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PROCRASTINATION, DEADLINES, AND STATUTES OF LIMITATION

ANDREW J. WISTRICH*

ABSTRACT

Statutes of limitation are deadlines. Although psychologists have discovered a great deal about how people respond to deadlines during the past thirty years, the basic structure of statutes of limitation has not changed since at least 1623. This Article explores the question of whether the received model of statutes of limitation remains optimal in light of what we now know about procrastination, the planning fallacy, loss aversion, intertemporal discounting, the student syndrome, and other features of human cognition. It concludes by suggesting a more modern approach to statutes of limitation that is based on a better understanding of how people actually behave. Specifically, the archaic "all-or-nothing" approach should be abandoned in favor of a more modern, incremental approach that gradually decreases the value of untimely claims as the duration of the plaintiff's delay in filing increases.

* Magistrate Judge, United States District Court, Central District of California. The perceptive comments of J.T. Fraser, Chris Guthrie, Jeffrey Rachlinski, Tyler Ochoa, Chrisoula Andreou, Jonathan Nakamoto, and Jessica Cheh improved this Article and are gratefully acknowledged.

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INTRODUCTION

Time limits are a fundamental aspect of life.¹ Not surprisingly, law contains many of them.² Statutes of limitation are perhaps the most prominent example. A statute of limitation sets a deadline by which a claimant must file a lawsuit. If the deadline is missed, the right to a decision on the merits and eligibility for a remedy are

1. See NICOLÒ MACHIAVELLI, DISCOURSES ON THE FIRST TEN BOOKS OF TITUS LIVIUS, reprinted in *THE PRINCE AND THE DISCOURSES* 99, 397 (Christian E. Detmold trans., Random House 1940) ("There is nothing more true than that all the things of this world have a limit to their existence"); WILLIAM SHAKESPEARE, *KING RICHARD II*, act. III, sc. 2, line 103 (Cambridge Univ. Press 1939) (1597) ("The worst is death, and death will have his day."); DAVID STEINDL-RAST, *THE MUSIC OF SILENCE* 5 (1995) ("Western culture reinforces th[e] ... conception of time as a limited commodity: we are always meeting deadlines; we are always short on time, we are always running out of time.").

2. See, e.g., U.S. CONST. art. I, § 8, cl. 8 ("To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries"); U.S. CONST. art. II, § 1, cl. 1 ("The executive Power shall be vested in a President of the United States of America. He shall hold his Office during the Term of four Years"); 18 U.S.C. § 3559 (2000) (specifying the maximum term of imprisonment for felonies, misdemeanors, and infractions); 29 U.S.C. § 207(a)(1) (2000) (limiting the number of hours that may be worked each week without payment of extra compensation for "overtime"); FED. R. APP. P. 4(a)(1)(A) (requiring that a notice of appeal be filed within thirty days of entry of the judgment or order appealed from); FED. R. CIV. P. 16(b) (requiring federal district courts to issue scheduling orders establishing deadlines for the completion of various pretrial activities); Jacob E. Gersen, *Temporary Legislation*, 74 U. CHI. L. REV. 247, 249-61 (2007) (discussing statutes that expire or "sunset" after a specified period of time has elapsed); Jacob E. Gersen & Anne Joseph O'Connell, *Deadlines in Administrative Law*, 156 U. PA. L. REV. 923, 925 (2008) (discussing congressional and judicial requirements that administrative agencies commence or complete actions within a prescribed period of time); Patrick E. Longan, *The Shot Clock Comes to Trial: Time Limits for Federal Civil Trials*, 35 ARIZ. L. REV. 663, 668-95 (1993) (discussing judicial imposition of limits on the duration of trials); Neil M.B. Rowe, *The Year-and-a-Day Rule: A Common Law Vestige That Has Outlived Its Purposes*, 8 JONES L. REV. 1, 1 (2004) (discussing the rule prohibiting "homicide prosecutions when the victim survives for more than one year and a day following the blow that eventually caused the victim's death"); William F. Ryan, *Rush to Judgment: A Constitutional Analysis of Time Limits on Judicial Decisions*, 77 B.U. L. REV. 761, 801-05 (1977) (discussing statutes requiring that judicial decisions be made within a fixed period of time); Jeffrey Evans Stake, *The Uneasy Case for Adverse Possession*, 89 GEO. L.J. 2419, 2421-23 (2001) (discussing statutes vesting title to real property in an adverse and exclusive possessor, thereby extinguishing the interest of the record owner, after a prescribed period of time).

forfeited.³ As one scholar has observed, "[s]tatutes of limitation elevate the temporal element to a categorical role."⁴

Statutes of limitation are ubiquitous. Almost every civil claim and criminal prosecution must be filed within a prescribed period of time. This is true not only in the United States, but also throughout the world.⁵ The crime of murder is the only common exception.⁶ Statutes of limitation also have been around for a long time. Some sorts of time limits have been imposed on civil lawsuits and criminal prosecutions for millennia.⁷ The direct ancestors of American statutes of limitation can be traced back for centuries. The first English statute of limitation for real property actions was enacted over five hundred years ago.⁸ Subsequent versions grouped real property actions into categories to which time limits of various lengths were assigned depending upon the character of the right sued upon.⁹ A later, more refined, and more comprehensive version of this approach, commonly known as the Limitations Act of 1623, included personal as well as real property actions.¹⁰ That statute

3. See 1 CALVIN W. CORMAN, *LIMITATION OF ACTIONS* § 1.1 (1991) ("Statutes of limitations often foreclose judicial actions by virtue of expiration of the allotted time."); 1 HORACE G. WOOD, *A TREATISE ON THE LIMITATION OF ACTIONS AT LAW AND IN EQUITY* § 1 (4th ed. 1916) ("Statutes of limitation are such legislative enactments as prescribe the periods within which actions may be brought upon certain claims, or within which certain rights may be enforced"). See generally *Developments in the Law: Statutes of Limitations*, 63 HARV. L. REV. 1177 (1950).

4. Richard A. Epstein, *The Temporal Dimension in Tort Law*, 53 U. CHI. L. REV. 1175, 1183 (1986).

5. See *Wood v. Carpenter*, 101 U.S. 135, 139 (1879) ("Statutes of limitation ... are found and approved in all systems of enlightened jurisprudence."); Edgar H. Ailes, *Limitation of Actions and the Conflict of Laws*, 31 MICH. L. REV. 474, 474 (1933) ("All civilized States, in the interest of an efficient administration of justice, have felt compelled to fix time limits beyond which access to their courts would be denied to aggrieved parties.").

6. See, e.g., CAL. PENAL CODE § 799 (West 2008).

7. See WILLIAM D. FERGUSON, *THE STATUTES OF LIMITATION SAVING STATUTES* 7 (1978) ("Statutes of limitation relating to real property may be traced to ancient Greece or beyond"); RUDOLPH SOHM, *THE INSTITUTES: A TEXTBOOK OF THE HISTORY AND SYSTEM OF ROMAN PRIVATE LAW* 283 (James Crawford Ledlie trans., Clarendon Press 3d ed. 1907) ("Emperors Honorius and Theodosius, ... moved by obvious considerations of convenience, enacted in 424 A.D. that all actions should be barred within a certain period.").

8. See 1488-89, 4 Hen. 7, c. 24 (Eng.).

9. See *The Act of Limitation with a Proviso*, 1540, 32 Hen. 8, c. 2 (Eng.).

10. See 1623, 21 Jac., c. 16 (Eng.).

provided the model upon which most American statutes of limitation are based.¹¹

Nearly all statutes of limitation possess the same essential structure: they classify claims into groups, they assign each group of claims a limitation period of fixed duration, and they extinguish claims not filed before the limitation period expires. The key feature of that structure is a long plateau that suddenly ends in a cliff. The value of the plaintiff's claim remains the same throughout the prescribed limitation period. When the limitation period expires, however, the value of the plaintiff's claim suddenly drops to zero. This "all-or-nothing" approach is utilized in virtually every statute of limitation.¹²

The present structure of statutes of limitation possesses at least three serious flaws. First, it allows plaintiffs to wait until deep in the limitation period before filing. In fact, a plaintiff who waits until the very last day of the limitation period suffers no penalty whatsoever, even if the limitation period is several years long. For example, if the limitation period is four years in duration,¹³ then a statute of limitation structured in the typical manner treats delays in filing suit of one, two, three, or even four years minus one day exactly the same. The assumption implicit in such a structure—that nothing of importance changes with the passage of time until the end of the limitation period is reached—is counterintuitive and contrary to

11. See *Wood v. Carpenter*, 101 U.S. 135, 139 (1879) ("[T]he English statute of limitations of the 21st of James I, ... was adopted in most of the American colonies before the Revolution, and has since been the foundation of nearly all of the like legislation in this country.").

12. Some early English statutes of limitation concerning real property claims had a somewhat different structure. They prohibited lawsuits based on claims arising before a fixed date, usually twenty or thirty years earlier. Often the cutoff date was linked to an important historical event heralding the beginning of a new era with which everyone would be familiar, such as the transfer of power from one monarch to another. See Thomas E. Atkinson, *Some Procedural Aspects of the Statute of Limitations*, 27 COLUM. L. REV. 157, 158 (1927) ("By the Statute of Merton [1235, 20 Hen. 3, c. 8 (Eng.)], the limitation was changed to the date of the Coronation of Henry II and by the Statute of Westminster I [1275, 3 Edw., c. 39 (Eng.)], it was set at the Coronation of Richard I in 1189, where it remained until 1540."). See generally HENRY THOMAS BANNING, A CONCISE TREATISE ON THE STATUTE LAW OF LIMITATION OF ACTIONS 2 (2d ed. 1892); 2 FREDERICK POLLOCK & FREDERIC WILLIAM MAITLAND, THE HISTORY OF ENGLISH LAW BEFORE THE TIME OF EDWARD I 81 (1895).

13. Some periods are shorter and some are longer, but this is a common duration. See, e.g., CAL. CIV. PROC. CODE § 337(1) (West 2008) (prescribing a four-year limitation period for breach of written contract); *id.* § 343 (prescribing a four-year limitation period for all claims not specifically provided for).

experience.¹⁴ Among other things, most evidence deteriorates over time,¹⁵ societal attitudes toward particular laws evolve,¹⁶ and the passage of time erodes both the benefit to the plaintiff of prevailing on the claim and the corresponding deterrent effect on the defendant and others, assuming that prejudgment interest is not available.¹⁷ These changes are gradual, not avulsive. They occur throughout the limitation period, rather than only at the end.¹⁸ With each passing day the purposes of the limitation system are eroded, but the resulting interim harms to defendants, to the justice system, to society, and even to plaintiffs themselves, are not reflected in the penalty imposed upon plaintiffs. Consequently, the limitation system gives plaintiffs little incentive to avoid them.

A second problem with the present structure of statutes of limitation is that the penalty exacted is drastic. If the plaintiff misses just one deadline, the plaintiff's claim is extinguished. Late filing by as little as one day results in the loss of the entire value of the plaintiff's claim. There is no effort to match the severity of the penalty to the degree of the plaintiff's fault or to the gravity of the injury caused by the plaintiff's delay. This not only hurts plaintiffs with meritorious claims, it also undermines the policy of the substantive law on which their claims are based.

A defect in the present structure of statutes of limitation is related to its harshness. Because the penalty for missing the deadline is so drastic, courts feel pressure to create ad hoc exceptions or to distort legal doctrine in order to avoid harsh or unjust results.¹⁹

14. See, e.g., OVID, *METAMORPHOSES* 372 (Rolfe Humphries trans., Indiana Univ. Press 1955) ("Time devours all things."); SOPHOCLES, *OEDIPUS AT COLONUS* (Dover 1999) ("[T]o the Gods alone belongs it never to be old or die, but all things else melt with all-powerful Time.").

15. Tyler T. Ochoa & Andrew J. Wistrich, *The Puzzling Purposes of Statutes of Limitation*, 28 PAC. L.J. 453, 474-77 (1997) [hereinafter Ochoa & Wistrich, *Puzzling Purposes*].

16. *Id.* at 493-95.

17. *Id.* at 492-93.

18. *Id.* at 511 (noting that "the digital, on or off quality of limitation of actions contrasts sharply with the analog, gradual nature of the evils it seeks to prevent").

19. See *Prussner v. United States*, 896 F.2d 218, 222 (7th Cir. 1990) ("All fixed deadlines seem harsh because all can be missed by a whisker."); Yair Listokin, *Efficient Time Bars: A New Rationale for the Existence of Statutes of Limitations in Criminal Law*, 31 J. LEGAL STUD. 99, 100 (2002) (explaining that statutes of limitation came to be viewed as justice-defeating technicalities during the 1970s and 1980s, and observing that the negative attitude was soon reflected in a series of statutes and court decisions weakening them); Gideon Parchomovsky, Peter Seligman & Steve Thel, *Of Equal Wrongs and Half Rights*, 82 N.Y.U. L. REV. 738, 745

This sort of nullification is seldom desirable, but it is especially troublesome in this context. Statutes of limitation already are problematic for lawyers. The challenges they present for non-lawyers are obviously even greater.²⁰ There is an enormous number of statutes of limitation²¹ and there are many areas of uncertainty in their application,²² such as the classification of claims (which renders the choice of the appropriate limitation period uncertain),²³ the implementation of the discovery rule of accrual (which makes it uncertain when the limitation period commences to run),²⁴ the judicial creation of doctrines such as equitable tolling (which make it uncertain whether the limitation period continues to run, or instead is paused, and if so, for how long it is paused),²⁵ and so on.

(2007) ("The need to make all-or-nothing decisions leads courts to tie themselves in doctrinal knots or to deviate from established legal principles, causing confusion and uncertainty.").

20. It is important to recognize that lawyers are of limited help to plaintiffs in the statute of limitation context. Many plaintiffs never hire a lawyer and simply proceed pro se. Obviously, those who never hire a lawyer must try to parse the statute and related case law on their own. But even those who are able to retain counsel must decide how soon to do so, and the statute of limitation is one of the factors that should inform their decision. In considering when to hire a lawyer, plaintiffs often implicitly assess the duration of the limitation period without the benefit of a lawyer's advice. Whether they retain counsel or not, many plaintiffs must therefore initially determine for themselves how long they can wait before filing suit. An attorney can only help after he or she is consulted.

21. See Jerald M. Montoya, *Introduction to California Statutes of Limitation*, 25 SW. U. L. REV. 745, at i (1996) (estimating that California has approximately 32,000 statutes imposing time limits on procedural or substantive rights).

22. See Eli J. Richardson, *Eliminating the Limitations of Limitations Law*, 29 ARIZ. ST. L.J. 1015, 1072 (1997) ("The purported certainty, simplicity and objectivity of existing limitations law is an illusion and a hoax.... Limitations law ... delivers ... uncertain application of a lengthy and complex series of ambiguous and subjective rules, with a resulting unpredictable outcome.").

23. See Tyler T. Ochoa & Andrew J. Wistrich, *Unraveling the Tangled Web: Choosing the Proper Statute of Limitation for Breach of the Implied Covenant of Good Faith and Fair Dealing*, 26 SW. U. L. REV. 1, 4-9 (1996) (describing the uncertain process by which claims are classified and the appropriate limitation period divined).

24. See *Grisham v. Philip Morris U.S.A.*, 151 P.3d 1151, 1164 (2007) (stating that "the essence of the discovery rule [is] that a plaintiff need not file a cause of action before he or she has reason at least to suspect a factual basis for its elements" (quotations omitted)); Stephen V. O'Neal, Comment, *Accrual of Statutes of Limitations: California's Discovery Exceptions Swallows the Rule*, 68 CAL. L. REV. 106, 123 (1980).

25. See *Appalachian Ins. Co. v. McDonnell Douglas Corp.*, 262 Cal. Rptr. 716, 738-39 (Cal. Ct. App. 1989) ("The 'equitable tolling' doctrine is a judicially created doctrine designed to prevent unjust and technical forfeitures of the right to a trial on the merits where the purpose of the statute of limitations—timely notice to the defendant of the plaintiff's claims—has been satisfied."); Tyler T. Ochoa & Andrew J. Wistrich, *Limitation of Legal Malpractice Actions:*

Not surprisingly, statutes of limitation are frequently litigated.²⁶ Indeed, missing the statute of limitation is the largest single source of legal malpractice claims.²⁷ When courts are induced to twist facts or distort limitation of actions law in order to avoid harsh results in particular cases, this uncertainty is compounded. The consequences are, among other things, increased expenditure of judicial time in resolving statute of limitation issues, more errors in the judicial application of limitation of action rules, more lawyer and pro se litigant time invested in researching statute of limitation issues, more legal malpractice claims, more inadvertent forfeitures of claims, and greater disparities in the treatment of similarly situated litigants.

