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## PEIRCE AND THE LAW: A NEW HYPOTHESIS

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*Here the professional logicians leave the subject; and I would not have troubled the reader with what they have to say, if it were not such a striking example of how they have been slumbering through ages of intellectual activity, listlessly disregarding the enginery of modern thought, and never dreaming of applying its lessons to the improvement of logic.*

- Charles Peirce, "How to Make Our Ideas Clear," 1877

### INTRODUCTION

In 1906, William James endeavored to explain no less than his entire philosophy in a series of lectures at the Lowell Institute. Standing before his audience, with the enormous problems of metaphysics and reality and ethics looming before him, he fearlessly launched into an anecdote about returning from a "solitary ramble" during a "camping party in the mountains." William James, *Pragmatism* 17 (Thomas Crofts & Philip Smith eds., Dover Publications, Inc. 1995). He reports that he found his friends in a "ferocious metaphysical dispute" about a squirrel on a tree. *Id.* The friends seized James and demanded to know whether a man, chasing a squirrel endlessly around in circles around a tree, "[goes] round the squirrel or not." *Id.* James solemnly announced to his audience, as though stumbling on the meaning of life itself, that "which party is right . . . depends on what you *practically mean* by 'going round' the squirrel." *Id.*

James was trying to explain the importance of focusing on the practical effects of philosophical problems, but his anecdote also captures that many problems are better attacked by examining the nature of the problem itself, rather than only the answer to it. He is right and, in fact, he doesn't go far enough. Ideas do not and cannot exist in a vacuum: each finds its place in the full context of all other ideas. To fully understand an idea is to understand its context.

Map that context in three dimensions. Along the vertical axis are the bigger categories in which an idea belongs and the smaller categories that belong in

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it. The idea that the Lakers will beat the Celtics this week might have above it the idea that the Lakers are a better team, and below it that the Lakers will have more rebounds this week. Along the horizontal axis are different ideas at the same level of specificity. The idea that the Lakers will beat the Celtics this week might have beside it the idea that the Spurs will beat the Pistons this week. Along the third axis are justifications for believing an idea. The idea that the Lakers will beat the Celtics might be layered in the idea that basketball games are predictable, which might be layered in some grand idea of causality.

The best ideas are consistent across all three axes. They seem right in themselves, they follow logically from bigger ideas that seem right, and they roughly parallel ideas that seem right in other topics.

The law, unfortunately, too often ignores its idea context, becoming so caught up in trying to dispense with a particular problem that it loses sight of bigger picture reasoning. I will not dare attempt, in this note, to place law in a fully functional, contextual graph, but I will try to get started on one. My focus is on normalizing the law one level up the  $\zeta$  axis: I will argue that to make good laws, we must first be sure we have the right method of lawmaking in place. In short, I argue that American lawmaking should be informed by the work of James' forerunner Charles Peirce, the founder of American philosophy.

Part One of the note summarizes Peirce's relevant work. I detail Peirce's selection of the scientific method as the best method of fixing ideas, examine his gradual unveiling of the mechanics of that method throughout his career, and offer some thoughts on the aesthetic superiority of inductive reasoning over deductive reasoning. I conclude with an overview of scientific innovation in Peirce's time, and challenge why the law chose not to take part in that scientific movement.

Part Two of the note applies Peirce's scientific method to law. I begin by creating a simple new model for scientific lawmaking: all laws should be codified by legislatures, and that code should be subject to constant revision based on recommendations from courts. I then discuss current American lawmaking process in the model's terms. First, I illustrate problems that arise from unscientific lawmaking, including the tyranny of *stare decisis*, the inefficiency of rules whose exceptions outnumber their applications, the inability of courts to clarify laws that are too vague to provide legitimate guidance to the governed, and the decline of federalism. Second, I search for areas of law that apply the scientific method, including the Restatements

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of the Law, the Supreme Court's substantive Due Process jurisprudence, its adoption of minority opinions, and its pontifications concerning the marketplace of ideas. I note the benefits that follow from scientific lawmaking, as well as the limitations on it imposed even in these areas.

## PART ONE - PEIRCE AND THE SCIENTIFIC METHOD

### *Introduction: Illustrations of the Logic of Science*

*Popular Science Monthly* is a still-active magazine that covers things like iPads and Porsches, but once upon a time it published the likes of Charles Darwin, Louis Pasteur, and Thomas Edison. It took on Charles Peirce in 1877, and over the next year he wrote six articles in a series called "Illustrations of the Logic of Science." Nathan Houser & Christian Kloesel, *The Essential Peirce* 109 (Indiana University Press, 1992). Peirce described the series simply as an attempt "to describe the method of scientific investigation," and less simply as "the earliest formulation of . . . 'pragmatism' . . . the tiny seed that under the culture of richer minds, grew into the goodly tree of that same appellation that already begins to afford a comfortable and wholesome lodge for many a soul."<sup>2</sup> *Id.*

### *Choosing the Method: The Fixation of Belief*

The first article in the series, "The Fixation of Belief," is the most important. In it, Peirce examines how men tend to fix their beliefs, and then tells them how they ought to. Charles Peirce, *The Fixation of Belief*, *Popular Science Monthly*, November 1877, at 1 (reprinted in Houser, *supra*, at 109).

The key to all ideas, says Peirce, is doubt. "Doubt," he explains, "is an uneasy and dissatisfied state from which we struggle to free ourselves and pass into the state of belief." Houser, *supra*, at 114. Peirce's first step is his

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<sup>2</sup> *Id.* I'm not sure that I'll ever look back and describe this note as affording a comfortable lodge for men's souls, but don't let that stop you.

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biggest. For him, doubt represents the sole motivation of, and resolving it the sole final goal for, inquiry. One might question the applicability of this premise for conclusions about lawmaking; the law, after all, has manifold other goals, including the ordering of society and the imposition of normative behavior standards. The difference is semantic (Peirce's version is simply more precise): to say we will continue to explore law until it solves all of our problems is to say we will continue to explore law until *we believe* that it solves all of our problems - until we cease to have any doubt that it does so.

