ANTITRUST TIME TRAVEL: ENTRY & POTENTIAL COMPETITION

SEAN P. SULLIVAN
HENRY C. SU*

How are claims of future entry, or its prevention, supposed to be addressed? To seriously engage with these claims, one must be prepared to undertake what we call analytical *time travel*: drawing connections between competition in the past, present, and future through evidence, inference, and educated guesswork. Modest attempts at time travel are familiar in antitrust. Some, like the inference of a firm's competitive significance from its market share, assume connections between past, present, and future competition.[1] Others, like the evaluation of challenges to mergers under Section 7 of the Clayton Act, assume connections between present and future competition.[2] But nowhere are the demands of time travel more explicit, the tasks more challenging, or the consequences more critical, than in the related doctrines of

* Sullivan is a Professor of Law at the University of Iowa College of Law and an Associate Editor of the *Antitrust Law Journal*. Su is a member of the California, District of Columbia, and Virginia Bars. This article reflects the views of the authors. It does not claim to represent the views of the authors' employers, or of any institutions with which we are affiliated, or of any of our clients. We benefitted from the comments of Erika Douglas, Eleanor Fox, Herb Hovenkamp, Christopher Leslie, Barak Orbach, Douglas Rathbun, and student participants at the November 2022 Antitrust Scholars Roundtable at the University of California, Irvine School of Law. We thank Kassandra DiPietro, Cassandra Ehly, and Maya Sanaba for their research assistance. And we thank the Law Library at the University of Iowa College of Law for help in collecting sources for this work. Correspondence may be addressed to Sullivan at sean-sullivan@uiowa.edu.

[1] *See, e.g.*, United States v. Gen. Dynamics Corp., 415 U.S. 486, 501 (1974) ("Evidence of the amount of annual sales is relevant as a prediction of future competitive strength, since in most markets distribution systems and brand recognition are such significant factors that one may reasonably suppose that a company which has attracted a given number of sales will retain that competitive strength.").

[2] *E.g.*, Brown Shoe Co. v. United States, 370 U.S. 294, 332 (1962) ("[T]he very wording of § 7 requires a prognosis of the probable future effect of the merger.") (emphasis omitted); United States v. Phila. Nat'l Bank, 374 U.S. 321, 362 (1963) ("[T]he ultimate question under § 7 [whether the effect of a merger would be substantially to lessen competition] . . . requires not merely an appraisal of the immediate impact of the merger upon competition, but a prediction of its impact upon competitive conditions in the future.").

Working paper for Sean P. Sullivan & Henry C. Su, *Antitrust Time Travel: Entry & Potential Competition*, 85 Antitrust L.J. (forthcoming 2023).

(1) the defense of easy entry to counter claimed anticompetitive effects and (2) the offense of anticompetitively acquiring a potential competitor.[3]

The time travel metaphor can be best understood by recognizing that antitrust law is concerned with protecting competition in the present, the future, or both. We cannot do anything about competition in the past, but it can help us to understand competition in the present and to predict competition in the future. Likewise, our understanding of competition in the present can help to predict competition in the future. Finally, predictions about competition in the future can affect our view of competition in the present—a point as true for firms making price and investment decisions as it is for tribunals tasked with evaluating antitrust challenges. Analytical time travel can thus involve forward time travel (using past and present conditions to describe the properties of future competition) or backward time travel (using predictions about future competition to describe the properties of present competition).

Time travel labels help to separate and connect entry and potential competition concepts. The "actual potential competition" offense and what we call the "corrective entry" defense involve predictions about the future competitive significance of rivalries not in existence at the time of evaluation. This is forward time travel. These inquiries consider competitors that do not yet exist and how those competitors will impact competition that has yet to occur. The "perceived potential competition" offense and what we call the "preventative entry" defense involve a backward-leaping assessment of how the threat of future rivalry influences competitive behavior today. This is backward time travel. It is as if the future entrants are traveling backward through time to exert their competitive influence upon current market participants.