During the past century, many aspects of the legal system have been transformed.²⁸ The same, of course, could be said of virtually every field of human activity.²⁹ We now use telephones and email to communicate, automobiles and airplanes to travel, pharmaceuticals to treat disease, and so on. None of these inventions pre-dated 1850, much less 1623. By contrast, it is remarkable how little statutes of limitation have changed since the Limitations Act of 1623. Their essential structure has endured. To be sure, there have been refinements. Courts and legislatures have created intricate rules of accrual and tolling, and developed increasingly sophisticated ways

Defining Actual Injury and the Problem of Simultaneous Litigation, 24 SW. U. L. REV. 1, 51-54 (1994) (summarizing the equitable tolling doctrine).

26. WILLIAM F. RYLAARSDAM & PAUL TURNER, CALIFORNIA PRACTICE GUIDE: CIVIL PROCEDURE BEFORE TRIAL—STATUTES OF LIMITATIONS, preface (The Rutter Group 2007) (“Indeed, statutes of limitations may well be the single most litigated issue in civil cases; almost 15% of published opinions in civil appeals, one way or another, deal with issues posed by statutes of limitations.”).

27. See 3 RONALD E. MALLIN & JEFFREY M. SMITH, LEGAL MALPRACTICE § 23.3 (2007 ed.) (“The most frequently alleged error in a legal malpractice action is the attorney’s failure to comply with a time limitation.... Often the error is the failure to sue before the statute of limitations bars the claim.”); RYLAARSDAM & TURNER, *supra* note 26, at preface (“Statutes of limitations provide a unique challenge to civil litigators. A missed statute is the most common error made by plaintiffs’ lawyers.”).

28. See, e.g., LAWRENCE M. FRIEDMAN, A HISTORY OF AMERICAN LAW 584 (1973) (“In the law itself, there was rapid, ceaseless change in the 20th century.”).

29. See ALVIN TOFFLER, FUTURE SHOCK 23 (1970) (“Until this century ...’ social change was ‘so slow, that it would pass unnoticed in one person’s lifetime. That is no longer so. The rate of change has increased so much that our imagination can’t keep up.”) (quoting C.P. Snow); ARNOLD TOYNBEE, EXPERIENCES 181 (1969) (“The pace has been accelerating constantly since the earliest date from which any record of human affairs has survived.”).

of handling a myriad of issues, such as continuing wrongs. Whether these refinements and added complexities strengthen or weaken the ability of the limitation system to achieve its goals is debatable. What is striking, however, is that despite the scholarly attention lavished on statutes of limitation,³⁰ the soundness of their essential structure almost never has been questioned.³¹ Why, during this time of extraordinarily rapid change, has this rather crude and arbitrary structure remained intact? In particular, why has the “all-or-nothing” approach—that is, the assumption that the value of the plaintiff’s claim should remain flat throughout the limitation period, and then suddenly drop from 100 percent to zero overnight—persisted? When one considers the importance of statutes of limitation, and the persistence of their problematic structure during a period of rapid advance—not only in law, but also in nearly every other field of endeavor—a further question presents itself: Is this the best we can do, or have we learned things since 1623 that can help us to improve the way in which statutes of limitation are structured? My answer is that we can do better.³²

This Article will proceed as follows: Part I briefly outlines the policies furthered and hindered by statutes of limitation, providing the background against which the advantages and disadvantages of

30. See, e.g., Adam Bain & Ugo Colella, *Interpreting Federal Statutes of Limitations*, 37 CREIGHTON L. REV. 493 (2004); Kyle Graham, *The Continuing Violations Doctrine*, 43 GONZ. L. REV. 271 (2008); Bruce A. McGovern, *The New Provision for Tolling the Limitations Periods for Seeking Tax Refunds: Its History, Operation and Policy, and Suggestions for Reform*, 65 MO. L. REV. 797 (2000); Lindsey Powell, *Unraveling Criminal Statutes of Limitation*, 45 AM. CRIM. L. REV. 115 (2008); Richardson, *supra* note 22; Jonathan W. Diehl, Note, *Drafting a Fair DNA Exception to the Statute of Limitations in Sexual Assault Cases*, 39 JURIMETRICS J. 431 (1999).

31. One article that does question the essential structure of statutes of limitation is Ehud Guttel & Michael T. Novick, *A New Approach to Old Cases: Reconsidering Statutes of Limitation*, 54 U. TORONTO L.J. 129 (2004). For a discussion of the suggested reform described in that article, see *infra* Part III.C.

32. In undertaking this inquiry, I am not questioning whether we should have statutes of limitation at all; that question already has been answered in favor of statutes of limitation. See *Bd. of Regents v. Tomanio*, 446 U.S. 478, 487 (1980) (noting that statutes of limitation “have long been respected as fundamental to a well-ordered judicial system”); *Wood v. Carpenter*, 101 U.S. 135, 139 (1879) (“Statutes of limitation are vital to the welfare of society.”); *Adams v. Woods*, 6 U.S. (2 Cranch) 336, 342 (1805) (stating that allowing claims to be “brought at any distance of time . . . would be utterly repugnant to the genius of our laws.”). See generally Ochoa & Wistrich, *Puzzling Purposes*, *supra* note 15. Instead, I am questioning only their basic structure.

their existing structure and possible alternative structures must be measured. Part II summarizes psychological research concerning procrastination, the planning fallacy, and the ways in which humans react to threatened losses and to deadlines. This empirical data makes it possible to transcend the intuitions about human behavior on which ancient statutes of limitation were based and to think creatively about potential reforms. Part III discusses three alternative structures for statutes of limitation that are graduated, rather than all-or-nothing, in character. Part IV analyzes the strengths and weakness of what I consider to be the most attractive alternative structure. Part V briefly sketches how the incremental depreciation of claim value might be applied in two different contexts. Finally, the Article concludes by suggesting that an incremental depreciation of the value of the plaintiff's claim as time passes and societal costs from delayed filing accrue most effectively utilizes the insights of psychological research in seeking to promote the purposes of statutes of limitation while at the same time minimizing their costs.

I. THE PURPOSES OF CIVIL STATUTES OF LIMITATION

Several years ago, I coauthored an article analyzing the policies supporting and opposing statutes of limitation in civil cases.³³ Readers interested in a detailed discussion of those policies may wish to examine that article. It makes sense, however, to briefly summarize the relevant conclusions here. When examining the structure of statutes of limitation and considering the desirability of alternative structures, it is important to keep in mind the reasons why we have statutes of limitation and the balance they attempt to strike.

In our previous article, Professor Tyler Ochoa and I identified the following as the policies favoring the limitation of civil actions: (1) promote repose, of which we identified four distinct aspects, namely: (a) allow peace of mind, (b) avoid disrupting settled expectations, (c) reduce uncertainty for the defendant and others, and (d) reduce

33. See Ochoa & Wistrich, *Puzzling Purposes*, *supra* note 15. For an interesting discussion of the purposes of civil statutes of limitation see Charles C. Callahan, *Statutes of Limitation—Background*, 16 OHIO ST. L.J. 130, 132-34 (1955).

protective measures and associated costs; (2) minimize the deterioration of evidence, of which we identified four distinct aspects, namely: (a) ensure accurate fact-finding, (b) prevent fraud, (c) reduce litigation costs, and (d) preserve the integrity of the legal system; (3) place defendants and plaintiffs on an equal footing; (4) promote the cultural value of diligence; (5) encourage the prompt enforcement of substantive law; (6) avoid the retrospective application of contemporary standards; and (7) reduce the volume of litigation, of which we identified three distinct aspects, namely: (a) reduce the overall number of claims filed, (b) reduce the number of unmeritorious claims filed, and (c) reduce the number of disfavored claims filed.³⁴ We concluded that although most of these policies are worth promoting, some provide negligible support for limiting civil actions because they are either unimportant or better promoted by other means. Those that we concluded fell into this category were: (1) minimize deterioration of evidence, but only insofar as it seeks to prevent fraud and to preserve the integrity of the legal system; (2) place defendants and plaintiffs on an equal footing; (3) promote the cultural value of diligence; and (4) reduce the volume of litigation, in all three of its aspects.³⁵ That left us with the following as policies providing strong support for limiting civil actions: (1) promote repose (to allow peace of mind, avoid disrupting settled expectations, reduce uncertainty for the defendant and others, and reduce evidence preservation and insurance-related costs); (2) minimize deterioration of evidence (to ensure accurate fact-finding and to reduce litigation costs); (3) encourage the prompt enforcement of substantive law; and (4) avoid the retrospective application of contemporary standards.

We also analyzed the policies opposing limitation of civil actions. We identified two: (1) promote adjudication of claims on their substantive merits; and (2) vindicate meritorious claims.³⁶ We concluded that both of those policies weigh strongly against limiting civil actions.³⁷ We noted, however, that although limiting civil actions impairs the policies opposing the limitation of civil actions,

34. See Ochoa & Wistrich, *Puzzling Purposes*, *supra* note 15, at 460-501.

35. See *id.* at 480, 483-92, 495-99.

36. See *id.* at 500-10.

37. See *id.* at 501-03, 509.

it nonetheless indirectly enhances them to some extent by helping to ensure the accuracy of adjudication (without which the adjudication of claims on their substantive merits arguably possesses little societal value) and by encouraging the prompt litigation of meritorious claims (so as to maximize both the compensatory value and the deterrent value of the litigation of claims).³⁸

A sound limitation system, then, effectively encourages the prompt filing of claims, but it does so in a manner that simultaneously minimizes the inadvertent forfeiture of claims. Although a grasp of the policies favoring and disfavoring statutes of limitation is essential to assessing the desirability of potential reforms, it is not sufficient. It also is necessary to take into account how plaintiffs are likely to react to the proposed changes in making choices about when to hire a lawyer or file a lawsuit. Recent research in psychology can illuminate us on that score, and it is to that I now turn.

II. THE PSYCHOLOGY OF PLANNING, PROCRASTINATION, AND DEADLINES

A. *Loss Aversion*

People evaluate changes not in the abstract, but relative to a reference point, such as the status quo.³⁹ Not all changes, however, are valued equally. Losses or changes that make things worse affect people more deeply than gains or changes that make things better.⁴⁰ An example illustrates this phenomenon well.

38. See *id.* at 492, 503-04.

39. See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263, 279 (1979) [hereinafter Kahneman & Tversky, *Prospect Theory*] (describing the role of loss aversion in prospect theory).

40. See Daniel Kahneman, Jack L. Knetsch & Richard Thaler, *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, in *CHOICES, VALUES, AND FRAMES* 159, 160 (Daniel Kahneman & Amos Tversky eds., 2000) (defining loss aversion as the phenomenon that "the disutility of giving up an object is greater than the utility associated with acquiring it"); Amos Tversky & Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, in *CHOICES, VALUES, AND FRAMES* 143, 150 (Daniel Kahneman & Amos Tversky eds., 2000) [hereinafter Tversky & Kahneman, *Loss Aversion in Riskless Choice*] ("The basic intuition concerning loss aversion is that losses (outcomes below the reference state) loom larger than corresponding gains (outcomes above the reference state).").

A simple application of loss aversion ... is penalty aversion. People will act to avoid penalties but not necessarily to obtain bonuses in rhetorically different presentations of the same underlying facts. As Richard Thaler noted in a real-world observation, when a gas station charged a "penalty" for using credit cards (\$2.00 versus \$1.90, say), people paid cash; when a gas station across the street gave a "bonus" for using cash (\$1.90 versus \$2.00), people used credit cards.⁴¹

The magnitude of this effect is substantial. Experiments have shown that people must be paid a large amount to delay receipt of a reward, but are unwilling to pay large amounts to delay imposition of a fine.⁴² In one study, subjects were indifferent between receiving ten dollars immediately and receiving twenty-one dollars after a delay of one year, but also were indifferent between losing ten dollars immediately and losing fifteen dollars after a delay of one year.⁴³ This study suggests two things. The first is that not only are present losses felt more keenly than future gains, but future losses are discounted at a lower rate than future gains. The second is that future gains are discounted at more than twice the rate of future losses. People, then, are roughly twice as anxious to avoid a one hundred dollar loss as they are eager to obtain a one hundred dollar gain.⁴⁴ Others have reported finding even greater disparities.

41. Edward J. McCaffery & Jonathan Baron, *Rethinking Redistribution: Tax Policy in an Era of Rising Inequality: The Political Psychology of Redistribution*, 52 UCLA L. REV. 1745, 1751 (2005) (citing Richard H. Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39, 45 (1980)); see also George Loewenstein & Drazen Prelec, *Anomalies in Intertemporal Choice: Evidence and an Interpretation*, in CHOICE OVER TIME 119, 122 (George Loewenstein & Jon Elster eds., 1992).

42. See RICHARD H. THALER, THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE 96 (1992) [hereinafter THALER, WINNER'S CURSE].

43. Loewenstein & Prelec, *supra* note 41, at 122 (citing George Loewenstein, *The Weighting of Waiting: Response Mode Effects in Intertemporal Choice* (1987) (unpublished working paper, on file with Center for Decision Research, University of Chicago)).

44. Tversky & Kahneman, *Loss Aversion in Riskless Choice*, *supra* note 40, at 150-58; see also THALER, WINNER'S CURSE, *supra* note 42, at 70; Chip Heath, Richard P. Larrick & George Wu, *Goals as Reference Points*, 38 COGNITIVE PSYCH. 79, 87 (1999) (stating that "[s]tudies of risky choice and riskless choice have presented converging evidence that losses are weighted approximately two times more than equivalent gains (the most common values for this 'coefficient of loss aversion' fall between 2 and 4)"); (citations omitted); Kahneman & Tversky, *Prospect Theory*, *supra* note 39, at 279 ("The aggravation that one experiences in losing a sum of money appears to be greater than the pleasure associated with gaining the same amount."); Robert A. Prentice & Jonathan J. Koehler, *A Normality Bias in Legal Decision Making*, 88

According to a different study, for example, discount rates for future gains were from three to ten times greater than the discount rate for future losses.⁴⁵

Theoretically, the justice system could attempt to encourage prompt filing of civil lawsuits by rewarding plaintiffs rather than penalizing them. The phenomenon of loss aversion, however, indicates that the reward would have to be at least twice as large as the penalty in order for the incentive to be equally effective. Thus, we would have to reward plaintiffs for filing on time by doubling or tripling the value of their claims merely to achieve the same effect that we presently achieve by extinguishing the value of their claims. That might distort the incentives created by the substantive law by, for example, overdetering defendants from engaging in conduct that occasionally is harmful but is socially beneficial overall. Of course, when a statute of limitation reduces or eliminates the value of a claim, that also distorts the incentives created by the substantive law, but this time by underdetering defendants. Because the latter causes a smaller distortion than the former, however, it represents the better choice. The justice system therefore selected the right path when it decided to penalize plaintiffs for untimely filing rather than rewarding them for timely filing.⁴⁶

Loss aversion also may explain why the unavailability of prejudgment interest for many claims,⁴⁷ or a below-market rate of prejudgment interest, does not provide a sufficient incentive for some plaintiffs to file their claims promptly. Plaintiffs probably view prejudgment interest as a deferred gain (i.e., if they win they will recover the \$100 value of their claim plus an additional \$10 in prejudgment interest) rather than viewing the lack of prejudgment interest as causing a loss (i.e., the gradual erosion of the value of their claim from \$100 to \$90). Therefore, depriving plaintiffs of prejudgment interest, which already occurs for some sorts of claims, would not be a suitable substitute for statutes of limitation.

CORNELL L. REV. 583, 601 (2003) ("[T]he pain that Sarah feels upon losing \$100 is likely to be about twice as intense as the joy that Emily feels upon gaining \$100.").

45. Thaler, *supra* note 41, at 41-42.

46. See, e.g., Christine Jolls & Cass R. Sunstein, *Debiasing Through Law*, 35 J. LEGAL STUD. 199, 206, 216 (2006) (suggesting that to encourage breast feeding, society should emphasize the losses suffered from not breast feeding rather than the gains obtained from breast feeding).

47. See CAL. CIV. CODE §§ 3287-91 (West 2008).

B. Planning Fallacy

People frequently underestimate how long it will take to complete future tasks.⁴⁸ For example, the Sydney Opera House required sixteen years to complete, instead of the six years originally planned, and the completed building was considerably scaled down from the original design, yet far more expensive than anticipated.⁴⁹ Similarly, only 1 percent of major military high technology purchases are delivered on time and on budget.⁵⁰ The phenomenon is not limited to large or long-term projects, however. We all have experience with the home remodeling project that required months to complete rather than the weeks that the contractor had estimated, or the academic paper that took a month to write rather than the week that we had projected.