Satisfied that we believe things in order to assuage doubt, Peirce turns to the question of what methods we use to fix those beliefs. He enumerates four methods, and evaluates each according entirely to how effective it is in alleviating doubt. The first he calls the method of tenacity. *Id.* at 116. Those using this method accept the first idea they come across, then systematically avoid anything that might change their minds. *Id.* Peirce cites as an example a friend who entreated him "not to read a certain newspaper lest it might change [his] opinion upon free-trade." *Id.* at 115. Peirce has no issue with this method, except that he doesn't think it will work. A man who adopts it, he predicts, will inevitably discover that others think differently from him, "and it will be apt to occur to him, in some saner moment, that their opinions are quite as good as his own." *Id.* at 116. A method that provides greater unity of belief across a larger population is thus required.

The second method, then, is the method of authority. *Id.* at 117. An external entity (usually, the state) picks beliefs for everyone, and silences any contrary belief with force. *Id.* Peirce dryly notes that "when complete agreement could not otherwise be reached, a general massacre of all who have not thought in a certain way has proved a very effective means of settling opinion in a country." *Id.* This method solves in part the problems of the method of tenacity, and Peirce admits that it has in fact "over and over again worked the most majestic results." *Id.* at 118. But it ultimately fails simply because it is impractical. "No institution can undertake to regulate opinions on every subject," Peirce insists. *Id.* at 118. People will notice varieties of beliefs in unregulated areas, and since ideas bleed constantly into each other, people will eventually come to doubt even the regulated ideas. *Id.*

From the failure of the first two methods, Peirce decides that a method is required that gives greater attention to the process of arriving at belief, rather than only the end belief itself - a method "which shall not only

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produce an impulse to believe, but shall also decide what proposition it is which is to be believed." *Id.* In short, a method is required that can survive competition from other ideas. From this need comes the third method, the *a priori* method<sup>3</sup>. Using the *a priori* method, "men, conversing together and regarding matters in different lights, gradually develop beliefs in harmony with natural causes." *Id.* It is an organic method through which we believe what "seem[s] agreeable to reason" in the full context of the world around us. *Id.* at 119. The method appears attractive until Peirce gives some illustrations of it: Plato, for example, apparently found it "agreeable to reason that the distances of the celestial spheres from one another should be proportional to the different lengths of strings which produce harmonious chords." *Id.* The method fails because it is too sentimental - it is "more or less a matter of fashion" and subject to fashion's pendulum temperament. *Id.* More important, a method that relies on internal feelings risks bumping into external facts that leave the subscriber back in the state of uncomfortable doubt he began in. *Id.*

From this, Peirce decides that the right method must be based on some "external permanency," which "affects, or might affect, every man." *Id.* at 120. This permanency is reality, and the method of using it to fix beliefs is scientific investigation. *Id.*

### *Assembling the Pieces: Elsewhere in Illustrations*

The next four articles in the "Illustrations" series provide little more than vague clues as to how the scientific method works. They deal in large part with symbolic logical proofs of science and are stuffed with diagrams, arcane symbols, and numbers. They do contain some general descriptions of the scientific method, and help to explain the attitude with which we should engage it. In "How to Make Our Ideas Clear," Peirce provides a broad overview of what the scientific method is<sup>4</sup>. Charles Peirce, *How to Make Our Ideas Clear*, Popular Science Monthly, January 1878, at 286 (reprinted in Houser, *supra*, at 124). He calls it a "process of investigation"

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<sup>3</sup> While Peirce thoroughly rejects the *a priori* method in this article, I suspect (though he never admits) that it provides the basis for "abduction," the initial component of Peirce's scientific method. Abduction is discussed in greater detail *infra* at 46.

<sup>4</sup> The article is much more famous for its insight on what makes ideas more or less clear. That topic is discussed in greater detail *infra* at 50.

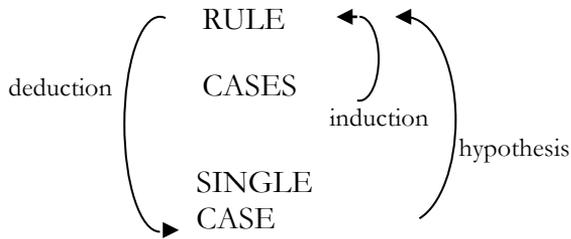
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which, even if undertaken from different angles by different men, will "move steadily together toward a destined centre . . . to a foreordained goal . . . like the operation of destiny." Houser, *supra*, at 138. In "The Doctrine of Chances" and "The Probability of Induction," he explains that this new method, unlike old logical models, requires us to consider all conclusions as probabilities instead of as certainties. Charles Peirce, *The Doctrine of Chances*, Popular Science Monthly, March 1878, at 604 (reprinted in Houser, *supra*, at 142); Charles Peirce, *The Probability of Induction*, Popular Science Monthly, April 1878, at 705 (reprinted in Houser, *supra*, at 155). He explains that these "synthetic" conclusions are incapable of logical proof, but are nevertheless real and capable of practical application. Houser, *supra*, at 168-69. In "The Order of Nature," he concludes that the world seems well suited to scientific investigation. Charles Peirce, *The Order of Nature*, Popular Science Monthly, June 1878, at 203 (reprinted in Houser, *supra*, at 170). It is not perfectly ordered, and any strict rule will surely meet an exception, but is ordered enough to allow for predictions about what will happen in the future. Houser, *supra*, at 176-79.