We use these time travel labels to introduce a helpful way of understanding entry and potential competition arguments. While entry and potential competition theories will probably always be contentious,[4] complicated,[5] and paradoxical,[6] these features are exacerbated by a tendency of courts to describe these theories briefly, without delving into details of what is being claimed to happen and why. Current doctrines are also needlessly burdened

---

[3] While our primary interest is the potential illegality of acquisitions involving potential competitors under Section 7 of the Clayton Act, the following applies in analogous ways to Section 1 and 2 offenses concerning acquisition and exclusion of potential competitors.

[4] *Cf.* Jonathan B. Baker, *Responding to Developments in Economics and the Courts: Entry in the Merger Guidelines*, 71 ANTITRUST L.J. 189, 190 (2003) (commenting that "[n]owhere in [the process of drafting the 1992 merger guidelines] were the problems of steering between the demands of precedent and economic logic more difficult than in writing the section on entry").

[5] *See infra* Part II.

[6] *See infra* Part III.

by artificial bifurcation of related concepts. Ripped apart and stuffed into separate silos of analysis,[7] entry and potential competition theories have evolved in some peculiar ways—and have failed to evolve at all in others.[8] The thesis of this Article is that a clearer, more accurate, and more administrable understanding of entry and potential competition analysis emerges from viewing these theories not as siloed doctrines but as related facets of the same underlying exercise in analytical time travel.

This is, in fact, how both theories got their start. Part I demonstrates this in a brief correction of the historical record on entry and potential competition. Contrary to modern practice, early struggles to understand the relevance of "potential competition" did not fixate on separating the harm that might flow out of effects on potential competition from the palliative effects that potential competition had for current or future competition. True, much of the current doctrine in this area developed only after potential competition theories were separated into those involving harms and those involving benefits. But it is hard to see where the modern approach is superior to the earlier, more fluid, approach—and there are obvious respects in which it is inferior.

Motivated by skepticism about current practice, Part II reconstructs the entry defense and potential competition offense from the unified perspective that both involve the same exercises in antitrust time travel. Relying on nothing but modern economic models of entry, this reconstruction reveals helpful insights. It highlights, for example, the importance of considering strategic responses to potential entry when evaluating all time travel theories—entry defenses and potential competition offenses alike. It also unearths traps that have ensnared this area of law for decades, such as immaterial philosophical arguments about what counts as a barrier to entry.

---

[7] *Compare* US Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines 1 (2010), ftc.gov/os/2010/08/100819hmg.pdf [hereinafter 2010 Horizontal Merger Guidelines] (referencing federal antitrust enforcement practices with respect to "mergers and acquisitions involving actual or potential competitors"), *with id.* at 28 (describing circumstances in which potential entry would "alleviate concerns about adverse competitive effects"); *cf.* United States v. Waste Mgmt., Inc., 743 F.2d 976, 982 (2d Cir. 1984) (recognizing that "[t]he Supreme Court has never directly held that ease of entry may rebut a showing of *prima facie* illegality under *Philadelphia National Bank*" but inferring that such a defense is implied by the Court's emphasis of injury to potential competition as a possible violation).

[8] In another article in this issue, Louis Kaplow offers a similarly negative review of the state of entry analysis in merger review. *See* Louis Kaplow, *Entry and Merger Analysis*, *supra* this issue, 85 ANTITRUST L.J. XXX (2023) (commenting that "entry is usually an afterthought in merger analysis," that "standard [entry] inquiries are circumscribed," and that this analysis inadequately incorporates modern economics).

In short, the time travel perspective clarifies the common requirements and complexities that undergird both entry and potential competition theories.

Part III exploits this clear-eyed vantage point to survey some paradoxes of analytical time travel in antitrust. Some of these are artificial, as where doctrinal silos have facilitated the asymmetric treatment of symmetric concepts. Siloed thinking explains how the validity of the actual potential competition offense could be doubted while the validity of the corrective entry defense goes unquestioned. Other paradoxes reveal deep truths about the fragility of all time travel stories. The most profound of these is what might be called the antitrust version of the *grandmother paradox* (the puzzle of trying to decide what would happen if a person traveled back in time to kill his or her own grandmother before she gives birth to that person's parent). Across a range of assumptions and economic models, entry is least likely to occur when it would be most likely to cure competitive concerns and is most likely to occur when its effects on competition would be least significant. This and other paradoxes recommend healthy skepticism when evaluating time travel stories.