Psychologists call this phenomenon the planning fallacy. It has been defined as “the tendency to be overly optimistic about how long it will take to perform a task in the future, even though people are aware that in the past they have not finished [their] tasks by the predicted time.”⁵¹ In general, “predicted completion times for specific future tasks tend to be more optimistic than can be justified by the actual completion times or by the predictors’ general beliefs about the amount of time such tasks usually take.”⁵² The phenomenon is so pervasive that one software development expert joked that the planned completion date for a computer program typically is “the

48. See Michael M. Roy, Nicholas J.S. Christenfeld & Craig R.M. McKenzie, *Underestimating the Duration of Future Events: Memory Incorrectly Used or Memory Bias?*, 131 PSYCHOL. BULL. 738, 738 (2005). See generally David A. Armor & Aaron M. Sackett, *Accuracy, Error, and Bias and Predictions for Real Versus Hypothetical Events*, 91 J. PERSONALITY & SOC. PSYCH. 583, 583 (2006) (“To date, several hundred studies have shown that people’s predictions tend to be excessively and unrealistically optimistic.”) (citations omitted).

49. PETER HALL, *GREAT PLANNING DISASTERS* 138 (1980).

50. Roger Buehler, Dale W. Griffin & Michael Ross, *Inside the Planning Fallacy: The Causes and Consequences of Optimistic Time Predictions*, in *HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT* 250, 268 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., 2002) [hereinafter Buehler, Griffin & Ross, *Inside the Planning Fallacy*].

51. Roy, Christenfeld & McKenzie, *supra* note 48, at 742 (citing Daniel Kahneman & Amos Tversky, *Intuitive Prediction: Biases and Corrective Procedures*, 12 TIMS STUD. MGMT. SCI. 313 (1979)).

52. Buehler, Griffin & Ross, *Inside the Planning Fallacy*, *supra* note 50, at 250.

most optimistic prediction that has a non-zero probability of coming true."⁵³

In one early study, college undergraduates were asked to estimate how long it would take them to complete various tasks.⁵⁴ The results were as follows:

In [Study 1], undergraduates estimated when they would finish their honors thesis. On average, participants underestimated their completion time by 39%. For Study 2, participants made predictions for an everyday, nonacademic task (i.e., writing a letter to a friend) and an academic task (i.e., completing an essay) that would be finished within the next week. Participants, on average, underestimated how long it would take by 46%. Study 3 again had participants estimate how long it would take to complete an academic task that they planned to finish in the next 2 weeks using a think-out-loud procedure. After 2 weeks, only 70% of participants had actually completed the task, and of those that did, duration to finish was underestimated by 15% For Study 4, participants were asked to estimate when, in comparison with the deadline, they would complete a 1-hr computer tutorial program. Overall, participants underestimated when they would finish the task by 12%.⁵⁵

As the results of this study suggest, the planning fallacy is a trap into which most people are likely to fall in a wide variety of situations.⁵⁶

In another study, subjects were asked to predict when they would file their tax returns.⁵⁷ The subjects who expected a tax

53. TOM DEMARCO, CONTROLLING SOFTWARE PROJECTS: MANAGEMENT, MEASUREMENT AND ESTIMATION 14 (1982).

54. See Roger Buehler, Dale W. Griffin & Michael Ross, *Exploring the "Planning Fallacy": Why People Underestimate Their Task Completion Times*, 67 J. PERSONALITY & SOC. PSYCH. 366 (1994) [hereinafter Buehler, Griffin & Ross, *Exploring the "Planning Fallacy"*].

55. Roy, Christenfeld & MacKenzie, *supra* note 48, at 739 (summarizing the result of the studies conducted in Buehler, Griffin & Ross, *Exploring the "Planning Fallacy," supra* note 54).

56. *Id.* at 741 ("The tendency to underestimate seems to be a very general phenomenon found with quite different types of tasks. Almost all of the studies reviewed found a sizable tendency to underestimate.").

57. See Roger Buehler, Dale Griffin & Heather MacDonald, *The Role of Motivated Reasoning in Optimistic Time Predictions*, 23 PERSONALITY & SOC. PSYCHOL. BULL. 238, 240-42 (1997) [hereinafter Buehler, Griffin & MacDonald, *Motivated Reasoning*].

refund predicted that they would file their tax returns an average of 27.6 days before the deadline, but they actually filed their tax returns later, just 15.2 days before the deadline on average.⁵⁸ Those not expecting a refund also underestimated the time required to file their tax returns, although their predictions were somewhat more accurate.⁵⁹ They expected to file their tax returns an average of 16.9 days before the deadline, but actually filed them just 12.9 days before the deadline on average.⁶⁰ Thus, all of the subjects in the experiment underestimated how long it would take them to file their tax returns, with those who believed they would receive a refund underestimating the time required most severely.⁶¹

Like the subjects in the experiment who thought they would receive a tax refund, plaintiffs filing lawsuits typically believe that they will obtain a recovery. Otherwise, they would not bother to file at all. The experiment suggests that like those expecting a tax refund, plaintiffs are likely to underestimate the time required to file a lawsuit. Such underestimation of task completion time may be mildly costly in terms of foregone interest for someone who expects a tax refund, but may be catastrophic for a plaintiff because missing the deadline prescribed by the statute of limitation may extinguish the claim entirely,⁶² not merely slightly erode its value. In addition, underestimation appears to be greatest when monetary incentives for prompt completion are available.⁶³ Finally, for most people, filing a lawsuit is a more complex, unfamiliar, and longer-term task than filing a tax return. Thus, the duration of that task probably would be underestimated even more severely than the amount of time required to file a tax return.

Several explanations for the tendency to underestimate task duration have been offered. These include the hypotheses that

58. *Id.* at 241.

59. *See id.*

60. *Id.*

61. *See id.*

62. *See* Ferguson, *supra* note 7, at 1 (“[A] limited period of time is provided for the bringing of an action and, if the action is not commenced in time, the lapse of time will constitute a defense to the suit or will deprive the plaintiff of his right.”).

63. *See* Buehler, Griffin & McDonald, *Motivated Reasoning*, *supra* note 57, at 241; Stephanie J. Byram, *Cognitive and Motivational Factors Influencing Time Prediction*, 3 J. EXPERIMENTAL PSYCHOL.: APPLIED 216, 235-36 (1997); Roy, Christenfeld & McKenzie, *supra* note 48, at 740.

people (a) fail to remember that in the past they have been interrupted by surprises, (b) do not remember all the subcomponents of the task when planning, (c) are overly narrow in their focus on the task, and/or (d) disregard memories of how long similar tasks have taken in the past.⁶⁴

People may also be overly influenced by the strength of their current intentions.⁶⁵ They may believe that because they feel strongly about doing something today they will feel equally strongly about doing it tomorrow, excessively discounting the possibility that their feelings or external conditions will change tomorrow and render their present desires and intentions less attractive and therefore less influential.⁶⁶

64. Roy, Christenfeld & McKenzie, *supra* note 48, at 742 (citations omitted); see also Daniel Kahneman & Amos Tversky, *Intuitive Prediction: Biases and Corrective Procedures*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 414, 415 (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982) ("The planning fallacy is a consequence of the tendency to neglect distributional data and to adopt what may be termed an internal approach to prediction, in which one focuses on the constituents of the specific problem rather than on the distribution of outcomes in similar cases. The internal approach to the evaluation of plans is likely to produce underestimation. A building can only be completed on time, for example, if there are no delays in the delivery of materials, no strikes, no unusual weather conditions, and so on. Although each of these disturbances is unlikely, the probability that at least one of them will occur may be substantial. This combinatorial consideration, however, is not adequately represented in people's intuitions. Attempts to combat this error by adding a slippage factor are rarely adequate, since the adjusted value tends to remain too close to the initial value that acts as an anchor.") (citations omitted); Ernesto Blanco & Robert Folger, *The Planning Fallacy: The Cognitive Process* 8 (unpublished manuscript, on file with the University of Central Florida) (suggesting that "overoptimism vis-à-vis a future task is caused by four main factors: (1) the temporal proximity of the task; people tend to be optimistically biased when the outcome of their predictions is still far ahead in time, (2) the selection of the goal; once the individual has selected a goal, he or she becomes overoptimistic in implementing plans of action, (3) mental construction of scenarios; people tend to infer the likelihood of an outcome on the basis of mental plans or scenarios about how the future will unfold, often with greater optimism than the actual situation warrants, and (4) enhanced motivational states; people may find incentives to be overoptimistic, like job promotions, bonuses, and social recognition") (citing David A. Armor & Shelley E. Taylor, *When Predictions Fail: The Dilemma of Unrealistic Optimism*, in HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 334, 339-43 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., 2002)).

65. Derek J. Koehler & Connie S.K. Poon, *Self-Predictions Overweight Strength of Current Intentions*, 42 J. EXPERIMENTAL PSYCHOL. 517, 522 (2006).

66. See *id.*; see also DANIEL GILBERT, *STUMBLING ON HAPPINESS* 134-37 (2006).

These possible causes of the planning fallacy would be difficult to ameliorate in the statutes of limitation context. One common suggestion—improving recall of the duration of similar past tasks⁶⁷—might help some people but not others. Contractors and other professionals estimating the duration of construction projects, for example, might benefit from the suggestion. Plaintiffs who are contemplating filing a lawsuit for the first—and perhaps only—time in their lives, by contrast, probably would have no relevant experience to draw upon and so would not be helped by it. They would have no idea how long it might take them to file a lawsuit (if they were proceeding *pro se*), or how long it might take them to locate and retain an attorney, and for the attorney to file a lawsuit (if they were not proceeding *pro se*). Similarly, if the planning fallacy results from people's reliance on oversimplified representations of future tasks that ignore contextual factors that may interfere with timely performance, experience with the task or sophistication in thinking about the task would be crucial to accurate estimation of task duration. Here again, plaintiffs (as distinguished from their counsel) are unlikely to possess the requisite background or skills to estimate task duration accurately.⁶⁸ Finally, because underestimation of task completion times is more pronounced for longer tasks than for shorter tasks,⁶⁹ the longer the limitation period, the more severe the plaintiff's underestimation of the time required for filing is likely to be. This is hardly surprising. The longer the duration of a task, the grater the risk that obstacles to task completion will arise. Moreover, people typically have better information about near future events than distant future events.⁷⁰ The planning fallacy therefore

67. See Roy, Christenfeld & McKenzie, *supra* note 48, at 754-55.

68. See Tim Silk, *Getting Started is Half the Battle: The Influence of Deadlines and Effort on Consumer Self-Regulation to Redeem Rewards* 8 (2005) (working paper, on file with the Sauder School of Business, University of British Columbia); see *infra* notes 127-39 and accompanying text.

69. See Roy, Christenfeld & McKenzie, *supra* note 48, at 741 (citing Christopher D.B. Burt & Simon Kemp, *Construction of Activity Duration and Time Management Potential*, 8 APPLIED COGNITIVE PSYCHOL. 155 (1994) (explaining that while almost all experiments have found a sizeable tendency to underestimate the duration of future tasks; the duration of very short simple tasks, such as those requiring less than five minutes to complete, is more likely to be overestimated than underestimated)).

70. See, e.g., Shiri Nussbaum, Nira Lieberman & Yaacov Trope, *Predicting the Near and Distant Future*, 135 J. EXPERIMENTAL PSYCHOL.: GEN. 152, 152-53 (2006) ("Temporal distance from future outcomes ordinarily reduces the accuracy with which those outcomes can be

suggests that plaintiffs will typically underestimate the duration of the task of filing a lawsuit and are likely to misschedule their time and miss the deadline.

One additional point should be noted. The Buehler, Griffin and Ross experiment discussed earlier⁷¹ contained a fifth study in which observers were asked to predict how long it would take participants in Study 4 to complete their task.⁷² This made it possible for the experimenters to compare the relative susceptibility of actors and observers to the planning fallacy. The results of the fifth study were that: "[u]nlike the actors, the observers tended to overestimate how long it would take the actor to finish by approximately 31%."⁷³ This means that the estimates of the actors and the observers differed by 43 percent (31 percent overestimation by the observers combined with 12 percent underestimation by the actors).⁷⁴

Study 5 has important implications for designers of statutes of limitation. It suggests that although plaintiffs are likely to underestimate the amount of time required to file a lawsuit, observers, such as legislators, judges, and jurors, are likely to overestimate the time required. Therefore, well-meaning legislators may establish limitation periods that are unnecessarily long, and well-meaning judges or kind-hearted jurors may evaluate the diligence of plaintiffs too generously. Thus, the belief that plaintiffs need long limitation periods in which to file their claims may be the product of cognitive error. This is important because establishing longer limitation periods actually may increase the risk that plaintiffs will miss the filing deadline.⁷⁵

C. Procrastination

Procrastination is familiar to most. It has been defined as "voluntarily delay[ing] an intended course of action despite expect-

predicted.").

71. See *supra* text accompanying notes 54-56.

72. See Buehler, Griffin & Ross, *Exploring the "Planning Fallacy,"* *supra* note 54, at 377.

73. Roy, Christenfeld & McKenzie, *supra* note 48, at 739-40 (summarizing the results of the fifth study conducted in Buehler, Griffin & Ross, *Exploring the "Planning Fallacy,"* *supra* note 54, at 377-79).

74. See *supra* text accompanying note 55.

75. See *infra* notes 131-37 and accompanying text.

ing to be worse off for the delay."⁷⁶ Although procrastination is sometimes defended,⁷⁷ it typically is viewed as a negative trait.⁷⁸

Procrastination is common. It has been estimated that "80%-95% of college students engage in procrastination, approximately 75% consider themselves procrastinators, and almost 50% procrastinate consistently and problematically."⁷⁹ Procrastination is so prevalent that it is not unique to humans. Even pigeons will put off doing a small amount of work now for a delayed reward, preferring instead to do much more work later to obtain the same reward.⁸⁰

76. Piers Steel, *The Nature of Procrastination: A Meta-Analytic and Theoretical Review of Quintessential Self-Regulatory Failure*, 133 PSYCHOL. BULL. 65, 66 (2007); see also Chrisoula Andreou, *Understanding Procrastination*, 37 J. THEORY SOC. BEHAV. 183, 183 (2007) [hereinafter Andreou, *Understanding Procrastination*] ("I will count as cases of procrastination only those cases of delaying in which one leaves too late or puts off indefinitely what one should—relative to one's ends and information—have done sooner.") (citation omitted).

77. See, e.g., PETER L. BERNSTEIN, AGAINST THE GODS: THE REMARKABLE STORY OF RISK 15 (1996) ("[O]nce we act, we forfeit the option of waiting until new information comes along. As a result, not-acting has value. The more uncertain the outcome, the greater may be the value of procrastination."); Gregory Schraw, Theresa Wadkins & Lori Olafson, *Doing the Things We Do: A Grounded Theory of Academic Procrastination*, 99 J. EDUC. PSYCHOL. 12, 21-22 (2007) (arguing that student procrastination is an adaptive strategy designed to maximize efficiency and other values). Some contend that when deferring action or choice is a value maximizing response to a situation, it does not qualify as procrastination. E.g., Andreou, *Understanding Procrastination*, *supra* note 76, at 183 (arguing that "when 'putting off' is rational it isn't procrastination") (quoting Maury Silver & John Sabini, *Procrastinating*, 11 J. THEORY SOC. BEHAV. 207, 208 (1981)).

78. See, e.g., THE SIXTH ORATION OF M.T. CICERO AGAINST MARCUS ANTONIUS, *reprinted in* 4 THE ORATIONS OF MARCUS TULLIUS CICERO 116, 119 (C. D. Yonge trans., Henry G. Bohn 1852) ("[I]n the conduct of almost every affair slowness and procrastination are hateful"); SAMUEL JOHNSON, THE RAMBLER NO. 134 (June 29, 1751), *reprinted in* 1 THE WORKS OF SAMUEL JOHNSON, L.L.D. WITH AN ESSAY ON HIS LIFE AND GENIUS BY ARTHUR MURPHY, ESQ. 208, 208 (George Dearborn 1834) [hereinafter JOHNSON, THE RAMBLER NO. 134] (describing procrastination as "one of the general weaknesses, which, in spite of the instruction of moralists, and the remonstrances of reason, prevail to a greater or less degree in every mind"); Letter from Philip Stanhope, Lord of Chesterfield to His Son (Dec. 26, 1749), *in* 2 LETTERS WRITTEN BY THE LATE RIGHT HONOURABLE PHILIP DORMER STANHOPE, EARL OF CHESTERFIELD TO HIS SON 162, 165 (3d ed., J. Rivington & H. Gaine 1775) ("No idleness, no laziness, no procrastination: never put off till to-morrow what you can do to-day.").