Finally, in "Deduction, Induction, and Hypothesis," the sixth and concluding article in the series, Peirce introduces the three elements that will later comprise the three steps of his scientific method. Charles Peirce, *Deduction, Induction, and Hypothesis*, Popular Science Monthly, August 1878, at 470 (reprinted in Houser, *supra*, at 186). The article is not, at first glance, about the scientific method at all, but is instead a discussion of the traditional logical techniques used to draw inferences. First is deduction, which is "merely the application of general rules to particular cases." Houser, *supra*, at 187. Second is induction, which occurs when "we find a certain thing to be true of a certain proportion of cases and infer that it is true of the same proportion of the whole class." *Id.* at 189. Peirce adds to these a third technique, traditionally subsumed by induction. This is hypothesis (also known, no doubt to purposely confuse us, as "abduction" or "retroduction"), which occurs when "we find some very curious circumstance, which would be explained by the supposition that it was a case of a certain general rule, and thereupon adopt that supposition." *Id.* at 189.

The three techniques importantly represent different movements up and down an idea ladder. Deduction moves from abstract rule to specific case. Induction moves from body of cases to abstract rule. Hypothesis moves from specific case to abstract rule.



It will come as no surprise that Peirce is mostly unimpressed with deduction and is much more generous in his discussion of the upward moving inferences.

*The Method Emerges: Mature Peirce*

However down on deduction Peirce appeared in "Illustrations," he did not abandon it as he continued to refine his philosophy throughout his life. The three inferential techniques, described for their own sake in "Deduction, Induction, and Hypothesis," developed into a three part, systematic procedure for applying the scientific method. The procedure is well summarized in "A Neglected Argument for the Reality of God," a 1908 essay. Charles Peirce, *A Neglected Argument for the Reality of God*, Hibbert Journal, 1908, at 90 (available at [http://en.wikisource.org/wiki/A\\_Neglected\\_Argument\\_for\\_the\\_Reality\\_of\\_God](http://en.wikisource.org/wiki/A_Neglected_Argument_for_the_Reality_of_God)). "Every inquiry whatsoever takes its rise in the observation . . . of some surprising phenomenon," Peirce begins. *Id.* The first step in that inquiry is *hypothesis*: "at length a conjecture arises that furnishes a possible Explanation." *Id.* We proceed with *deduction*: we conduct an "examination of the hypothesis, and a muster of all sorts of conditional experiential consequences which would follow from its truth." *Id.* Finally, we use *induction*: we examine "how far those consequents accord with Experience, and of judging accordingly whether the hypothesis is sensibly correct, or requires some inessential modification, or must be entirely rejected." *Id.*

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Put more simply: we make a prediction, we think of what must follow if the prediction is true, and then we test to see if those things do indeed follow. Crucially, the scientific method has no end point. If in the induction stage the expected consequents do indeed occur, we loop back to the deduction stage to come up with more consequents to test. If in the induction stage the expected consequents do not occur, we loop back to the hypothesis stage and come up with a new theory to test.

### *Clarity of Ideas*

Though not directly related to the scientific method, Peirce's conclusions of what makes ideas clear must also be included in any Peircian lawmaking reform. An idea, Peirce felt, can only be put to work when it is specific - when it is clear what the idea is, what it means, and how it is different from other ideas. Traditional philosophy put ideas in two tiers of clarity. An idea is simply *clear* when it is "so apprehended that it will be recognized wherever it is met with, and . . . no other will be mistaken for it." Peirce, *How to Make Our Ideas Clear* (reprinted in Houser, *supra*, at 124). Better are ideas that are *distinct* - ones which are capable of exact definition in abstract terms and which have no elements within them which are not clear. Houser, *supra*, at 125. Peirce added a third grade of clarity. He argued that "our idea of anything *is* our idea of its sensible effects," and so an idea is only fully clear when we understand every conceivable effect it will have. *Id.* at 132.

Attaining Peirce's third grade of clarity is paramount in lawmaking. The sole purpose of the law is govern human behavior. A judge or legislator must not put a law on the books based on a general understanding of it or its definition in abstract terms. He must understand how the law is going to affect the world it governs. All laws should be created, evaluated, and amended based on these effects.

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*Induction at its Limits*

One might complain that, if we explore too thoroughly the  $\xi$  axis I mentioned in my introduction, we will eventually run into the serious problem of tautology. Peirce's idea about how we should analyze ideas is itself an idea, and thus at its core can only justify itself with itself. This is indeed a frustrating and intractable dilemma, but seen from a different angle, it represents the strongest case for using inductive instead of deductive reasoning. Deduction, at its root, disproves itself: all conclusions come from premises, and so require at least one first premise from which all others are derived. But this first premise, having no premise itself, will forever be un-provable. Induction, on the other hand, is self-affirming: evaluating ideas based on what comes out in practice gets a positive evaluation based on what comes out in practice.

Contrast two puzzles. The first is Bertrand Russell's barber paradox. We are asked to imagine the barber of a small town who cuts the hair of everyone in the town who does not cut his own hair, and when we are then asked who cuts the barber's hair, our heads explode. The puzzle captures the essential defect of deductive thinking: it dwells on what cannot be real and fills us with confusion and uncertainty.

The second is Christian Goldbach's aptly named "Goldbach's conjecture," which posits that all even numbers greater than two are the sum of two prime numbers. Countless mathematicians have spent countless hours trying to prove this theory, but none have succeeded - the conjecture is logically without justification. On the other hand, it has been tested on ever increasingly large numbers, and has never once been found to fail. The puzzle captures the essence of inductive thinking: it expresses in simple and humble propositions the infinite observations of the magnificent world around us.

*Peirce in Context*

The years in which Peirce wrote, from roughly 1870 to 1920, were pretty damn exciting. The scientific method was sweeping through fields well

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beyond philosophy, and academic journals were the least of its conquests. In mathematics, Cantor expounded set theory, Venn drew his famous circles, and Pearson brought mathematical statistics into popularity. In physics, long-settled Newtonian static physics were dragged abruptly into the modern age by Maxwell's electromagnetic theory, Rutherford's discovery of alpha and beta particles, Planck's quantum theory, and Einstein's theory of relativity. In chemistry, Stoney published the first study of electrons, Bohr created his model of atomic structure, and Lewis discovered covalent bonds and diagrammed molecules. In biology, Darwin birthed the study of evolution while Mendel birthed the study of genetics. In psychology, Freud published "The Interpretation of Dreams." And for anyone else utterly nonplussed by words like "alpha" and "covalent," these years introduced the telephone, the light bulb, and the motion picture. All of these developments relied on a new method of scientific thinking: that of experimentation instead of assumption - that of probability instead of proof.