I. TIME TRAVEL OVER TIME

Today, the defense of easy entry is at little risk of being confused for the offense of acquiring a potential competitor. To any listener, these sound like separate concepts with different analytical goals. For much of antitrust history, however, a more fluid concept of "potential competition" embraced both theories. This reflects an important truth: the economics of what we today recognize as the entry defense are much the same as those of what we now call the potential competition doctrine. A brief historical review reveals just how long ago this common origin in economics was understood.

A. EARLY AND FLUID THINKING ABOUT POTENTIAL COMPETITION

The story of potential competition starts at the dawn of antitrust law. In the decades between the passage of the Sherman Act and the Clayton Act, the most influential thinker on the subject of potential competition was American economist John Bates Clark.[9] Across numerous articles and addresses, Clark extolled the power of potential competition to control the otherwise seemingly unchecked power of trusts and large firms.[10] While Clark's arguments hardly

---

[9] *Cf.* GREGORY J. WERDEN, THE FOUNDATIONS OF ANTITRUST: EVENTS, IDEAS, AND DOCTRINES 139–55 (2020) (summarizing Clark's contributions to antitrust analysis); Luca Fiorito, *When Economics Faces the Economy: John Bates Clark and the 1914 Antitrust Legislation*, 25 REV. POL. ECON. 139 (2013) (similar, with emphasis on Clark's contributions to the Clayton Act and FTC Act).

[10] *See* WERDEN, *supra* note 9, at 141–48 (surveying some of Clark's contributions to the subject of potential competition).

persuaded all of his contemporaries,[11] his views were inarguably influential during the time,[12] and they remain so today.

In a 1901 text titled *The Control of Trusts*, Clark championed the ability of potential competition to curb market power abuses by trusts and industry incumbents:

> When prices are unduly high, owing to the grasping policy of some trust, what happens? New competition usually appears in the field. . . . Readily, and sometimes almost recklessly, does it build new mills and begins to compete with trusts, when these consolidated companies do not know enough to proceed on a conservative plan. Let any combination of producers raise the prices beyond a certain limit, and it will encounter this difficulty. The new mills that will spring into existence will break down prices; and the fear of these new mills, without their actual coming, is often enough to keep prices from rising to an extortionate height. The mill that has never been built is already a power in the market; for if it surely will be built under certain conditions, the effect of this certainty is to keep prices down.[13]

Deconstructed for closer inspection, this claim reveals two related but distinct theories about the beneficial effects of potential competition.

The first describes the future corrective effects of potential competition—an exercise in forward time travel. Here, the threat of potential competition is not assumed to deter price elevation by existing firms. Current prices may rise as a result of poor competitive conditions. But, when they do, potential competition will materialize in the form of future entry. New mills will "spring into existence,"[14] in Clark's words, and as they emerge their new competition will act to unwind whatever price elevation has occurred.[15] Thus, potential competition acts as a corrective counterforce to exercises of market power. Even if prices rise temporarily, future entry will eventually drive them

---

[11] *See id.* at 158–60, 165 (discussing contemporaries of Clark who did not share his confidence in the ability of potential competition to constrain market participants).

[12] *See id.* at 148–50 (observing the influence of Clark's views in his time).

[13] JOHN BATES CLARK, THE CONTROL OF TRUSTS: AN ARGUMENT IN FAVOR OF CURBING THE POWER OF MONOPOLY BY A NATURAL METHOD 13 (1901).

[14] *Id.*

[15] J. B. Clark, *The "Trust": A New Agent for Doing an Old Work: Or Freedom Doing the Work of Monopoly*, 52 NEW ENGLANDER AND YALE REV. 223, 226 (1890) ("A too great rise in prices will tempt new capitalists and start new and rival establishments. This has actually happened again and again; and this fact has inspired among managers of Trusts a very wholesome respect for the potential competition of which we are speaking.").

back down.[16] At least this is the future corrective theory of potential competition.