79. Steel, *supra* note 76, at 65 (citations omitted).

80. See James E. Mazur, *Procrastination by Pigeons with Fixed-Interval Response Requirements*, 69 J. EXPERIMENTAL ANALYSIS BEHAV. 185 (1998); James E. Mazur, *Procrastination by Pigeons: Preference for Larger, More Delayed Work Requirements*, 65 J. EXPERIMENTAL ANALYSIS BEHAV. 159 (1996).

Procrastination also is not a new phenomenon. "Procrastination has plagued human beings since at least the birth of civilization."⁸¹ It does, however, appear to be increasing. An examination of holiday credit card purchases predicted that five times more last-minute Christmas shopping would occur in 1999 than in 1991.⁸²

Various causes of procrastination have been suggested. Three of the most widely accepted explanations are intertemporal discounting, task averseness, and certain personality traits.⁸³

Life frequently requires that people trade off present costs and benefits against future costs and benefits.⁸⁴ This is commonly referred to as "intertemporal choice."⁸⁵ As one group of scholars explained:

Intertemporal choice refers to a choice between options whose consequences occur at different points in time. Examples of intertemporal choice include: Receiving \$10 today, or \$12 in a week, choosing between chocolate cake and fruit for dessert, saving versus spending money now, promising to write a journal article or teach an extra course in the next academic term, choosing a major in college, and deciding whether to smoke a cigarette. In each of these cases, a decision maker needs to trade off the utility (or value) of one outcome that is temporally proximal (typically immediate) with another one that is temporally distant. In the examples above, the proximal outcome is \$10, the taste of the chocolate cake, or the happiness derived from current spending; the distant outcome is \$12, the health consequences of eating rich foods, or the hardships associated with not saving enough for a rainy day.⁸⁶

It turns out that "there is a remarkable consensus in the literature that future outcomes are discounted (or undervalued) relative to immediate outcomes."⁸⁷ The farther in the future an event is

81. Steel, *supra* note 76, at 84.

82. See Robert D. Hershey Jr., *Many Shoppers Won't Do Today What They Can Do on Dec. 24*, N.Y. TIMES, Nov. 28, 1999, at BU12.

83. See Steel, *supra* note 76, at 67-68.

84. See Dilip Soman et al., *The Psychology of Intertemporal Discounting: Why Are Distant Events Valued Differently from Proximal Ones?*, 16 MARKETING LETTERS 347, 347 (2005).

85. *Id.*

86. *Id.*

87. *Id.* at 348.

expected to occur, the less impact it has on people's decisions and behavior.⁸⁸ As Samuel Johnson said, it is only natural for us "to be most solicitous for that which is by its nearness enabled to make the strongest impressions."⁸⁹ This phenomenon, which is usually referred to as "intertemporal discounting"⁹⁰ or "positive time preference,"⁹¹ is pervasive.

The lure of the present is powerful.⁹² Even when a distant future reward is strongly desired, or a distant future penalty is deeply dreaded, people may be unable to overcome the force of intertemporal discounting. In fact, it can lock people into a cycle of procrastination from which they cannot easily escape. One philosopher has offered the following example:

[T]he effects of smoking accumulate in a way that prompts intransitive quitting preferences in those with both a taste for cigarettes and a concern for decent health. More specifically, since smoking a cigarette cannot take one from a state of decent health to a state of poor health, but smoking very many can, someone with a taste for cigarettes and a concern for decent health is likely to *invariably* prefer both (1) having an extra cigarette before finally quitting, and (2) quitting after a relatively low number of cigarettes, such as 5,000, to quitting after a very high number of cigarettes, such as 500,000.⁹³

A person with both a persistent taste for cigarettes and an enduring concern for decent health, then, may be trapped. He or she may always prefer enjoying one more cigarette to the discomfort of foregoing that one additional cigarette in the hope of enjoying better health in the distant future. This occurs because people value enjoying a small, certain, and immediate reward more highly than

88. *See id.* ("[A]n identical (positive) outcome will become increasingly attractive the closer it is located in time to the time of decision-making.").

89. JOHNSON, THE RAMBLER NO. 134, *supra* note 78, at 208.

90. Soman et al., *supra* note 84, at 348.

91. Gideon Keren & Peter Roelofsma, *Immediacy and Certainty in Intertemporal Choice*, 63 ORG. BEHAV. & HUM. DECISION PROCESSES 287, 294 (1995).

92. JOHANN WOLFGANG VON GOETHE, TASSO (1790) ("The present moment is a powerful goddess.") (quoted in THE OXFORD BOOK APHORISMS 348 (John Gross ed., Oxford University Press 1987)).

93. Chrisoula Andreou, *Environmental Preservation and Second-Order Procrastination*, 35 PHIL. & PUB. AFF. 233, 238-39 (2007) [hereinafter Andreou, *Second-Order Procrastination*].

avoiding a larger, but uncertain and long-delayed, penalty.⁹⁴ The immediacy and certainty of the gratification associated with the smaller reward overwhelms the deeply discounted value of the larger uncertain and deferred penalty.⁹⁵ If the increment by which the larger penalty is diminished is the same at every point of choice, and if the smoker's preferences remain stable, then he may find himself locked in an enduring "preference loop,"⁹⁶ with the result that he will never stop smoking.

A second prominent explanation for procrastination is task averseness. If people find a task difficult or unpleasant, they are likely to defer performance of that task and to choose to do something else instead.⁹⁷ "Consistently and strongly, the more people dislike a task, the more they consider it effortful or anxiety producing, the more they procrastinate"⁹⁸ Among other things, an aversive task can make "ephemeral pleasures" (like watching a television sitcom), and even "ephemeral chores" (like organizing one's desk), seem unusually enticing.⁹⁹

Finally, studies have shown some association between procrastination and a variety of personality traits, such as fear of failure, self-consciousness, high distractability, low achievement motivation, impulsiveness, poor self-control, low conscientiousness, and so on,¹⁰⁰ although not all psychologists agree that a cause and effect relationship exists.¹⁰¹ Some of these traits, such as impulsiveness and low conscientiousness, may be related to high rates of intertemporal discounting, so they may overlap with intertemporal discounting as an explanation for procrastination. The importance of these personality traits relative to intertemporal discounting and task

94. See Shane Frederick, George Loewenstein & Ted O'Donoghue, *Time Discounting and Time Preference: A Critical Review*, 40 J. ECON. LITERATURE 351, 382 (2002).

95. *Id.*

96. See Andreou, *Understanding Procrastination*, *supra* note 76, at 187-89. This risk may be higher if the future consequence is a loss or penalty than if it is a gain or reward, but it applies regardless of the valence of the future consequence. See generally Frederick, Loewenstein & O'Donoghue, *supra* note 94, at 370 (arguing that "loss aversion reinforces time discounting, creating a powerful aversion to delay [consumption]").

97. See Steel, *supra* note 76, at 68.

98. *Id.* at 75.

99. Andreou, *Understanding Procrastination*, *supra* note 76, at 189 (citing Silver & Sabini, *supra* note 77, at 214).

100. See Steel, *supra* note 76, at 75-79, 81.

101. See Schraw, Wadkins & Olafson, *supra* note 77, at 21-23.

averseness as potential causes of procrastination is not well understood.¹⁰²

The implications of what we know about procrastination and its causes for statutes of limitation can be summarized as follows. Many people procrastinate. Some do so in part because of personality traits,¹⁰³ which the justice system cannot realistically expect to change, and that therefore must be acknowledged as a characteristic that many plaintiffs are likely to share. The task of filing a lawsuit—or even simply hiring a lawyer—is one that many people probably would find unpleasant.¹⁰⁴ It is unfamiliar and intimidating, and it might require either the immediate expenditure of money or making an immediate commitment to pay money in the future. Thus, we can expect that it would be a task that many plaintiffs would be inclined to put off. Further, these characteristics of filing a lawsuit would be difficult to change. Altering them in a significant way would entail, among other things, overhauling the litigation process and the ways in which lawyers are retained and compensated.¹⁰⁵ Finally, the outcome of litigation is something that ordinarily will be perceived as occurring in the distant future. Even in efficient courts with small caseloads it can take a year or two for a lawsuit to be resolved, whether by settlement or adjudication.¹⁰⁶ In larger or less efficient courts, it may take considerably longer. Moreover, there is a popular perception that court proceedings are

102. See *id.* at 23 (“[O]ur findings are inconsistent with claims that procrastination is caused by fear of failure or laziness”).

103. See Steel, *supra* note 76, at 68-70.

104. See Learned Hand, *The Deficiencies of Trials To Reach the Heart of the Matter* (Nov. 17, 1921), in 3 LECTURES ON LEGAL TOPICS 89, 105 (1926) (“[A]s a litigant, I should dread a lawsuit beyond almost anything else short of sickness and death.”).

105. While it may be difficult to reduce the complexity and averseness of filing a lawsuit, it may be worth taking some steps in that direction. Unfamiliar, complex, or unpleasant tasks may trigger second-order procrastination. Second-order procrastination means postponing planning about how to proceed with a task, thus delaying even starting on the task, and compounding delay in task completion. See Andreou, *Second-Order Procrastination*, *supra* note 93, at 243-44. For the intimidated or poorly educated, even finding out how to approach the task of filing a lawsuit might itself be aversive. Relatively inexpensive steps to make the process easier, such as an informational 800 telephone number or a widely publicized informational website, might be beneficial.

106. See, e.g., Jeffrey O’Connell, *A Proposed Remedy for Mississippi’s Medical Malpractice Miseries*, 22 MISS. C. L. REV. 1, 2 (“[T]he average tort lawsuit reaches trial years after it is filed.”) (citation omitted).

complex and prolonged.¹⁰⁷ Thus, the process of filing a lawsuit is both an aversive task and one in which there are up-front costs—at least the cost of deferring leisure or other preferred activities, and perhaps the cost of incurring litigation expenses and stress as well—and the prospect of, at best, a long-delayed reward of an uncertain amount. This may increase the likelihood that even a plaintiff who wants to file a lawsuit rather than forfeit her claim will become locked into a cycle of going to the beach day after day rather than foregoing that pleasure and hunting for a lawyer instead. Accordingly, the task of filing a lawsuit triggers intertemporal discounting and task aversion, two of the three most significant causes of procrastination.¹⁰⁸ The result is that many people predictably will wait until the deadline for filing a lawsuit is imminent before taking action, and having underestimated the amount of time and effort required to complete the task because of the planning fallacy, may be vulnerable to missing the deadline and forfeiting their claims.

D. Deadlines

The typical strategy for attempting to overcome procrastination is the imposition of a deadline.¹⁰⁹ A deadline is “[a] line that does not move or run.”¹¹⁰ The term also possesses the connotation that

107. See, e.g., CHARLES DICKENS, *BLEAK HOUSE* (Norman Page ed., Penguin Books 1971) (1853).

108. See *supra* note 83 and accompanying text.

109. See *Spears v. City of Indianapolis*, 74 F.3d 153, 157 (7th Cir. 1996) (“We live in a world of deadlines. If we’re late for the start of the game or move, or late for the departure of the plane or train, things go forward without us.”).

110. 4 OXFORD ENGLISH DICTIONARY 290 (2d ed. 1989).

negative consequences will occur if the line is transgressed.¹¹¹ The way deadlines work is illustrated by the following example:

[Tom] is a college student who has been assigned an essay on September 15th, the start of a semester, due on December 15th, when the course ends.... Tom has two choices over the course of his semester: studying or socializing. Tom likes to socialize, but he likes to get good grades even more. However, because the positive component of socializing is perpetually in the present, it maintains a uniformly high utility evaluation. The reward of writing is initially temporally distant, diminishing its utility. Only toward the deadline do the effects of discounting decrease, and writing becomes increasingly likely.¹¹²

Because of this mechanism, it is widely believed that deadlines are effective in reducing delay or procrastination in task completion,¹¹³ and they are commonly employed. Statutes of limitation are an obvious example.

Deciding to create a deadline, however, is only the first step. Not all deadlines possess the same structure. Once the decision to impose a deadline is made, choices about the design of that deadline also must be made. These choices include resolving such issues as:

111. The first use of the term may have referred to a fishing line that was baited with dead rather than live bait (so that it did not move), or that was weighted so that it would remain stationary in the water. See *id.* Shortly thereafter, the term was used to refer to a rope line placed seventeen feet inside the perimeter of the stockade wall at the Andersonville, Georgia prison camp during the American Civil War. BENSON J. LOSSING, 3 PICTORIAL HISTORY OF THE CIVIL WAR IN THE UNITED STATES OF AMERICA 600 (1868) (“[S]eventeen feet from the inner stockade was the ‘dead-line,’ over which no man could pass and live.”); see also OXFORD ENGLISH DICTIONARY, *supra* note 110 (quoting 44 CONG. REC. 358, 384 (1876)) (referring to the “‘dead line,’ beyond which the prisoners are not allowed to pass.”). Eventually, the term was used to denote limits on time as well as space, such as a point in time by which a newspaper story had to be completed. See OXFORD ENGLISH DICTIONARY, *supra* note 110.

112. Steel, *supra* note 76, at 71. Although this example illustrates the effect of deadlines on intertemporal discounting, they mitigate the effects of task averseness or problematic personality traits in exactly the same ways. As the deadline (and the associated penalty) approaches, the adverse consequences of missing the deadline overwhelm the benefits of postponing the task, and procrastination frequently ceases.

113. See, e.g., Gersen & O’Connell, *supra* note 2, at 948 (reporting that “deadlines do shorten the time frame in which agencies issue policy”); Alvin E. Roth, J. Keith Murnighan & Francoise Schoumaker, *The Deadline Effect in Bargaining: Some Experimental Evidence*, 78 AM. ECON. REV. 806, 822 (1988) (concluding that “one of the clearest phenomena to emerge from the [bargaining experiments] discussed here is a ‘deadline effect’: a very high percentage of agreements are reached very close to the end, just before the deadline”).

(1) whether the deadline should be externally-imposed or self-imposed; (2) whether the period allowed for task completion should be long or short; and (3) whether there should be one, end-of-period deadline or multiple, evenly-spaced deadlines.

For example, a plausible response to the likelihood that many plaintiffs will procrastinate in filing suit might be to lengthen the deadline in order to minimize the risk that the deadline will be missed. In fact, this approach has been widely employed in the context of statutes of limitation. Over the last twenty-five years, nearly all of the amendments to statutes of limitation have lengthened their duration.¹¹⁴ Similarly, contractual provisions purporting to shorten the duration of limitation periods frequently are rejected as unconscionable.¹¹⁵

This intuition, however, may be unsound. In particular, lengthening limitation periods or other deadlines may be ineffective or make matters worse. First, rather than ensuring that a deadline is met, a long deadline may simply delay performance of the task without avoiding the last minute rush that can lead to missing the deadline. Psychologists have identified a phenomenon they call the "student syndrome."¹¹⁶ When people have more time than necessary to complete a task, they treat the extra time as a margin of safety that will help ensure that they meet the deadline.¹¹⁷ Unfortunately, rather than beginning the task right away and reserving the safety margin to cover unexpected interruptions, unanticipated obstacles, equipment failure, and the like, people typically consume the safety margin first, delaying beginning the task until only the minimum amount of time required to complete the task under the most favorable conditions remains.¹¹⁸ The result is that they often miss the deadline because they underestimate the time required for task

114. See Steve Seidenberg, *Time's Running Out for Time Limits*, A.B.A. J. E-REPORT, Sept. 2003, at 4.4 ("There is a trend for states to lengthen or eliminate their statutes of limitations.") (quoting Evan Lee); see also O'Neal, *supra* note 24, at 107, 124 (describing the erosion of the date-of-injury rule of accrual in favor of the discovery rule of accrual because the latter is more generous to plaintiffs than the former).

115. See, e.g., *Davis v. O'Melveny & Myers, L.L.C.*, 485 F.3d 1066, 1076-78 (9th Cir. 2007) (holding unconscionable a one-year limitation period). But see *Soltani v. W. & S. Life Ins. Co.*, 258 F.3d 1038, 1044-45 (9th Cir. 2001) (finding that, as a general matter, a consensual six-month limitation period is not unreasonably short).

116. See ELIJAHU M. GOLDRATT, *CRITICAL CHAIN: A BUSINESS NOVEL* 24 (1997).

117. See *id.*

118. See *id.*

completion, regardless of how much extra time they were allowed at the outset.¹¹⁹ Therefore, lengthening the limitation period may have little or no effect in terms of preserving claims, but would definitely lengthen the period between the lawsuit generating event (or discovery thereof) and the filing of the lawsuit. Second, a generous deadline may decrease the likelihood that the task will be completed at all.¹²⁰ A long period may appear like a period with no deadline. At best, it may stimulate the creation of self-imposed deadlines, which research suggests are less effective than externally-imposed deadlines.¹²¹ Third, we may be overestimating the time required to file a lawsuit.¹²² If so, extending the duration of limitation periods may inadvertently reduce the number of lawsuits filed and unnecessarily compromise the purposes of statutes of limitation.