The law, meanwhile, was hardly affected by the scientific revolution taking place in these years. The Law and Economics movement, itself only a narrow and uncreative application of the statistical method, did not get humming until the 1960s, nearly 100 years late. In Peirce's time, contract law celebrated the Golden Age of induction by bowing before narrow minded formalism. The Supreme Court's most famous decision was *Plessey v. Ferguson*, 163 U.S. 537 (1896), which abundantly eschewed Peirce's "external reality" in favor of the logic-shrouded myth of "separate but equal." Federal courts clung doggedly to outdated and inane pleading codes, not yielding to the Federal Rules of Civil Procedure until the 1930s.

The law is necessarily reliant on tradition and uniformity, and a sporting resistance to change is not only allowed but preferred. But its willingness to ignore utterly a new way of thinking so effective as to have ushered in an entirely new modern world is irresponsible. I have heard it is better late than never.

## PART TWO - THE SCIENTIFIC METHOD AND THE LAW

To recap, we have learned that good ideas are found by applying a very specific method. We should make our best guess as to how to resolve a question. We should consider how this guess, if true, will play out in the

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real world. We should test this guess to see if it does indeed play out that way. Based on that test, we should revise our guess. And we should do this over and over again, never satisfied.

At some level, the American lawmaking system already applies the method. First, hypothesis: the legislature makes statutes that predict how the law should govern behavior. Second, deduction: the judiciary explains in decisions, using syllogisms or dictionaries or whatever other method of interpretation, what the law means. Third, induction: the judiciary tests the statutes against real world fact patterns and sees if they work.

American law rarely plays out quite so neatly as that, but it is true that the pieces for executing the method are already in place. Only a few changes are required to bring lawmaking up to speed with the scientific age. First, all common law should be codified. Any good experiment begins with a good hypothesis, such that the scientist can determine whether it succeeds or fails. Second, since deduction should take place before experimentation, the original lawmaker (in my new system, always the legislature) should begin the deduction stage. Statutes should contain explanation and examples sections. Third, judicial opinions should be more honest, going so far at times as to ignore "binding" authority (even at the expense of legal stability<sup>5</sup>). A judge, like a scientist, must examine his hypothesis impartially, searching with rigor for ways in which it is inadequate and ways in which it could be improved. A judge who applies law with a strong preexisting bias toward it is like a paid expert witness who will distort data to fit whatever conclusions he is asked to show. A more honest judiciary is made possible by the fourth and most important tweak: all laws must face regular revision (say, once every five years). The legislature should be required to review judicial opinions that have sternly evaluated the law against hundreds of cases, and redraw lines to better fit those cases.

The existing American legal system provides numerous illustrations of the pitfalls of traditional lawmaking and the advantages of a more scientific approach. I will start with the bad - examining four problems in our current system that grow from an unscientific lawmaking method. Then I will move to the good - pointing out four areas of law that have applied the scientific method and showing the benefits that the method yields.

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<sup>5</sup> Oliver Wendall Holmes astutely observed that the law "so called is nothing but a prediction." *The Path of the Law*, 10 Harv. L. Rev. 457, 458 (1897). The allegedly devastating cost of a less precedent bound judiciary is more psychic than actual.

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## A. THE BAD

The current system of American lawmaking very often creates wonderful laws. Where it sometimes struggles is recovering after putting a bad law down on the books. I have arranged these struggles in three categories: first, when courts continue to apply the bad law; second, when courts continuously distinguish cases from the bad law, resulting in unnecessarily complex jurisprudence; and third, when courts are unable to settle on an interpretation of a vaguely written law, resulting in unpredictability for those governed. I conclude by reviewing the decline of federalism and the unhappy implications of that trend.

### *The stare decisis Apology*

The glaring pitfall of the existing lawmaking system is the prevalence of the *stare decisis* apology, in which a court opines that it is probably wronging a party before it, then shrugs, insists its hands are tied, and proceeds anyways. This problem occurs when a court identifies two distinct roles - that of lawmaker and that of administrator - and assumes the latter role. It then claims that the administrator must defer at all times to the judgment of the lawmaker. The *stare decisis* apology calls to mind Peirce's method of authority.

A variety of relationships can give rise to the *stare decisis* apology. First, courts often bow before statutes, even when those statutes are shortsighted and poorly drafted. In *Williamson v. Lee Optical of Oklahoma Inc.*, 348 U.S. 483, 487 (1955), the Supreme Court admitted that an "Oklahoma law may exact a needless, wasteful requirement in many cases," then applied it against the parties anyways under a separation of powers theory. Second, courts invoke *stare decisis* apologies when they feel bound by a higher court - what is referred to as "vertical *stare decisis*." In *Kucinich v. Bush*, 236 F. Supp. 2d 1, 4 (D.D.C. 2002), the court recognized important constitutional questions about the extent of executive authority, then declined to rule on any of them because the "question whether members of Congress have

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standing to sue Executive Branch officials is neither novel nor unsettled" - it had been ruled on by the Supreme Court, and the district court had power only to apply that ruling.

Third, courts sometimes invoke *stare decisis* apologies when they feel bound by decisions at their own level - what is referred to as "horizontal *stare decisis*." In *Planned Parenthood of Se. Pennsylvania v. Casey*, 505 U.S. 833 (1992), at least three justices voted to strike down an abortion law even while hinting that it may be constitutional. "A decision to overrule *Roe's* essential holding under the existing circumstances would address error, if error there was, at the cost of both profound and unnecessary damage to the Court's legitimacy," they wrote. *Id.* at 869 (O'Connor, Stevens, and Souter, JJ., concurring). The justices continued to stomp their feet and pout later in the opinion. "We conclude that the basic decision in *Roe* was based on a constitutional analysis which we cannot now repudiate." *Id.* Whatever the justices' interpretation of the Constitution was, it was secondary. They felt required to vote to apply an earlier standard in order to preserve the people's confidence in the judiciary. I am not sure that they did not instead only compound an untrustworthy image: they implied both that the Court had failed earlier as a lawmaker and was now failing to correctly resolve a dispute before it.

Over-reliance on *stare decisis*, particularly while, as in *Casey*, practically admitting that an earlier decision was questionable, creates two important problems. First, it leaves the parties before a court feeling mistreated. The essential purpose of the law is to correctly resolve the disputes of the people it governs. To prioritize any other purpose - be it consistency, formality, or nostalgia - is to badly misplace that essential purpose. Second, at a broader level, over-reliance on *stare decisis* leaves law stagnant and unresponsive to changes in the world or in our understanding of it.

Courts should give far less weight to *stare decisis*, so long as they carefully articulate the reasons the law does not correctly govern the case at hand<sup>6</sup>. An individual case looks at a problem directly, in its full context and with all its unique features. A law, on the other hand, is a blunt instrument that only approximates where lines should be drawn. When courts decide enough specific cases, more accurate lines will emerge.

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<sup>6</sup> Lower courts are, of course, still subject to reversal. But reversal will now occur when a lower court decision fails the parties before it, rather than when it fails some technical requirement.

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*The "Yes, But" Law*

Many judges are aware that helplessly making bad decisions under the oppressive rule of *stare decisis* is not the best way to administer justice. These judges use guile to escape their precedential tyrants - they *distinguish*. While the precedent is still good, binding law, they say, it does not govern the matter at hand because of some important factual dissimilarity.

This strategy reminds me of my efforts to repair a drawer in my apartment. It is cracked in the middle, and for months now I have been trying to tape it together. As each new piece of tape begins to fail, I add a new one on top of it. At this point I think the drawer is composed more of tape than of drawer. While the drawer is still vaguely functional, I surely would be wiser simply to remove all the tape and repair the drawer using some more thorough, farsighted method.

The same is true of many laws, where distinguishable exceptions have been stacked on top of each other like pieces of tape so often that the original law is obscured. Consider defamation law. A baseline element of defamation is that a defendant can only be liable for statements that were "published" - that were communicated in any way to a third party. But that element has seemingly been excused as often as it has been enforced, with courts adding more exceptions to it all the time. Under the "self-compelled publication" doctrine, a defamatory statement against an employee made only against that employee (and not to a third party) is still actionable if it is foreseeable that the statement will be passed on to a third party out of necessity. *See, e.g., Purcell v. Seguin State Bank*, 999 F.2d 250 (5th Cir. 1993). Under the "republication rule," publishing a statement is actionable even if the statement was originally made by another person and is clearly attributed to the original speaker. *See, e.g., Friedman v. Israel Labour Party*, 957 F. Supp. 701, 708 (E.D. Pa. 1997). Under the "neutral reportage" doctrine, the republication rule does not apply if the original speaker is a big deal and the defamation itself is a matter of public interest. *See Edwards v. National Audobon Society, Inc.*, 556 F.2d 113 (2d Cir. 1977). Under new Congressional legislation, the republication rule does not apply to online message boards if the hosting website is a "distributor" and not a "publisher." *See Zeran v. America Online, Inc.*, 129 F.3d 327 (4th Cir. 1997). The resulting state of the law effectively covers a range of diverse fact patterns, but is complex and confusing. It may be possible to redraw the baseline publication element to better include all of the exceptions to it.

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Making laws that are simple and streamlined is important. It provides more effective notice to the people the laws govern and allows them to more easily conform their actions to legal requirements. It also allows for more efficient amendment. Amending a complex, multilayered law can be difficult because it is not clear whether the amendment affects all of the iterations of a law, or only the iteration that inspired it.

Distinguishing a case from existing law is a far better judicial action than making a *stare decisis* apology. It both more fairly resolves the disputes of parties and allows laws to more easily evolve. In large part, the process of distinguishing cases represents the process of induction: the process of making new conclusions based on the failures of the original hypothesis in practical experiments. The missing step is reformulating the hypothesis for additional testing. That simple addition would go a long way toward creating a more economical statement of law.

### *The 180 Law*

A third problem created by our current lawmaking system is law that vacillates so wildly between two extremes that it provides virtually no guidance for those people affected by it. One of the best examples of this problem is found in United States Commerce Clause jurisprudence. The Constitution grants Congress the power "To regulate Commerce with foreign Nations, and among the several States, and with the Indian tribes." U.S. Const. art. I, Section 8, cl. 2. In 1824, the Supreme Court thought it obvious that this clause gave Congress the power to regulate anything affecting interstate trade. *See Gibbons v. Ogden*, 22 U.S. 1 (1824). In 1895 the Court announced with equal confidence that "anything affecting interstate trade" was much too large a category, and that Congress could of course only regulate the buying and selling of products. *See United States v. E.C. Knight Co.*, 156 U.S. 1 (1895). The Court contradicted itself four or five more times before finally, in 1942, it held that Congress could regulate even a non-commercial backyard garden, a holding so extreme that nobody won on a Commerce Clause challenge for the next 60 years. *See Wickard v. Filburn*, 317 U.S. 111 (1942). Just when everybody was starting to get comfortable with this interpretation, the Court struck down a federal anti-gun law on Commerce Clause grounds, declaring that an all-inclusive reading of the Commerce Clause is impossible because the Constitution

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specifically insists that the federal government is one of limited powers. *See United States v. Lopez*, 514 U.S. 549 (1995).