In one study, college students were asked to answer and return a questionnaire in exchange for a five-dollar reward.¹²³ They were divided into three groups, each of which received a different deadline. The duration of the deadline significantly affected the percentage of the students who answered the questionnaire and collected their reward. About 60 percent of the students with a five-day deadline completed the questionnaire and received the five dollar reward, compared with only 42 percent with a twenty-one-day deadline.¹²⁴ The worst performers of all were those in the group that was not assigned a deadline. Only 25 percent of the students with no deadline completed the questionnaire and received a reward.¹²⁵ The experimenters concluded that "the more time people had to complete the task, the less likely they were to do it."¹²⁶

A later, more elaborate study yielded similar results.¹²⁷ In this experiment, college students were asked to choose among three options: (1) buying two movie tickets at the reduced price of eleven dollars (the normal price was twelve dollars); (2) buying two movie

119. *See id.*

120. *See infra* notes 131-34 and accompanying text.

121. *See infra* notes 140-49 and accompanying text.

122. *See supra* notes 71-75 and accompanying text.

123. Amos Tversky & Eldar Shafir, *Choice Under Conflict: The Dynamics of Deferred Decision*, 3 PSYCHOL. SCI. 358, 361 (1992).

124. *Id.*

125. *Id.*

126. *Id.*

127. *See generally* Silk, *supra* note 68.

tickets for an increased price of thirteen dollars (the normal price was twelve dollars), less a six dollar (or nine dollar) mail-in rebate; or (3) buying no movie tickets.¹²⁸ The deadline for rebate redemption was either one day, seven days, or twenty-one days.¹²⁹ One hundred eighty-four students purchased the rebate offer, and the net redemption rate by those who purchased the rebate offer was 59 percent.¹³⁰

What the experimenter wanted to determine was whether varying duration of the deadline would affect the percentage of students applying for the mail-in rebate, their delay in initiating the application process, and their delay in completing the application process.¹³¹ The longer the deadline, he found, the smaller the number of students who applied for the mail-in rebate.¹³² In the group assigned a deadline of one day, 77 percent applied for the rebate, while only 70 percent of those assigned a seven-day deadline did so.¹³³ The group assigned the twenty-one-day deadline was the least likely to apply for the rebate. Just 59 percent of the students in that condition bothered to apply.¹³⁴ The results also showed that the longer the deadline, the greater the delay both in beginning the process of applying for a rebate and in completing that process once it was begun.¹³⁵ The conclusion was that "shorter deadlines can increase redemption rates by mitigating the influence of procrastination."¹³⁶ The study also suggests that not only do longer deadlines result in lower rates of task completion, but they also increase delay both in beginning the task and in completing the task once it has been started.¹³⁷

128. *Id.* at 13.

129. *Id.* at 14.

130. *Id.* at 18.

131. *Id.* at 11-12.

132. *Id.* at 18.

133. *Id.* at 36 fig.4B.

134. *Id.*

135. *Id.* at 18-19.

136. *Id.* at 12-27. Whether this difference between longer and shorter deadlines would persist if both the longer and shorter periods possessed a more extended duration (say, one year and two years), a situation more analogous to statutes of limitation, apparently has not been studied. Nevertheless, there is no reason to expect that a trend of declining applications over time would suddenly reverse itself.

137. *Id.* This indicates that conventional assumptions on which some analyses of statutes of limitation are based may be flawed. See, e.g., Thomas J. Miceli, *Deterrence, Litigation Costs,*

Interestingly, it did not matter whether the amount of the rebate was smaller or larger: in either case, the redemption rate was about the same.¹³⁸ Even more surprising was the finding that varying the difficulty of the application process revealed a “backlash” effect: those who confronted a more challenging application process were actually more likely to complete that process than those who faced an easier application process.¹³⁹

Both the Tversky and Shafir study and the Silk study utilized a single, end-of-period deadline. A different study, which was conducted by Ariely and Wertenbroch, explored the question whether multiple, evenly-spaced deadlines might work better than a single, end-of-period deadline.¹⁴⁰ In that experiment, students were recruited to proofread papers.¹⁴¹ Payment was contingent on the quality of the proofreading (ten cents were paid for each correctly detected error) and timely completion (a one dollar penalty was imposed for each day of delay in completing the project).¹⁴² Sixty students participated in the study.¹⁴³ They were randomly assigned to three conditions.¹⁴⁴ In the evenly-spaced deadline condition, participants were required to submit one of the three texts they had proofread every seven days.¹⁴⁵ In the end-of-period-deadline condition, the participants were required to submit all three texts within twenty-one days.¹⁴⁶ In the self-imposed deadline condition, the participants were allowed to choose their own deadline for each

and the Statute of Limitations for Tort Suits, 20 INT'L REV. L. & ECON. 383, 393 (2000) (asserting that “a longer statute [of limitations] enhances deterrence by confronting injurers with more lawsuits”); see also Matthew A. Edwards, *The Law, Marketing and Behavioral Economics of Consumer Rebates*, 12 STAN. J.L. BUS. & FIN. 362, 415-16 (2007) (“Although most consumers might express a preference for long task completion deadlines, ... scholarly work actually supports a different, counterintuitive notion that longer deadlines may lead to increased breakage and that shorter deadlines might increase rebate redemption. Regulators, therefore, might want to consider mandating shorter redemption deadlines.”) (citations omitted).

138. Silk, *supra* note 68, at 36 fig.4B.

139. *Id.* at 29-30.

140. Dan Ariely & Klaus Westenbroch, *Procrastination, Deadlines, and Performance: Self-Control by Precommitment*, 13 PSYCHOL. SCI. 219, 222 (2002).

141. *Id.*

142. *Id.*

143. *Id.*

144. *Id.*

145. *Id.*

146. *Id.*

of the three texts, provided that all three had to be submitted within twenty-one days.¹⁴⁷ The results were that those assigned to the evenly-spaced deadline condition experienced fewer delays in submissions, performed better on the task by correctly detecting more grammatical mistakes, and enjoyed higher earnings than those in the end-of-period-deadline condition.¹⁴⁸ Although the students who operated under the self-imposed deadline condition also outperformed those in the end-of-period-deadline condition in all three dimensions, they underperformed those in the externally imposed evenly-spaced deadline condition.¹⁴⁹ The upshot of this is not just that deadlines matter, but also that the structure of deadlines matters.

The Silk study and the Tversky and Shafir study both involved situations analogous to the conditions in which statutes of limitation operate. In both studies, the subjects were like plaintiffs in that they were given the opportunity to apply for a monetary reward. Further, in both studies, the penalty for missing a deadline was loss of the entire potential award.

The Ariely and Wertenboch study, by contrast, is not quite as analogous. The task involved in that experiment—proofreading three papers—could easily be divided into three discrete tasks. Filing a lawsuit could be viewed in the same way—that is, it could be divided up into a series of steps, such as contacting a lawyer, retaining a lawyer, etc.—but those events would be difficult for the justice system to monitor, and a different but parallel set of steps would have to be designed for pro se litigants. On the other hand, like the Silk study and the Tversky and Shafir study, the Ariely and Wertenboch study required participants to complete a task in order to obtain a reward, a situation analogous to the situation accompanied by a plaintiff contemplating filing a lawsuit.

147. *Id.*

148. *Id.* at 223.

149. *Id.* at 222-23; see also Charles Vlek & Gideon Keren, *Behavioral Decision Theory and Environmental Risk Management: Assessment and Resolution of Four 'Survival' Dilemmas*, 80 ACTA PSYCHOLOGICA 249, 264 (1992) ("One possibility is to decrease the psychological distance to the future, e.g., by making the future more salient, 'now.' Part of this strategy might amount to ... 'proximal goal setting': the breaking up of a long-term goal into successive steps to be achieved at moments lying much closer to the present and to one another." (citing ALBERT BANDURA, SOCIAL LEARNING THEORY (1977))).

E. Summary

The research summarized above teaches several lessons about how people actually behave and respond to deadlines that are relevant to the design of statutes of limitation. First, deadlines improve performance. Those working under a deadline are more likely to complete the task and obtain a reward or avoid a penalty than those working without one. They are also likely to complete the task earlier than those working without a deadline. Second, although a self-imposed deadline is better than no deadline at all, externally-imposed deadlines are more effective than self-imposed deadlines in reducing delay and promoting task completion. Third, not all deadline structures are equally effective. The shorter the deadline, the more likely people are to complete a task and claim their reward, whether the reward takes the form of a payment or a partial refund of the purchase price. Shorter deadlines also result in fewer missed deadlines than do longer deadlines. Further, multiple, evenly-spaced deadlines reduce delay or procrastination more effectively than a single, end-of-period deadline. Fourth, losses and penalties provide stronger incentives than gains and rewards. People experience at least twice as much displeasure from losing \$100 as the pleasure they would experience from gaining \$100. Fifth, people are vulnerable to the planning fallacy. They consistently underestimate how long it will take to complete tasks, even when they have missed deadlines while performing similar tasks in the past. Sixth, people discount the future relative to the present. In particular, even large distant future gains are ineffective in overcoming small increments of immediate gain.

This means that the following principles should guide the design of a limitation system: (1) statutes of limitation should be used to externally impose filing deadlines; (2) the deadline provided by a statute of limitation should be shorter rather than longer; (3) each statute of limitation should consist of multiple, evenly-spaced deadlines rather than simply one, end-of-period deadline; (4) plaintiffs should be penalized for missing the statute of limitation deadline rather than rewarded for meeting it; (5) a plaintiff should not lose all of the value of a claim simply for missing one deadline; and (6) the discounted future penalty associated with each evenly-spaced

deadline contained in a statute of limitation should be sufficiently painful to overcome the undiscounted present reward for not filing.

III. POSSIBLE ALTERNATIVE STRUCTURES

A. Varying the Burden of Persuasion

One possible alternative structure for statutes of limitation would be to vary the burden of persuasion depending upon how promptly a claim is filed. Specifically, the level of confidence required could be raised over time: plaintiffs who wait until late in the limitation period would be required to provide more persuasive evidence in support of their claims than those who file early in the limitation period. As an example, assume a limitation period of three years duration.¹⁵⁰ A plaintiff who filed within one year would be required merely to prove her claim by a preponderance of the evidence. A plaintiff who filed between one year and two years, however, would be required to prove her claim by clear and convincing evidence. Finally, a plaintiff who filed between two years and three years would be required to prove her claim beyond a reasonable doubt. Claims not filed within three years would be extinguished.

This possible change has much to recommend it. It is incremental in nature, so the harshness of the all-or-nothing approach is mitigated. It also possesses many of the characteristics which psychologists suggest a good deadline structure should have. A further advantage of this approach is that it simultaneously punishes untimely filing by disadvantaging tardy plaintiffs and compensates defendants for the risk that they will be unfairly prejudiced by the deterioration of evidence resulting from the plaintiff's delay.

Tinkering with burdens of persuasion, however, may impose costs. Burdens of persuasion are defined and allocated based on a variety of considerations, including such matters as convenience, access to evidence, and the types of adjudicative error we most want to minimize.¹⁵¹ The level of confidence required rests on societal

150. This is a common period length. See, e.g., CAL. CIV. PROC. CODE § 338(d) (West 2008) (providing a three-year period for fraud).

151. See 2 KENNETH S. BROUN, MCCORMICK ON EVIDENCE § 337 (6th ed. 2006).

judgments about the costs of litigation errors and the optimal allocation of those costs among plaintiffs and defendants in civil cases.¹⁵² Tampering with the burden of persuasion to accomplish purposes external to the law of evidence or the substantive law, such as the promotion of a limitation of actions policy, indirectly compromises their ability to accomplish their own internal purposes.

A second problem with manipulating burdens of persuasion as a way of creating a more sophisticated limitation system is that although the scheme seems simple, there is little consensus about what the three levels of persuasion actually mean.¹⁵³ They are widely viewed as “awkward vehicles” for expressing the level of confidence required.¹⁵⁴ Studies show that there is wide variation in the percentage of certainty people attribute to each of the three burdens of persuasion.¹⁵⁵ The “beyond a reasonable doubt” standard might mean 80 percent sure to one person and 99 percent sure to another. Therefore, the detriment imposed by the higher burden would be uncertain and would vary among factfinders.

A third problem with varying burdens of persuasion is that it would be difficult to confirm that the scheme had been implemented correctly. Even assuming that the three levels of persuasion had roughly the same meaning for most people, there would be no way

152. Cf. Donald Wittman, *Two Views of Procedure*, 3 J. LEGAL STUD. 249, 253 (1974) (“In criminal cases the standard of proof needed to convict a defendant is proof ‘beyond a reasonable doubt.’ The error rate of the trial is thus extremely biased in favor of the defendant [the probability of finding a guilty man innocent is much greater than the probability of finding an innocent man guilty]. In contrast, in civil cases the standard of proof is usually the ‘preponderance of the evidence’ or ‘more likely than not’ standard, resulting in an error rate that is almost totally unbiased [the probability of finding an innocent man guilty is almost the same as the probability of finding a guilty man innocent].”).

153. MCCORMICK, *supra* note 151, § 339-41.

154. *Id.* § 339.

155. See Rita James Simon & Linda Mahan, *Quantifying Burdens of Proof: A View from the Bench, the Jury, and the Classroom*, 5 LAW & SOC'Y REV. 319, 325 (1971) (finding that when asked to express the level of belief required in terms of probabilities, jurors had a very different understanding of the phrase “preponderance of the evidence” than did judges, and that they believed the level of certainty required to satisfy that standard was far higher); Lawrence M. Solan, *Refocusing the Burden of Proof in Criminal Cases: Some Doubt About Reasonable Doubt*, 78 TEX. L. REV. 105, 126-29 (1999) (reporting numerous studies showing variation in the interpretation of the degree of certainty required by the “beyond a reasonable doubt” standard of persuasion; concluding that most judges surveyed thought the probability of guilt had to be in the 85 to 95 percent level of confidence, whereas most jurors concluded that a level of confidence of between 61 percent and 81 percent was required).

of confirming that judges or jurors actually applied the intended burden of persuasion, even if they had attempted to. A juror, or even a judge, might believe that she is applying the "beyond a reasonable doubt" standard to a tardy but extremely sympathetic and deserving plaintiff, even though she actually is applying a lower burden of persuasion. Moreover, because the process is internal, external validation is impossible. As a result, fact-finder nullification probably would be both likely and undetectable.

A fourth difficulty with varying the burden of persuasion to provide an incentive for prompt filing is that the technique is already used to implement other goals. Although the "beyond a reasonable doubt" standard is seldom used in civil cases,¹⁵⁶ the "clear and convincing" standard occasionally is used to raise the level of certainty required where a claim is disfavored on policy grounds, presents a special danger of undetectable deception by the plaintiff, or poses an especially grave risk to an important liberty interest.¹⁵⁷ Using this technique to improve statutes of limitation would interfere with those existing schemes. Relatedly, because the "beyond a reasonable doubt" standard already is constitutionally required in all criminal cases,¹⁵⁸ varying the burden of persuasion as a way of implementing the statute of limitation in criminal cases would not be possible. This would require handling limitation of actions differently in civil cases than in criminal cases. While adopting a different statute of limitation structure for criminal cases than for civil cases might make sense, it would also add complexity.

The final problem with varying burdens of persuasion is related to the second. Even when future losses or benefits are clearly delineated, people still discount them steeply. If future gains or losses are only vaguely described, people probably will discount them even more steeply relative to more concrete present gains and losses.¹⁵⁹ As an example, a plaintiff who risks the loss of a claim

156. MCCORMICK, *supra* note 151, § 341.

157. *Id.* § 340.

158. *In re Winship*, 397 U.S. 358, 364 (1970).

159. See Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, 39 AM. PSYCHOLOGIST 341, 349 (1984); Kahneman & Tversky, *Prospect Theory*, *supra* note 39, at 265 (defining the "certainty effect" as the principle that "people overweigh outcomes that are considered certain, relative to outcomes which are merely probable").

with an estimated value of \$100,000 by filing late probably feels a stronger incentive to meet the filing deadline than one who merely risks having to satisfy a different and arguably higher, but vaguely described, standard of proof.¹⁶⁰ Because the difference between, for example, the clear and convincing evidence standard and the beyond a reasonable doubt standard is vague, the change from one to the other may not create a strong incentive for prompt filing.