The Supreme Court has articulated some pretty voluminous standards for evaluating Commerce Clause claims, but given the frequency with which those standards are re-written, it would be most honest to advise a lawmaker that whether a new regulation is constitutional is anybody's guess. Nor can the Supreme Court's back and forth bickering be seen as some kind of Hegelian synthesis or Peircian process of discovery - as the steady progression, through compromise, toward a final goal. Instead, the Court simply goes back and forth between two extremes: a broad reading of the Commerce Clause that covers all regulation that touches on interstate commerce, and a narrow reading of the Commerce Clause that only covers regulation of interstate trade itself.

This problem arises from a tragic combination: a law (the Commerce Clause) that is both poorly written and unchangeable. The development of the Commerce Clause, involving countless cases, represents an extremely effective experiment. What is missing is any sort of induction: the drawing of a new conclusion from the body of data. It may be time, after more than 200 years of disagreement, to admit that a new hypothesis is needed. As to who should win when the law is finally rewritten - the broad or the narrow interpreters - the answer is surely compromise. There is no need whatsoever to worry about "The Framers" or "The Text." We are the Framers now and we are writing the text.

Many who would otherwise be on board with the proposition that all laws should be subject to constant revision may jump ship when it comes to the Constitution, believing perhaps that tampering with the document amounts to sacrilege. Yet, absolutely the most important tenet of American pragmatism is the concept of fallibility. It is extraordinarily unlikely that anyone will ever get anything exactly right, and more, the world is dynamic, and what is exactly right today may not be tomorrow. We must never be too confident in our ideas, but treat them with constant skepticism, testing them against our experiences and continually revising and refining them.

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## *The Decline of Federalism*

Encompassed in the evolution of the Commerce Clause (and stretching into administrative law, Due Process and equal protection jurisprudence, and elsewhere) is the slow decline of federalism. While not a direct negative consequence of unscientific lawmaking, federalism's decline is worth noting as a general barrier to designing more scientific lawmaking procedures in the future. Dissenting opinions in the Supreme Court's decision in *Gonzales v. Raich*, 545 U.S. 1 (2005), in which the court upheld a federal law prohibiting the medicinal use of marijuana, provide useful summaries of the issue. Justice Thomas explains that the case "illustrates the steady drift away" from the Constitution's original federalist vision and leaves no "hint of what aspect of American life is reserved to the States." *Id.* at 70 (Thomas, J., dissenting). Justice O'Connor adds that this is a shame, as "one of federalism's chief virtues [is] that it promotes innovation" by allowing individual states to test out new laws. *Id.* at 42 (O'Connor, J., dissenting). As the Constitution is interpreted to allow more and more federal laws on the books, more and more state laws, which are often diverse and innovative, are preempted.

To apply the scientific method, lawmakers must have flexibility to present new hypotheses. The decline of federalism reduces the flexibility of state courts and legislatures and forces them to comply with federal rules. The movement in Commerce Clause and other constitutional doctrine toward greater federal power thus suggests that American lawmaking is moving in the wrong direction - applying increasingly rigid, unscientific laws rather than working toward a more dynamic system.

### B. THE GOOD

In other places in American law, we can see Peirce's scientific method already at work. These areas, while imperfect, showcase the benefits we can expect to reap from more scientific lawmaking. These areas include the American Law Institute's "Restatements of the Law," the Supreme Court's Due Process Clause jurisprudence, and the prevalence of minority opinions in Supreme Court decisions. The section ends with a brief discussion of the

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law's curious ability to recognize the value of the "marketplace of ideas" everywhere except in the law's own formation.

### *The Restatements*

The best legal illustration of Peirce's method comes in the American Law Institute's Restatements of the Law, particularly the influential Restatement of Contracts. The Restatements were created in the 1920s as an effort to write down in one place the entirety of the law. See Restatement of Contracts at xi-xii. The authors hoped to take the sprawling, complex common law of judicial opinions and reduce it to simple statements of rules, much like a statute. *Id.* Each Restatement section included a rule, an explanation of the rule, and illustrations of the rule. Forty years later, the authors reconvened to update their work. See Restatement (Second) of Contracts at vii (1981).<sup>7</sup>

The Restatements of Contracts contain all three of the steps in Peirce's scientific method. By writing out contract law in precise, definite rules, the first Restatement provided a clear hypothesis capable of experimentation and evaluation. By including explanations and illustrations of each rule, the Restatement created deductive consequents that could be searched for in real world experiments. Though technically powerless, the first Restatement was cited in over 12,000 court opinions, providing thorough experimentation. See 1979 Annual Report, 56 A.L.I. Proc. 560 (1980). Finally, by creating a new Restatement, revised according to the successes and failures of the first Restatement in courtrooms, the A.L.I. created inductive conclusions. Those conclusions, of course, will serve as new hypotheses to be tested with new cases. Other Restatement topics have already released third editions, and one hopes that this cycle of prediction and revision will continue for many years.

The Restatements include additional qualities that make them particularly powerful applications of Peirce's method. First, the Restatement (Second) ventures beyond its titular purpose of restating the current common law. Certain sections contain law that "contradict[s] long-standing traditional

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<sup>7</sup> For a more thorough overview of the Restatements, see Gregory E. Maggs, *Ipse Dixit: The Restatement (Second) of Contracts and the Modern Development of Contract Law*, 66 Geo. Wash. L. Rev. 508, 514 (1998).

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rules" and instead "implic[s] a normative assertion as to what should now be held." Gregory E. Maggs, *Ipse Dixit: The Restatement (Second) of Contracts and the Modern Development of Contract Law*, 66 Geo. Wash. L. Rev. 508, 510-11 (1998) (quoting Herbert Wechsler, *The Course of the Restatements*, 55 A.B.A. J. 147, 150 (1969)). Amazingly, when these sections were cited in cases, courts "almost universally accepted" the proposed revisions to the law. *Id.* at 512-513 (finding 234 out of 241 cases citing experimental rules adopted the new rules). The Restatements thus represent scientific progress. They made new predictions after surveying shortcomings of their first hypothesis, and those new predictions have been confirmed through additional testing.

This scientific progress is possible because of a second important feature of the Restatements. Unlike statutes and common law, the Restatements are mere persuasive authority and are non-binding on courts. This allows courts to conduct unbiased evaluations of how the Restatements resolve real cases. When applying mandatory authority, courts must force cases into the rules using one of the unhappy techniques described above. When applying persuasive authority, courts can evaluate how well the fact pattern before them fits into the written law, then accept or reject the law accordingly.

Unfortunately, the Restatements are limited. First, they govern only common law, and will be preempted by any statutes on the books (including the Constitution). These statutes, since they do not use the scientific methodology of the Restatements, are unlikely to be as successful in dealing with cases. Second, the Restatements are undemocratic. They are created by extremely successful lawyers - a group of people whose opinions may be skewed by a rare and non-representative lifestyle. The advantages of using elite, hyper-educated viewpoints should already be captured by the participation of judges in lawmaking. The predictions should therefore be made instead by elected legislatures. Finally, the Restatements work very slowly. The Restatement (First) of Contracts was published in 1932. The Restatement (Second) was published in 1981. By tapping the vast resources of the American justice system, we should be able to churn out experiments and new hypotheses much more quickly, allowing us to more effectively improve our laws and to more smoothly adapt to changes in society.

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*The Due Process Clause*

The Constitution, treated rather roughly above, contains in some places an effective application of scientific lawmaking. Some sections of the Constitution are drafted with such extraordinary vagueness that the Supreme Court is left near full discretion in interpreting (inventing?) them. As we have seen elsewhere, flexibility is a key component of scientific inquiry because it allows courts to experiment with new laws, while rigidity stifles the ability to form hypotheses and to test them.

One illustration of the Supreme Court using its discretion to pursue scientific laws is the development of substantive Due Process Clause jurisprudence. The Due Process Clause itself states only that "No person shall . . . be deprived of life, liberty, or property, without due process of law." U.S. Const. amend. XIV, § 1. This clause, particularly the enormously broad "liberty," is written vaguely enough to allow the Supreme Court to pull a wide range of dubious substantive rights from it. Its method, initially extremely conservative, has developed into something remarkably open-ended. Whenever it feels so inclined, the Court rolls out some new substantive right it wants included. In the years that follow, the Court slowly brings the right into focus, either restricting it if it is found too jarring, or expanding it if it shows favorably.

For example, in 1905, the Court held that "liberty" included the right to free contract, and that the government could not pass laws restricting contracts unless it had a compelling interest in public health. See *Lochner v. New York*, 198 U.S. 45, 64 (1905) (striking down a law fixing maximum hours an employee was allowed to work). When the new right started to smell funny - meeting with angry legislatures, apathetic individuals, impossible line drawing, and abundantly assailable logic - the Court simply backed off, overruling the right in *W. Coast Hotel Co. v. Parrish*, 300 U.S. 379, 397-99 (1937). In doing so, the Court applied the scientific method, basing its repudiation of the right on error found in practical experience: the Court admitted that it must "take judicial notice of the unparalleled demands for relief which arose during the recent period of depression" and provide a constitutional interpretation that allows the government to respond to those demands. *Id.* at 399.

When the Court found the early returns on a new right more favorable, it proceeded in the opposite direction. In 1965, for example, the Court found

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that "liberty" includes the right to a private marital life, and that a law prohibiting the use of contraceptives was thus unconstitutional. *Griswold v. Connecticut*, 381 U.S. 479, 485-96 (1965). Unlike the free contract right of *Lochner*, the new privacy right showed considerable promise and appeared to resolve a number of cases that had previously made the Court squeamish. The Court quickly expanded the right to private marriage into the right to private sex, *Eisenstadt v. Baird*, 405 U.S. 438, 443 (1972), and the right to private sex into the right to abortion, *Roe v. Wade*, 410 U.S. 113, 164 (1973). At that point, the Court began to experience more serious resistance, and responded by backing slightly off its position. See *Planned Parenthood of Se. Pennsylvania v. Casey*, 505 U.S. 833, 851-53 (1992) (inventing a new standard of review under which more abortion proscriptions were found constitutional).

The elasticity of these rights is surprising, given the unmoving text of the Constitution. But putting aside issues of judicial responsibility and separation of powers, the results of the cases are largely positive. A law that, in practice, seemed foolish and unnecessary was summarily removed. A law that, in practice, seemed useful and important was stretched to its outer limit, then reigned back in to a level that everyone could live with. The positive outcomes of these laws is a result of scientific investigation. Liberated by the vague language of the Due Process Clause, the Court drew free hypotheses from its observations of which liberties are desired. The Court exposed those hypotheses to the rigorous tests of cases for a few years, then revised them based on the results of those tests.

The Supreme Court's Due Process Clause method is, while effective, strikingly undemocratic. The Court strikes down statutes from elected bodies based on its own hypotheses, with little textual support from the Constitution. Further, as both the predictor and the experimenter, the Court is unlikely to evaluate its tests with sufficient objectivity. Minor changes would alleviate this problem. As with the Restatements, the hypotheses should be made by elected bodies. The Court would still add its own commentary and rulings about these rights, but those rulings would contribute to a cooperative process of legal progress, rather than a unilateral exercise of concentrated power.

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## *The Power of Multiple Opinions*

The Supreme Court has an additional lawmaking opportunity that many courts do not have available to them: the power to write multiple opinions. Most obviously, having multiple opinions gives future justices more options to consider when deciding cases, but it also often seems that justices feel more comfortable expressing honest evaluations in concurring and dissenting opinions (at the very least, they seem more comfortable making saucy remarks about their coworkers). The presence of multiple opinions has at times served a useful scientific function: the Court has, after observing that a decision has not addressed fact patterns as well as anticipated, subtly or expressly adopted a prior minority opinion as good law. Justice Holmes' dissenting opinion in *Abrams v. United States*, 250 U.S. 616 (1919), is frequently cited for both the marketplace of ideas rationale for the First Amendment and the clear and present danger doctrine (both surviving at least in part as good law), while Justice Clarke's majority opinion is all but forgotten. Similarly, the limits of executive power are widely analyzed using Justice Jackson's concurring opinion in *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952), even though the opinion was technically non-binding at the time it was penned.