In light of these difficulties, varying burdens of persuasion as a mechanism for implementing an incremental approach to statutes of limitation probably would not work well.¹⁶¹

B. Depreciating the Value of the Claim

A more promising approach would be to penalize plaintiffs for delay in filing by gradually decreasing the value of their claims. The most straightforward application of this principle would be a small reduction in the value of the claim for each day that passes between the accrual of the claim and its eventual extinguishment. As an example, assume a limitation period of four years or 1460 days.¹⁶² The value of the plaintiff's claim might be decreased by 1/1460 per day until the plaintiff's claim was extinguished. Specifically, if the plaintiff filed before the limitation period expired, the amount of the plaintiff's damages recovery could be reduced by multiplying the amount awarded by the fact-finder by a fraction, the numerator of which would be the number of days of the limitation period that had elapsed, and the denominator of which would be the total number of days in the limitation period. Therefore, a plaintiff who delayed for two years after accrual of its claim before filing suit would have its damages award reduced by multiplying the amount of the award by 730/1460, or 50 percent.

160. On the other hand, civil plaintiffs usually do not know whether they will prevail, and often do not know how much money they will receive if they prevail or when they will receive the money. Therefore, reducing the amount of money they will receive may not send a strong signal about the importance of promptness either.

161. See Epstein, *supra* note 4, at 1183 ("In the end no manipulation of the burdens of proof, the rules of admissibility, or the discretion of the jury works as well or efficiently as a simple rule that forces a plaintiff to sue early in the process or forever hold his peace.").

162. I am not proposing that limitation periods have any particular duration. That issue lies beyond the scope of this Article. The examples I use are merely intended to illustrate the structural change I am suggesting.

One refinement is necessary. Some part of the limitation period should be excluded before the value of the claim would begin to be reduced on a daily basis. Certainly, it is reasonable to allow plaintiffs some period of time to prepare for filing suit without penalty. Whether this span of time should be 30 days or 90 days or 180 days or even longer is debatable, but it makes sense to exclude a reasonable period of time immediately following accrual because it seems unrealistic to characterize that as delay on plaintiff's part. I suggest that one year is the appropriate penalty-free time period. This should give almost all plaintiffs ample time to file their claims, and its simplicity makes it easy for everyone to remember and apply.

There is reason to doubt, however, that daily discounting of the value of claims would work optimally. Although a continuous stream of tiny identical daily penalties is aesthetically pleasing, we need a penalty structure that will be effective in combating procrastination. As research has shown, because people discount the future at high rates, the steady but noiseless daily accrual of small reductions in the amount of damages that may be awarded in the future probably will be overshadowed even by smaller daily immediate rewards of not filing, and thus will provide an insufficient incentive for prompt filing.¹⁶³

In order to avoid this problem, another refinement is required. There should be a series of penalties imposed in periodic steps, and the penalty associated with each step should be large enough to be noticeable and to outweigh the small daily benefits of avoidance or postponement, even when intertemporal discounting is considered. As an example, assume a four-year limitation period. The value of the plaintiff's claim would remain at 100 percent if it is filed at any point between accrual and the expiration of one year, but would be reduced to 75 percent of its value if it is filed between year one and year two, to 50 percent if it is filed between year two and year three, and to 25 percent if it is filed between year three and year four.¹⁶⁴

163. See *supra* Part II.A.

164. Research regarding the way in which people understand fractions suggests that these discounts might better be described as a reduction of 25 cents for every dollar of claim value, or the like. See Gary L. Brase, *Which Statistical Formats Facilitate What Decisions? The Perception and Influence of Different Statistical Information Formats*, 15 J. BEHAV. DECISION MAKING 381 (2002).

After the fourth anniversary of the accrual date, the claim would be extinguished.¹⁶⁵ This new structure would provide the plaintiff with a reasonable amount of time, such as one year, within which to file a lawsuit without suffering any penalty whatsoever for delay. Thereafter, the plaintiff would suffer a significant, but not draconian, penalty for each additional year of delay. It might be described as replacing one deadline with a series of "harmlines."

Experience from a different context suggests that such an approach would work. Some teachers use the following grading structure to encourage students to turn in their assignments early in the semester instead of waiting until the last minute, exactly the effect we are aiming for in the limitation of actions context. If an assignment is turned in before March 1, the student will begin with an A, and then be marked down from there during the grading process. If the assignment is turned in after March 1 but before April 1, the student will begin with a B, and then be marked down from there. If the assignment is turned in after April 1 but before May 1, the student will begin with a C, and then be marked down from there. Finally, if the paper is not turned in by June 1, the student will receive an F on the assignment. Teachers probably would not have adopted this structure so widely unless it was effective in reducing procrastination and appropriately balanced promptness with fairness to students.

C. The Guttel and Novick Proposal

Two scholars have suggested a fresh approach to statutes of limitation that rests in part on concepts similar to those underlying mine.¹⁶⁶ They also propose jettisoning the all-or-nothing structure of statutes of limitation, but in a different manner. As they explain:

The rule we advance never entirely bars the claim. Instead, it extracts a price that compensates the defendant for his eviden-

165. In my example, the loss of value is the same at each step. It would be possible, of course, to increase or decrease the percentage discount during each subsequent period. It also would be possible to apply a different pattern of discounting, depending on the type of claim involved. All of these approaches, however, would make the structure more complicated, something that is highly undesirable in this particular area of law.

166. Guttel & Novick, *supra* note 31.

tiary loss. This price consists of the total damages claimed by the plaintiff, discounted by the probabilistic value of the lost evidence. Thus, for example, if decay in the exculpatory evidence doubles the plaintiff's chance of winning the case, from a baseline of 30 per cent to 60 per cent, the proposed model halves her potential damages.¹⁶⁷

The Guttel and Novick proposal is creative. Like mine, it recommends a gradual, rather than avulsive, reduction in the value of the plaintiff's claim.¹⁶⁸ By ignoring the reasons for the plaintiff's delay, it also neatly sidesteps many of the practical problems that arise in applying statutes of limitation.¹⁶⁹ Finally, it aims to motivate plaintiffs to file promptly by imposing a penalty, and the amount of that penalty is measured by the amount of harm actually caused by the delay in filing. These are important strengths.

On the other hand, their proposal possesses flaws. First, it assumes that delay prejudices only the defendant, and not the plaintiff. This is untrue. The plaintiff bears the burden of persuasion on the elements of her claim. If, due to faded memories or lost documents, the surviving evidence is unconvincing, delay is likely to hurt the plaintiff at least as much as, if not more than, it hurts the defendant.¹⁷⁰

Second, statutes of limitation have several purposes. The Guttel and Novick proposal addresses just one of them: avoiding the deterioration of evidence. It does nothing to address the other purposes unless they happen to coincide with the deterioration of evidence. Sometimes they will, but sometimes they will not. For example, evidence may decay either more rapidly or more slowly than societal standards evolve, yet avoiding the retrospective

167. *Id.* at 132-33.

168. In this respect, it lends support to the incremental approach I am suggesting.

169. See Guttel & Novick, *supra* note 31, at 133.

170. Plaintiffs, not just defendants, can be hurt by the deterioration of evidence. See William Swadling, *Limitation*, in *BREACH OF TRUST* 319 (Peter Birks & Arianna Pretto eds., 2002) ("When cases (as they often do) depend predominately on the recollection of witnesses, delay can often be most prejudicial to defendants and to plaintiffs also. Witnesses' recollections grow dim with the passage of time and the evidence of honest men differ sharply on the relevant facts. In some cases it is sometimes impossible for justice to be done because of the extreme difficulty in deciding which version of the facts is to be preferred") (quoting *Birkett v. James*, [1978] A.C. 297, 327 (H.L.) (Salmon, L.)); Ochoa & Wistrich, *Puzzling Purposes*, *supra* note 15, at 471-72.

application of contemporary standards is one of the purposes of statutes of limitation.¹⁷¹ In addition, their proposal abandons any pretense of promoting repose—another important purpose of statutes of limitation¹⁷²—by explicitly permitting the plaintiff “to file her claim at any point.”¹⁷³

Third, the determination of prejudice seems impractical. Assessing the probative value of evidence that no longer exists presents an intractable problem. What would a witness who has died have said? What would documents that were destroyed have revealed? How, if at all, might the fact-finder’s decision have differed if that additional evidence had been presented? These issues cause problems in the spoliation of evidence context,¹⁷⁴ and in the speedy trial context.¹⁷⁵ They likely would do so in this context as well.

Fourth, most cases settle, and few are tried.¹⁷⁶ This is widely thought to be socially beneficial,¹⁷⁷ and, as presently structured, the justice system both encourages and depends on a high settlement rate. Any proposal for reforming statutes of limitation must take account of this reality. Predictable litigation outcomes promote settlement, and unpredictable litigation outcomes discourage settlement.¹⁷⁸ Because the prejudice determination that Guttel and Novick propose would be highly unpredictable, it would provide a poor platform for settlement bargaining. Therefore, it probably

171. See Ochoa & Wistrich, *Puzzling Purposes*, *supra* note 15, at 493-95.

172. See *id.* at 460-71.

173. Guttel & Novick, *supra* note 31, at 178.

174. See 7 JAMES W. MOORE, ET AL., *MOORE'S FEDERAL PRACTICE* ¶ 37A.12[5][6][iii] (3d ed. 2006). Indeed, a common approach to spoliation is to abandon the effort to adjudicate the merits altogether. See, e.g., *Teletron, Inc. v. Overhead Door Corp.*, 116 F.R.D. 107, 126 (S.D. Fla. 1987) (entering default judgment against a defendant after its corporate counsel destroyed documents responsive to a pending discovery request that would have supported the plaintiff's allegations).

175. *Doggett v. United States*, 505 U.S. 647, 655 (1992) (noting that “time’s erosion of exculpatory evidence and testimony ‘can rarely be shown,’ ... compromis[ing] the reliability of trial in ways that neither party can move, or for that matter, identify”) (quoting *Barker v. Wingo*, 407 U.S. 514, 532 (1972)).

176. See Marc Galanter & Mia Cahill, “Most Cases Settle”: *Judicial Promotion and Regulation of Settlements*, 46 STAN. L. REV. 1339, 1387 (1994) (“[M]ost litigation results in settlement.”).

177. *Id.* at 1350-51.

178. See Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399, 423 (1973) (“[A] reduction in the variance between the parties’ estimates of the probability of prevailing and the true probability will [generally] increase the settlement rate.”).

would inhibit settlement in cases in which the plaintiff delayed appreciably in filing suit.

Fifth, the Guttel and Novick proposal does not provide plaintiffs with a strong incentive for early filing. Its focus is entirely ex post—that is, on correcting unfairness to the defendant that was caused by the deterioration of evidence. But plaintiffs deciding when to file their claims do not know how much evidence will be lost with each passing day or how a court will assess the probative value of that lost evidence. So, while plaintiffs under the Guttel and Novick proposal may know that they are running some risk that the value of their claims may be diminished by delay in filing, rational plaintiffs may be unable to quantify that risk, and irrational plaintiffs may tend to undervalue that risk because it is not concrete, and thus may become locked into a cycle of procrastination.¹⁷⁹

For these reasons, the Guttel and Novick proposal is less attractive than the incremental approach I have advanced. My proposal avoids most of these problems. It promotes all of the purposes of statutes of limitation, and it does so in a simple and straightforward manner that is knowable ex ante. Whatever the plaintiff recovers is reduced by a percentage that increases as the plaintiff's delay lengthens. This means that the implementation of the incremental approach is easy and predictable, that it provides an effective incentive for prompt filing, and that it supplies a sound platform for settlement negotiations.

179. See *supra* notes 85-89 and accompanying text; see also Vlek & Keren, *supra* note 149, at 264 (suggesting that positive time preference may be mitigated if policy promulgators "make expected losses, appear certain [so] they will figure on the 'debt' side of the decision maker's mental account; thereby [s]he would be more inclined to sacrifice something now in order to avoid the future losses").

IV. ASSESSMENT OF THE INCREMENTAL APPROACH

A. Advantages

1. *Encourages Plaintiffs To File Early in the Limitation Period*

The incremental approach to statutes of limitation would better achieve the important policies providing strong support for limiting civil actions than the present structure. It would promote repose in all of the four senses identified above.¹⁸⁰ It would minimize deterioration of evidence, thereby maximizing the accuracy of fact-finding and minimizing litigation costs. It would encourage the prompt enforcement of substantive law, thus strengthening both compensation and deterrence. And it would enhance fairness to defendants, by avoiding the retrospective application of contemporary standards. All of these purposes would be better served because the structure of the incremental approach encourages plaintiffs to file within the first year of the limitation period in a way that the present structure of the limitation system does not. Finally, the incremental approach also furthers the goal of vindicating meritorious claims by discouraging procrastination and by giving plaintiffs more than one chance to meet the filing deadline before their claims are extinguished.

2. *Utilizes Empirical Data from Psychology*

The incremental approach is not based on assumptions of rationality, wishful thinking, misguided intuition, or outmoded understandings of human behavior.¹⁸¹ Instead, it takes advantage of what psychologists have learned about procrastination, the planning fallacy, loss aversion, intertemporal discounting, and how human beings respond to deadlines. Accordingly, it offers the best hope of minimizing the risk of inadvertent forfeitures, increasing the likelihood that plaintiffs with meritorious claims will file while

180. See *supra* text accompanying notes 32-33.

181. See generally John T. Harvey, *Heuristic Judgment Theory*, 32 J. ECON. ISSUES 44, 47-48 (1998) ("[E]xperimental psychology suggests that most important assumptions of rational choice theory are violated with frequency in real life.").

all or most of the value of their claims remain, and making possible the fair and accurate adjudication of claims without imposing excessive costs on defendants.

3. *Treats Plaintiffs More Fairly*

Although some have suggested that the limitation system is not intended to punish dilatory plaintiffs,¹⁸² that is wrong as a historical matter. One of the two purposes Blackstone identified for having statutes of limitation was "to punish [the plaintiff's] neglect."¹⁸³ Plaintiffs, however, should not be punished more severely than is necessary to promote the goals of statutes of limitation. The incremental approach is more fair to plaintiffs because the size of a plaintiff's penalty depends on the degree of the plaintiff's fault. The longer the plaintiff delays, excluding the grace period, which is not fairly characterized as a period of "delay," the more deeply the value of the plaintiff's claim is discounted. A plaintiff who misses one deadline and loses all is treated very harshly,¹⁸⁴ whereas a plaintiff

182. See, e.g., Ailes, *supra* note 5, at 483 ("[I]t has been argued, [that] prescription is essentially a penalty inflicted upon the creditor because of his negligence Surely, it is a most superficial and distorted analysis of a statute of limitations which finds its *raison d'être* in punishing negligence. The bar of the statute, while it may have the effect of causing pecuniary loss to the creditor, was obviously not intended to punish his neglect. Far from being a criminal, the long-suffering creditor usually merits all aid the law gives him; but for practical reasons, the law is unable to aid him indefinitely.").

183. 3 WILLIAM BLACKSTONE, COMMENTARIES *188. The other purpose identified by Blackstone was that "it is presumed that the supposed wrongdoer has in such a length of time procured a legal title, otherwise he would sooner have been sued." *Id.*; see also *Wood v. Carpenter*, 101 U.S. 135, 139 (1879) (explaining that statutes of limitation "punish negligence").

184. As one commentator has observed:

My last category for unfair game design is the opportunity for total loss. And, by this, I don't mean the option of getting wiped out of a game. That's perfectly acceptable in many games, particularly if it's understood from the start.

However, what can feel more unfair is if the loss is an all or nothing sort of thing. In a game I played a couple of weeks ago, which I didn't particularly like, called *Smugglers of the Galaxy*, there's an entirely fair option for loss: you can get attacked by other players, and every time they do, your ship loses a point of hull. If that happens 5 times, your ship is destroyed and you start over. It's entirely cruel, but it's gradual, and thus fair.

Conversely, a game which I adore, called *Carcassonne* has very unfair rules for total loss of some elements of the game. There, you use your wooden figures to control fields, cities, and roads; you can mark up many points, particularly in fields which keep getting added to until the end of the game. But, if someone else

who misses one deadline and loses only a percentage of the value of her claim is treated relatively leniently. She may preserve most of the value of her claim by meeting the next deadline. This is more fair to plaintiffs because missing deadlines is common and difficult for most people to avoid.¹⁸⁵

4. *Tracks More Closely the Harms Caused by Delay*

Because it is gradual, the incremental penalty imposed on plaintiffs under my proposal makes more sense than the present all-or-nothing approach. The penalty suffered by the plaintiff for delay more closely approximates the harms to the defendant and to society as a whole resulting from the plaintiff's indiligence. For the most part, those harms occur incrementally, not avulsively.