The success of minority opinions adopted by the Supreme Court after observing the failure of a majority decision emphasizes two of the important lessons for scientific lawmaking we have seen elsewhere. First, courts must have flexibility to amend earlier decisions. We have often told our children that they should learn to admit their mistakes so that they can do better next time - a similar lecture for judges is in order. Second, judges must have freedom to express themselves honestly in their opinions, rather than encouraging overwhelming deference to statutes or precedent. The more ambitious (caustic) minority opinions often convey more cutting analysis than their more conservative, emotionless majority counterparts<sup>8</sup>.

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<sup>8</sup> Among the most shocking judicial language is Justice Douglas's claim in *Brandenburg v. Ohio*, 395 U.S. 444, 454 (1969) that his illustrious brethren, past and present, were "judges so wedded to the status quo that critical analysis made them nervous." In spite of (because of?) its indecorum, the opinion is among the purest examples of inductive legal conclusion drawing. Douglas endeavors to kick the "clear and present danger" doctrine to the curb expressly not because it is an illogical test, but because of "when and how [it] has been applied" - because of its failure in practical tests. *Id.* More specifically, he wants to get rid of it because of its failure to provide adequate First Amendment protection when it was

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As with the Due Process Clause, these benefits are imperfect. Beyond the problems posed for democracy discussed above, the circumstances that allow for the exercise of multiple opinions are simply too narrow. Only appellate courts have multiple judges, and only courts at an equal level are permitted to apply a minority opinion from a prior case. Better would be a system in which all judges at all levels were encouraged to write down their real feelings about laws and cases, rather than simply deciding them. These opinions should be freely circulated until the law's next revision, when they should be assimilated into a new, functional statute.

*A Lesson in Leadership: The Marketplace of Ideas*

Holmes' *Abrams* dissent is, as indicated, a prominent explanation of the widely held "marketplace of ideas" justification for the First Amendment. Free speech must be protected, Holmes says, because for a controversial idea, "the best test of truth is the power of the thought to get itself accepted in the competition of the market." *Abrams*, 250 U.S. at 630. An analogy to scientific lawmaking is obvious: an idea and a law must both be allowed to pass muster or not in the world if we are ever to evaluate them properly. Holmes seems to recognize the analogy later in the opinion, and describes in two short sentences the entire essence of scientific lawmaking: the Constitution, he says "is an experiment, as all life is an experiment. Every year if not every day we have to wager our salvation upon some prophecy based upon imperfect knowledge." *Id.*

It is frustrating that Holmes cannot see that what is so importantly an *end* for the law can equally serve as a *means* for it. The law must protect free speech so that, in all other fields, the best ideas can surface and prove their value. But the same is true for legal ideas - a free market must be encouraged so that the best laws are allowed to prove their value against all others. The courts might consider "leading by example" - not only telling its people the benefits of the free exchange of ideas, but illustrating them.

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needed most: to communists during the McCarthy era. *Id.* at 453-56. Unfortunately, his opinion has never been adopted as law.

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## CONCLUSION

I have a memory of going to a museum as a child to see dinosaur skeletons. I learned that most displayed skeletons are far from complete, containing only a few actual dinosaur bones. The museum creates the illusion of a full dinosaur skeleton by making fake bones and putting them together with the real ones. This particular museum had dyed its fake bones purple so that the viewers could see which bones were real and which were only models. The display captured in my young mind all of the excitement of scientific investigation. I imagined the excitement of digging up a new bone and plugging it directly into the skeleton as a replacement for a purple model - confirmation of years of study and carefully rendered predictions. I imagined the even greater excitement of digging up a new bone and finding it utterly dissimilar from its purple counterpart - indication that the dinosaur looked even scarier and more awesome than imagined.

It is an awfully good way of acquiring knowledge of any type. We find a bone - a single observation. We imagine how the bone might be part of something larger; we imagine a skeleton around it. We go back into the world, accumulating more observations. We revise constantly our skeleton, finding our imagined bones more and more often accurate.

The law is not usually a place of scientific investigation. It imagines too often that its purple bones are real. It takes too seriously its role as bureaucrat. It forgets too often that laws are dynamic, and must constantly be chased. It forgets too often that the law serves its people before its people serve the law. The great cost of these errors is that the law is not improving as rapidly as it could be.

American lawmakers should be mindful of the vast success scholars in other disciplines have experienced in applying the scientific method. Charles Peirce, the founder of the American pragmatism movement, summarized the necessity and methodology of the scientific method in countless articles in mathematics, chemistry, and philosophy. His work can form the basis for a new approach to American lawmaking. First, using the Peircian concept of *hypothesis*, a legislature should make a prediction of what law will best govern a certain topic. These laws, like the Restatements, should use *deduction* to explain what the laws mean and to predict how they will deal with certain cases. Next, courts should use the cases before them as experiments, applying the legislature's law where possible to resolve

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disputes, and noting areas in which the cases push the boundaries of the law. Finally, the legislatures should use *induction* to make new laws that express the findings of the courts' experiments. These new laws will take the place of the old hypotheses, and the process will repeat.

This is not to say that the system is broken or that it must be torn down and started anew. I suggest only small changes: that laws are more thoroughly stated, more honestly evaluated, and more frequently revised. The result of this method will be a better law. It will be clearer and more easily understood by the people it governs. It will leave more cases settled according to the moral instincts of our society. It will adjust more readily to changes in culture and technology. Most important - it will be more externally "right." It will come closer to Peirce's foreordained goal, at which all men, independently investigating, will arrive, like the operation of destiny.