As an example, on average, evidence degrades gradually, rather than all at once.¹⁸⁶ The gradual degradation of evidence makes outcomes more random and prone to error.¹⁸⁷ It only makes sense to reduce the stakes so that if the risk of error is higher, at least the cost of any error that occurs will be less.¹⁸⁸ But there is no point in overdoing it, which would simply cause an error in the opposite direction. So the reduction in the stakes should roughly approximate the increased risk of error, rather than underestimate or overestimate it. An incremental approach, even if imperfect, better satisfies this objective than does an all-or-nothing approach.

5. *Minimizes Pressure for Nullification*

Ad hoc nullification of procedural rules to serve the perceived needs of justice in a particular case is not uncommon.¹⁸⁹ Because it

manages to sneak into your field before the game-end you can potentially lose all of your points.

See Shannon Appelcline, *Its Not Fair!*, SKOTOS, June 24, 2004, www.skotos.net/articles/TTnT/TTnT_149.phtml.

185. As Tyler Ochoa commented, "[i]t is better to walk down stairs than to fall off a cliff."

186. See Ochoa & Wistrich, *Puzzling Purposes*, *supra* note 15, at 474.

187. Epstein, *supra* note 4, at 1181.

188. See Posner, *supra* note 178, at 401.

189. See Richard L. Marcus, *Completing Equity's Conquest? Reflections on the Future of Trial Under the Federal Rules of Civil Procedure*, 50 U. PITT. L. REV. 725, 755 (1989); Robert S. Summers, *Evaluating and Improving Legal Processes—A Plea for "Process Values,"* 60 CORNELL L. REV. 1, 39 (1974).

is less harsh and more fair to plaintiffs, and because it parallels the gradual accretion of the harms which the limitation system aims to minimize,¹⁹⁰ the incremental approach is likely to reduce the pressure courts presently feel to fudge the facts or distort limitation of action rules in order to avoid time-barring claims.¹⁹¹ For example, a judge or a jury feeling psychological pressure to nullify the statute of limitation for the benefit of a deserving plaintiff who was severely injured by the defendant's misconduct is more likely to capitulate to that pressure if the choice is between the plaintiff recovering 100 percent and the plaintiff recovering nothing, than it is if the choices are between the plaintiff recovering 100 percent and the plaintiff recovering 75 percent, or between the plaintiff recovering 75 percent and the plaintiff recovering 50 percent. In the latter scenarios, the plaintiff will at least receive something.¹⁹² Therefore, the emotional pressure factfinders will feel to bend the rules will be less.

6. More Consonant with the Fast Pace of Modern Life

The incremental approach is also more consistent with the pace of modern life. Many have observed that the speed of events is quickening.¹⁹³ Similarly, many of the obstacles to prompt filing which existed during earlier eras, such as painfully slow travel and communication, have been resolved. Viewed against this background, it seems only fitting that plaintiffs should be required to file their lawsuits more promptly.¹⁹⁴ In addition, this would allow

190. See *supra* notes 31-32 and accompanying text.

191. See *supra* note 18 and accompanying text.

192. On the other hand, losing 50 percent of the value of the claim may be like losing 100 percent of the value of the claim if the plaintiff will not be able to retain a lawyer or will lose interest and simply not bother to pursue the claim.

193. See, e.g., JAMES GLEICK, *FASTER: THE ACCELERATION OF JUST ABOUT EVERYTHING* 9 (1999) ("We are in a rush. We are making haste. A compression of time characterizes the life of the century now closing."); MARY SETTEGAST, *MONA LISA'S MOUSTACHE: MAKING SENSE OF A DISSOLVING WORLD* 9 (2001) ("[O]ur everyday perception is that time itself has accelerated while space has shrunk. The pace of life seems to be racing, and the entire geographical world is suddenly 'here' as the barriers of conventional space are overcome by telecommunications technology.").

194. Richard A. Epstein, *Past and Future: The Temporal Dimension in the Law of Property*, 64 WASH. U. L.Q. 667, 682 (1986) ("[T]he long limitation periods of ancient times appear to be inappropriate today.").

society to shift its attention from the past to the future, from which new challenges are rapidly approaching.

7. More Consistent with Comparative Fault

Abandoning the all-or-nothing approach to statutes of limitation is consistent with one of the fundamental themes of law, namely, that when two principles are in tension, "the law's preferred course is to seek an accommodating rule or result that is able to reduce, or if possible to resolve, the original tension."¹⁹⁵ This underlying theme animated the shift from contributory negligence to comparative negligence, a change analogous to the one I am proposing here.

Until the 1970s, most jurisdictions followed a doctrine known as contributory negligence in tort cases.¹⁹⁶ That doctrine provided that if a plaintiff was injured due to a defendant's negligence, but the plaintiff also was negligent, then the plaintiff would be disqualified from receiving any remedy for the defendant's negligence.¹⁹⁷ This doctrine persisted, even though it had long been regarded as unfair to plaintiffs.¹⁹⁸ During the last thirty years it has gradually been replaced in nearly every state by some form of comparative fault,¹⁹⁹ in which the plaintiff's negligence is not a complete defense to the defendant's liability, but merely reduces it in proportion to the

195. Gary T. Schwartz, *Contributory and Comparative Negligence: A Reappraisal*, 87 YALE L.J. 697, 725-26 (1978).

196. See *id.* at 697-98.

197. See BLACK'S LAW DICTIONARY 1062 (8th ed. 2004).

198. See *Li v. Yellow Cab Co.*, 532 P.2d 1226, 1230 (Cal. 1975) ("It is unnecessary for us to catalogue the enormous amount of critical comment that has been directed over the years against the 'all-or-nothing' approach of the doctrine of contributory negligence. The essence of that criticism has been constant and clear: the doctrine is inequitable in its operation because it fails to distribute responsibility in proportion to fault."); *McIntyre v. Balentine*, 833 S.W.2d 52, 56 (Tenn. 1992) (describing contributory negligence as "outmoded and unjust"); John W. Wade, *Comparative Negligence—Its Development in the United States and Its Present Status in Louisiana*, 40 LA. L. REV. 299, 303 (1980) (observing that contributory negligence was abandoned because "[t]here was no way to defend its obvious unfairness and the legal profession knew it").

199. See *McIntyre*, 833 S.W.2d at 55-56 & nn.2-4; 57B AM. JUR. 2D *Negligence* § 801 & n.1 (2004); see also Tony Weir, *All or Nothing*, 78 TUL. L. REV. 511, 513 (2004) (arguing that "the common law, as distinct from equity ... has traditionally preferred the 'all-or-nothing approach' but adding that "[t]his attitude has been changing for some time now, and the change is very manifest").

plaintiff's relative degree of fault or responsibility for the loss.²⁰⁰ Under a comparative fault regime, a plaintiff whose own negligence caused 20 percent of his loss could still recover the remaining 80 percent of his loss from the negligent defendant.²⁰¹

Adopting an incremental approach to statutes of limitation is akin to shifting from contributory negligence to comparative fault. Rather than completely destroying the value of the plaintiff's claim upon the expiration of the first deadline, it gives plaintiffs multiple opportunities to file suit, albeit with the proviso that they suffer a graduated penalty that increases as their delay in filing increases. Thus, like comparative fault, the incremental approach penalizes plaintiffs for engaging in conduct that is deleterious to themselves and to society, but it does so in a more fair or humane manner that maximizes both the chances that a plaintiff with a meritorious claim will avoid an inadvertent forfeiture of the entirety of that claim and the odds that he or she will file it sooner rather than later.

Comparative fault did not do away with any reduction of recovery based upon the plaintiff's fault. It recognized that although "the plaintiff is the biological victim of the accident," and thus "has a strong 'first-party' incentive to prevent the accident without regard to tort liability rules,"²⁰² that is not necessarily a sufficient incentive to induce socially optimal conduct.²⁰³ Similarly, in the context of statutes of limitation, a plaintiff with a meritorious claim has an incentive to file sooner rather than later, especially if prejudgment interest is not available,²⁰⁴ because the plaintiff's delay in filing will postpone the plaintiff's receipt of a remedy, thereby depriving her of its productive use in the interim. Like comparative fault, my proposal imposes an extra cost on the plaintiff who behaves in a socially suboptimal way because in this context the naturally occurring incentives are insufficient to achieve the desired results.

200. See BLACK'S LAW DICTIONARY 1062 (8th ed. 2004).

201. *Li*, 532 P.2d at 1229.

202. Schwartz, *supra* note 195, at 710.

203. *Id.*

204. See *supra* note 46 and accompanying text.

8. Summary

In sum, the incremental approach leaves everyone better off. Plaintiffs are better off because if their claims are meritorious, they receive their recoveries earlier, all other things being equal.²⁰⁵ If they do miss a deadline, their loss is partial rather than total.²⁰⁶ Finally, plaintiffs are more likely to file their claims because the initial deadline for doing so usually will be shorter than it presently is.

Defendants also are better off. They will be notified of disputes earlier and can attempt to resolve them informally through repairs, settlements, or the like. Failing that, they can preserve the evidence needed for their defense and be assured that their conduct will be judged by the legal standards in place at the time they acted.

Nonparties also are better off. Those who deal with or depend on plaintiffs or defendants can better plan for the future because uncertainty regarding both the plaintiff's and the defendant's future circumstances will be eliminated more quickly. In addition, because prompt filing strengthens deterrence,²⁰⁷ fewer nonparties will be harmed by misconduct in the future.

Courts also are better off. They can do a superior job of case management because early filing gives them a broader range of options in regulating the litigation process to ensure that adjudication occurs at the temporally optimal time.²⁰⁸ In addition, because deterioration of evidence will be minimized, their ability to decide cases accurately and efficiently will be enhanced.

My proposal, of course, does not fix all of the problems that make limitation of actions law so dysfunctional. Because it solves or ameliorates several important ones, however, it would improve statutes of limitation considerably.

205. See *supra* notes 148-49 and accompanying text.

206. See *supra* text accompanying note 164.

207. See *supra* text accompanying note 17 (noting that the passage of time reduces the deterrent effect on defendants).

208. See *infra* text accompanying note 235.

*B. Potential Disadvantages**1. Handles Non-Monetary Remedies Inelegantly*

One problem with the incremental approach is that it does not map comfortably onto the full panoply of remedies available in civil lawsuits. While this is a drawback, it will seldom be a serious one. Damages are far and away the most important element of recovery in civil actions. Damage awards, whether compensatory or punitive, can easily be reduced by a percentage. In most cases, then, the most common and most desired remedy will not pose a difficulty. The same is true of other monetary elements of recovery, such as prejudgment interest, postjudgment interest, attorneys fees, costs of suit, and restitution implemented by means of monetary payment.

Specific recovery of property or injunctions requiring conveyance of property are a bit more problematic. Typically, however, the value of real estate or unique pieces of personal property, such as a rare painting, can be monetized by means of an appraisal.

Injunctions requiring, or more commonly, prohibiting, particular future conduct,²⁰⁹ pose more of a challenge. Often, however, converting such relief into a numerical value will be possible. For example, if a defendant is held to have infringed a patent with ten years left to run and a plaintiff whose claim has been depreciated by 25 percent because of untimely filing seeks a permanent injunction, the term of the injunction could be limited to seven and one half years, rather than the full ten years' duration the plaintiff would have obtained if he had sued more promptly. Alternatively, assume that the defendant was selling 100,000 infringing copies of a copyrighted work per year. A plaintiff who sued during year two, that is, during months thirteen through twenty-four of a four-year limitation period, would be limited to recovering 75 percent of its monetary damages. Similarly, it could obtain injunctive relief preventing the defendant from engaging in 75 percent of its infringing sales. Thus, the defendant could continue to sell up to 25,000 infringing copies of the copyrighted work per year. This

209. See generally 1 DAN B. DOBBS, DOBBS LAW OF REMEDIES §§ 2.9-11 (West 2d ed. 1993) (discussing injunctions generally).

solution would provide an alternative to limiting the duration of the injunction. Finally, if a defendant ordinarily would be enjoined from engaging in specified conduct for the remainder of his lifetime, the defendant's life expectancy could be determined from actuarial tables, and then the duration of the permanent injunction could be reduced from the remainder of the defendant's life expectancy to just 75 percent of it.

Pure declaratory relief actions pose perhaps the greatest difficulty, but these are quite rare.²¹⁰ Typically, there is some sort of monetary or behavioral consequence which flows from the declaration. If so, it could be handled in one of the ways I have suggested above.²¹¹ For example, if a declaratory judgment regarding the interpretation of a contract term would have the consequence that the defendant would receive \$1000 less profit per year for the remaining years of the contract, then a plaintiff who waited three years to sue could only reduce the defendant's profit by \$250 per year, rather than by \$1000 per year, which would have been possible if he had sued promptly. Alternatively, if the contract had four years remaining, then the plaintiff would only be able to reduce the defendant's profits under the contract by \$1000 during one of the remaining four years, rather than during all four of them.

2. Treats Plaintiffs Less Favorably Than the Status Quo

A second problem with the incremental approach is that it seems to treat plaintiffs more harshly than the status quo. Of course, this is not a valid objection unless it is assumed that the status quo is superior to my proposal. Nevertheless, it deserves analysis.

The incremental approach might be viewed as treating plaintiffs more harshly in three different ways. To begin with, it shortens the period between accrual of a claim and the first deadline on which some sort of penalty is exacted for delay. Thus, in the example I have been using, a plaintiff who presently would be able to delay for nearly four years without suffering any penalty whatsoever would now suffer a partial penalty after a delay of just one year.

210. Thurman W. Arnold, *Trial by Combat and the New Deal*, 47 HARV. L. REV. 913, 930 (1934) (noting that the use of declaratory judgments is "comparatively rare").

211. See *supra* Parts III.A-B. Where that is not present, then no statute of limitation may be appropriate.

This only treats plaintiffs more harshly, however, if it results in a net reduction in the aggregate value of the plaintiffs' claims. Although it might reduce the value of some plaintiffs' claims, on the whole it should not. First, as the experiments described above show, plaintiffs are more likely to file their claims when the deadline is short than when the deadline is long.²¹² Therefore, some plaintiffs who otherwise would not file their claims under the present scheme will file them under my proposal. Two factors, however, may undermine this effect. The first factor is that because filing a lawsuit is more difficult and time-consuming than merely claiming a rebate, the strength of this effect may drop below the level suggested by the experiments when a more difficult task is involved. Although this is plausible, there is some evidence to the contrary. One study indicates that increasing the difficulty of the process for claiming a rebate actually increased, rather than decreased, the number of participants who claimed their rebate.²¹³ The second factor is that the bite of the periodic reductions is uncertain. On the one hand, they should be strong enough to gain the attention of plaintiffs who are informed about them. On the other hand, they will impose a significant cost on plaintiffs. The initial penalty, which would drop the value of a claim to 75 percent of its original worth, probably would not have much impact on the rate of post-penalty filing because much of the value of the claim would remain. The second penalty, however, which would decrease the value of the plaintiff's claim to just 50 percent of its original worth, might significantly reduce the rate of post-penalty filing. At this level, it could be difficult for plaintiffs to attract counsel, especially highly accomplished counsel, to represent them on a contingency basis. In addition, the incentive of a pro se litigant or a litigant retaining counsel on an hourly fee basis to pursue his or her claim will be substantially reduced. It may be expected that at the 25 percent level, many plaintiffs may conclude that filing a claim is not worthwhile, unless the value of a claim is very large or the plaintiff's emotional commitment to pursuing the claim is strong. Therefore, the effective limitation period under my proposal may be shorter than it seems.

212. See *supra* notes 146-49 and accompanying text.

213. See Silk, *supra* note 68, at 29-30.

Second, research suggests that the incremental penalties exacted for delay by my proposal will result in earlier filings than the current single end-of-period deadline regime.²¹⁴ Where there is no prejudgment interest, or where the rate of prejudgment interest is less than the market rate, plaintiffs will be better off if they file earlier because they will receive their recovery earlier and be able to invest it earlier. Only where the prejudgment interest rate exceeds the market interest rate will plaintiffs be hurt by my proposal. This, however, is an anomaly resulting from a poorly designed prejudgment interest statute that plaintiffs have no legitimate interest in perpetuating.

Third, some plaintiffs who cannot, or prefer not to, file right away can file after two or three years of delay under the present scheme without penalty, but under my proposal would suffer some penalty for their delay.²¹⁵ Here, a distinction must be drawn between plaintiffs who could not file earlier and those who simply chose not to file earlier. The discovery rule of accrual, which now is applied to most claims as to which event-based accrual and discovery-based accrual are likely to diverge,²¹⁶ accompanied by reasonable tolling of the limitation period for disabilities or equitable considerations,²¹⁷ adequately addresses the needs of the first group. A plaintiff who is unaware that he has been defrauded, or is in a coma, or is physically restrained from filing a lawsuit by the defendant, would not suffer any penalty because he delayed in filing suit, at least so long as the impediment existed. As for plaintiffs who simply have a taste for deferring filing, this is an interest which, in light of its social costs (i.e., defeating the purposes promoted by statutes of limitation), society need not indulge.

The fact that limitation periods may effectively be somewhat shorter than they presently are is not troubling in the abstract. Shorter periods possess both costs and benefits for plaintiffs, defendants, and society as a whole.²¹⁸ It is not at all clear that longer periods are better when all costs and benefits are netted out.

214. See *supra* notes 148-49 and accompanying text.

215. See *supra* text accompanying note 164.

216. See O'Neal, *supra* note 24, at 115.

217. See *Appalachian Ins. Co. v. McDonnell Douglas Corp.*, 262 Cal. Rptr. 716, 738-39 (Cal. Ct. App. 1989).

218. See *supra* text accompanying notes 15-17.

In addition, existing limitation periods probably are too long. This is not at all surprising because their duration is based in part upon assumptions about how long it would take to file a lawsuit 400 years ago,²¹⁹ a time when lawyers were scarce, courthouses were open only sporadically, travel was by horseback, and computers were inconceivable. Further, statutes of limitation have assumed an expressive function divorced from their policy moorings. When conduct appalls us, we first respond by increasing the sanction.²²⁰ When that is not feasible, we communicate our condemnation of the conduct by lengthening the limitation period.²²¹ While that may be emotionally satisfying, it probably defeats rather than promotes limitation policy.²²² Finally, any reduction in the length of the limitation period for some claims under my proposal would be partially compensated for by an increase in the duration of the limitation period for other claims. For example, if all claims were assigned a three- or four-year limitation period, plaintiffs with breach of oral contract or automobile accident negligence claims would have a shorter penalty-free period but a longer overall period.²²³ Persons with employment discrimination claims or claims against government entities might have both longer penalty-free periods and longer overall periods.²²⁴

3. Equates the Plaintiff's Delay with the Defendant's Fault

Another possible concern is that the incremental approach establishes a moral equivalence between a plaintiff's carelessness in delaying the filing of a lawsuit and an intentional wrong committed by the defendant that inflicted a severe injury on the plaintiff.²²⁵

219. See *supra* notes 8-11 and accompanying text.

220. See, e.g., John H. Langbein, *The Historical Origins of the Sanction of Imprisonment for Serious Crime*, 5 J. LEGAL STUD. 35, 36 (1976).

221. See Powell, *supra* note 30, at 134-39.

222. See, e.g., James Herbie DiFonzo, *In Praise of Statutes of Limitations in Sex Offense Cases*, 41 HOUS. L. REV. 1205, 1225-26 (2004); Listokin, *supra* note 19, at 113.

223. See CAL. CIV. PROC. CODE § 335.1 (West 2008) (providing two years for injury or death caused by wrongful or negligent act); *id.* § 339 (providing longer period for an oral contract).

224. See 42 U.S.C. § 2000e-5(e)(1) (2000) (stating that an individual wishing to file a federal lawsuit alleging employment discrimination must first file a charge with the Equal Employment Opportunity Commission (EEOC) within 180 days after the allegedly unlawful conduct occurred); see also *Ledbetter v. Goodyear Tire & Rubber Co.*, 127 S. Ct. 2162, 2166-67, 2170 (2007).

225. A variation of this argument is that my proposal equates a severe injury suffered by

This concern, however, is more apparent than real. To begin with, the defendant's conduct will sometimes be merely negligent, or, like a breach of contract, morally neutral (provided that the defendant compensates the plaintiff). In that circumstance, equating the plaintiff's delay with the defendant's misconduct is not incongruous. Moreover, the plaintiff who files promptly—that is, within one year—suffers no penalty at all, leaving the defendant's liability undiminished. If the plaintiff delays beyond that point, however, then the plaintiff's delay does reduce the defendant's liability. The same, of course, could be said for comparative fault. Comparative fault initially excluded reduction of the defendant's liability for the plaintiff's fault if the defendant's misconduct was intentional and the plaintiff's misconduct was merely negligent.²²⁶ This prohibition, however, has been eroded.²²⁷ The more modern view is that “most types of intentional tort cases would be more fairly decided if the courts could consider the fault of both parties. In such cases comparative fault should be used”²²⁸ Further, at some point, the plaintiff's delay in filing evinces at least negligence, if not gross negligence or recklessness, with respect to the risk that

the plaintiff with an uncertain amount of harm suffered by the defendant from the delay in filing. There are two responses to this variation. First, it is myopic, considering only the harm to defendant and ignoring the harm to the societal interests promoted by statutes of limitation. Second, as explained above, quantifying the harm to the defendant from deterioration of evidence is impractical. See *supra* notes 174-75 and accompanying text. Plainly, quantifying the harm to a much broader range of societal interests would be impossible.

226. See Ellen M. Bublick, *The End Game of Tort Reform: Comparative Apportionment and Intentional Torts*, 78 NOTRE DAME L. REV. 355, 364 & n.27 (2003) (“The rule that intentional and negligent fault are not explicitly compared has been firmly established in American jurisprudence.”).

227. See Jake Dear & Steven E. Zipperstein, *Comparative Fault and Intentional Torts: Doctrinal Barriers and Policy Considerations*, 24 SANTA CLARA L. REV. 1, 39 (1984) (“Courts should openly recognize that the asserted ‘different in kind’ theory poses no theoretical obstacle to comparison of intentional, reckless, and negligent conduct.”); William J. McNichols, *Should Comparative Responsibility Ever Apply to Intentional Torts?*, 37 OKLA. L. REV. 641, 697 (1984) (“Apportionment principles do have a proper place when conduct that intentionally invades plaintiff's legally protected interests is not significantly more culpable than the plaintiff's own contributory fault.”).

228. Gail D. Hollister, *Using Comparative Fault to Replace the All-or-Nothing Lottery Imposed in Intentional Torts Suits in Which Both Plaintiff and Defendant Are at Fault*, 46 VAND. L. REV. 121, 174 (1993); cf. Andrew R. Klein, *Comparative Fault and Fraud*, 48 ARIZ. L. REV. 983, 985 (2006) (arguing that “comparative fault jurisdictions should not bar plaintiffs from recovering in fraud when they fail to establish justifiable reliance on a misrepresentation”).

evidence will be lost. If that mental state is sufficient to subject a party to severe sanctions for failing to preserve evidence in other contexts,²²⁹ perhaps it should be enough in this context as well.

4. Fails To Distinguish Among Different Types of Claims

Another arguable problem with my proposal is that it is transubstantive because it treats all claims as if they were the same, taking a "one size fits all" approach. It is possible that some distinctions among types of claims should be made. At present, however, the classification of claims for statutes of limitation purposes lacks any consistent rationale.²³⁰ Thus, abandoning it hardly seems like much of a loss. Moreover, there is a trade-off between clarity and intuitiveness on the one hand, and maximizing the ability to individualize the fit between a particular claim and its corresponding limitation period, on the other hand. The law of limitation of actions is so complicated and uncertain that it necessitates legal advice, prolongs litigation, provokes inadvertent forfeitures, and discourages settlement.²³¹ The desire to individualize the treatment of claims based on their nature is responsible for much of the size and complexity of the law of limitation of actions.²³² Because a limitation system can work only if litigants can comprehend its rules,²³³ I would opt for simplicity in almost every respect. If every claim has the same limitation period and the same depreciation schedule for late filing, there is a realistic possibility that litigants will actually know when their claims must be filed. Although having just one uniform limitation period and just one uniform depreciation schedule are not essential features of my proposal, I believe they would be beneficial.

229. See, e.g., *Residential Funding Corp. v. DeGeorge Fin. Corp.*, 306 F.3d 99, 108 (2d Cir. 2002).

230. Richardson, *supra* note 22, at 1030-34.

231. See Albert Kocourek, *A Comment on Moral Consideration and the Statute of Limitations*, 18 ILL. L. REV. 538, 549 (1924) ("The anomalous and conflicting mass of rules which has accumulated as a judicial gloss on the statutes of limitations stands in need of legislative reformation.").

232. See Richardson, *supra* note 22, at 1044.

233. See *supra* note 20.

5. Forces Plaintiffs To Defer Other Tasks

Another potential problem with my proposal is that it may force plaintiffs to prioritize litigation more highly than they do under the present regime. This might be perceived as unfair because it reduces their autonomy, it may force them to choose between filing a lawsuit and completing more urgent tasks, and it prevents them from optimizing the timing of litigation from their point of view. Certainly, a limitation period that is too short may be unrealistic or cause an ill-advised preoccupation with time.²³⁴ It is not clear, however, that this presents much of a problem. For most people, filing a lawsuit is something they will do only once or twice in a lifetime. It is not too much to ask that they assign the task a high priority in light of the substantial social costs caused by delay. Repeat player plaintiffs pose even slighter concerns. Those who file lawsuits frequently in the normal course of business can, and ordinarily will, do so promptly. And if they do not without a good excuse, they arguably deserve little sympathy.

6. Causes Premature Filings

Although a shorter statute of limitation may increase filings, or stimulate earlier filing, those are not serious problems. If filings are increasing because plaintiffs are better able to avoid inadvertent forfeitures of their claims, that is a good thing, and the capacities of courts should be expanded to satisfy the demand. On the other hand, some cases that otherwise might have been resolved informally if the limitation period were longer may be filed unnecessarily. This should not happen very often so long as a sufficient penalty-free period, such as one year, is provided to allow informal resolution to run its course in most cases. In addition, under my proposal defendants will believe that plaintiffs will be motivated to sue promptly. Therefore, defendants will be motivated to solve problems more quickly before cases are filed. This means that some plaintiffs will have their problems resolved earlier by repair,

234. *Cartledge v. E. Jopling & Sons Ltd.*, [1962] 1 Q.B. 189, 195 (Sellers, L.J.) ("The courts have discouraged delay in seeking redress and so has legislation, but on the other hand there has been no encouragement given to precipitate litigation. It is undesirable for workmen to be encouraged to keep their eyes on the courts.").

pre-filing settlement, or the like. Accordingly, the shorter initial deadline will have the effect of discouraging procrastination by defendants in solving problems and resolving disputes. Finally, wider use of tolling agreements could permit consensual extension of the limitation period if both parties agree that allowing a longer period for prefiling informal resolution would be productive.²³⁵ Even if the parties cannot agree to toll the limitation period, the plaintiff can file the case and the court can stay it to ensure both that attempts at informal resolution can run their course before the parties incur unnecessary litigation-related expenses, and also that adjudication occurs at the temporally optimal time.

V. OTHER POTENTIAL APPLICATIONS

A. Criminal Prosecution

This Article focuses on statutes of limitation applicable to civil lawsuits. Separate analysis of limitation of criminal prosecutions is required because, as one scholar has acknowledged, "[t]he criminal limitations statute is only partially similar in form and purpose to its civil counterpart and is clearly different in its overall place and function in the law."²³⁶ Nevertheless, it appears that in at least some respects the incremental approach I am suggesting for limiting civil actions would apply equally well, if not even better, to the limitation of criminal prosecutions.

For one thing, most criminal penalties—fines, years of incarceration or on probation, etc.—are numerical in nature. Thus, the obstacles encountered in adapting the incremental approach to non-numerical remedies, such as injunctive or declaratory relief, would seldom arise in the criminal context.²³⁷ Further, some of the policies promoted by statutes of limitation loom even larger in the criminal context than they do in the civil context. As an example, the interest

235. See, e.g., ANN TAYLOR SCHWING, CALIFORNIA AFFIRMATIVE DEFENSES § 25.66 (West 2008).

236. Alan L. Adlestein, *Conflict of the Criminal Statute of Limitations with Lesser Offenses at Trial*, 37 WM. & MARY L. REV. 199, 259 (1995); see also 1 CHARLES E. TORCIA, WHARTON'S CRIMINAL LAW § 92 (15th ed. 1993) ("Although a statute of limitations in a civil case is merely one of repose, a statute of limitations in a criminal case is jurisdictional in nature, creates a bar to a criminal prosecution, and can be asserted at any time before or after judgment.").

237. The death penalty is one obvious exception.

in repose²³⁸ seems stronger in criminal cases than in civil cases, at least for minor crimes.²³⁹ In addition, special efforts are made to avoid mistakenly convicting the innocent in criminal cases.²⁴⁰ Accordingly, ensuring that evidence is fresh arguably is even more important in criminal than in civil cases.

On the other hand, because criminal prosecutions typically involve more serious and intentional wrongs—such as robberies, rapes, and murders—than do civil cases, giving the defendant a sentencing discount because of delay in commencing prosecution suggests a moral equivalency between the crime and prosecutorial delay that is more troubling than it would be in many civil cases.

B. Rights of Limited Duration

Although this Article concerns statutes of limitation, the incremental approach to time limits also may be applied outside of that narrow context. Freeing ourselves from the all-or-nothing approach to time limits opens up many possibilities. For example, consider rights of limited duration, such as copyrights. The current duration of copyrights—the basic standard being life of the author plus seventy years²⁴¹—strikes many as absurdly long.²⁴² If they are right, the most straightforward correction might be simply to reduce the copyright term, such as by reverting to the basic standard of life of the author plus fifty years that formerly was used.²⁴³ The incremental approach, however, suggests the possibility of another solution. As an example, the copyright term could be changed to life of the author plus twenty years with full protection, followed by a gradual reduction in the value of the protection afforded over the remaining

238. *United States v. Marion*, 404 U.S. 307, 322 n.14 (1971) (“[C]riminal statutes of limitation are to be liberally interpreted in favor of repose.”).

239. *Id.*

240. *See In re Winship*, 397 U.S. 358, 371-72 (1970) (Harlan, J., concurring); Wittman, *supra* note 152, at 253.

241. 17 U.S.C. § 302(a) (2000).

242. *See, e.g.,* Robert L. Bard & Lewis Kurlantzick, *Copyright Duration at the Millennium*, 47 J. COPYRIGHT SOC’Y 13, 61 (2000) (“What is striking about the arguments offered by proponents of a lengthened copyright term is their lack of substance. Virtually none of the reasons put forth for change have even a modicum of intellectual merit.”).

243. *See Eldred v. Ashcroft*, 537 U.S. 186, 194-96 (2003) (summarizing the history of copyright term extension); Tyler T. Ochoa, *Patent and Copyright Term Extension and the Constitution: A Historical Perspective*, 49 J. COPYRIGHT SOC’Y 19, 22-24 (2001).

fifty years at the rate of 2 percent per year. Thus, although the term of copyright protection would not be shortened, at some point considerably short of the life of the author plus seventy years, the benefit derived from enforcing the copyright would be no longer worth the trouble for the vast majority of copyrighted works. This would allow works of lesser value to be exploited relatively freely, while copyright holders would still retain the ability to enforce, albeit at a reduced level, their copyrights in more valuable works for the full term.²⁴⁴

CONCLUSION

Time limits, including deadlines such as statutes of limitation, play an important and necessary role in law, as they do in life. Because of their significance, we should not simply assume that the structure we have inherited from 1623, or even earlier, remains the best we can do today. As Oliver Wendell Holmes, Jr., once said, "It is revolting to have no better reason for a rule of law than that so it was laid down in the time of Henry IV."²⁴⁵ Designing a more effective structure for statutes of limitation requires us to do two things. First, we must overcome the all-or-nothing bias²⁴⁶ so that we can capitalize on the advantages offered by an incremental approach. Second, we need to take into account that recent empirical studies reveal about how people actually behave. Only if we have some understanding of procrastination, the planning fallacy, loss aversion, intertemporal discounting, and the actual effects of

244. Two scholars have suggested something similar, namely, considering the time elapsed since the creation of a work in determining the scope of the fair use defense to copyright infringement. In their schemes, unauthorized uses of copyrighted works would be more likely to be found to be fair uses late in the copyright term than early in the copyright term. See Justin Hughes, *Fair Use Across Time*, 50 UCLA L. REV. 775, 778 (2003); Joseph P. Liu, *Copyright and Time: A Proposal*, 101 MICH. L. REV. 409, 410 (2002). Their proposals indirectly support mine. They recognize that relevant changes occur throughout legal time periods, not merely at the end of them. Both Hughes and Liu argue that law should take the gradual nature of change over time into account in formulating legal rules. See Hughes, *supra* at 778; Liu, *supra* at 411-12. That argument supports my proposal as well as their own.

245. Oliver Wendell Holmes, Jr., *The Path of the Law*, 10 HARV. L. REV. 457, 469 (1897).

246. John E. Coons, *Approaches to Court Imposed Compromise—The Uses of Doubt and Reason*, 58 NW. U. L. REV. 750, 791 (1964) (referring to the systematic preference for winner-take-all outcomes as the "all-or-nothing bias").

various types of deadlines on people's behavior can we craft a limitation system that achieves its goals.