The second theory folded into Clark's claim describes the current effects of potential future competition—backward time travel launching from the conclusion of the previous analytical exercise. Here, the incumbent trusts engage in the same reasoning as we have above. Seeing that price elevation will only attract future entry, however, they elect not to raise prices in the first place. Hence, in this theory, future entry reaches backwards through time, in the form of a threat, to influence the behavior of current competitors. In Clark's words, "[t]he mill that has never been built is already a power in the market."[17] At least this is the present preventative theory of potential competition.

In some of his writing, Clark described the present preventative theory of potential competition as nearly on par with the importance of competition among current competitors.[18] Other times, especially in his later remarks,[19] he equivocated on the strength of this effect, reasoning that incumbent firms could elevate prices a considerable amount before attracting new entry into their markets.[20] One possible reconciliation of these views is Clark's belief that incumbent trusts could act to strategically weaken the threat of future entry, a topic to which we will return to in a moment. Even allowing for these tools of competitive suppression, though, Clark's economic narrative was missing some important details.

---

[16] John B. Clark, *Trusts, Present and Future*, 51 INDEPENDENT 1076, 1077 (1899) ("A radical increase in the price of an article was sure to bring new competitors into the field; and this would add to the supply of the article and soon bring down the price of it."); *id.* (conceding that "friction" did add some delay to this effect, as a "new mill cannot instantly spring into existence and begin putting its products on the market").

[17] CLARK, *supra* note 13, at 13.

[18] *Id.* at 75 ("If new competition is sure to spring up in case prices are raised, they will not be raised. They will continue to be held down by a possible producing agent, and not by one that is actually present and acting.").

[19] *See* Fiorito, *supra* note 9, at 145–49 (chronicling the evolution of Clark's commentary on the potential competition).

[20] *See, e.g.*, CLARK, *supra* note 13, at 13–14 ("The real and serious difficulty is the fact that the curbing influence of this latent competition cannot always be depended on to prevent a real and considerable extortion. There is often a considerable range within which trusts can raise prices without calling potential competition into positive activity."); *id.* at 78 ("Within limits a trust may raise its prices unduly, because the competitor cannot be drawn into the field except by large inducement. He must have a prospect of gain that will offset a peril."); Clark, *supra* note 15, at 226 ("As a rule [the trust] must push [its] gains to the limits of extortion before this check will operate efficiently.").

Commenting on Clark's analysis in 1902, English economist Arthur C. Pigou supplied many of the missing details.[21] Pigou questioned, for example, Clark's casual assertion that "in so far as legitimate rivalry in cheap production is concerned, it is safe enough to build a new mill."[22] It was difficult to reconcile this claim of quick and easy entry, Pigou noted, with the elsewhere popular idea that "economies of production" arose from the large size of incumbent trusts.[23] More importantly, Pigou identified a defect in Clark's presentation. The new mills that Clark said would "spring into existence" would not do so simply because current prices had been elevated:

> It is not enough for a potential rival to be able to compete with the prices at which the Trust at any time chooses to sell; he must be able to meet those at which, by abandoning all "monopoly revenue" and contenting itself with "normal profits" it could sell. Otherwise, even though all "illegitimate" competition were made impossible, the risks before independent producers would still be so great, that prices might be kept well above the point at which they could reap a profit, without ever inducing them to come into the field.[24]

Put another way, if the immediate consequence of entry was competition driving prices back to the competitive level, then the rational potential competitor would not be attracted to enter a market merely by the prospect of temporarily elevated prices. Something more was needed to provide at least a hope of profit in the newly competitive post-entry market. That something would need to contend with questions like "If the opportunity for profit were so apparent, why have we not seen entry already?" and "How did the incumbents acquire their trust positions if entry was easy in the first place?"[25] Such was the sophistication of early economic dialogue on the beneficial effects of potential competition.

---

[21] *See generally* A. C. Pigou, *The Control of Trusts. By J. B. Clark, Professor in Columbia University.*, 12 ECON. J. 63 (1902).

[22] *Id.* at 66 (quoting CLARK, *supra* note 13, at 27–28). Pigou was not alone in doubting the low cost of entry. *See, e.g.*, ARTHUR TWINING HADLEY, ECONOMICS: AN ACCOUNT OF THE RELATIONS BETWEEN PRIVATE PROPERTY AND PUBLIC WELFARE 152–53 (1896) ("[N]o new competitor will be called into being unless the price is high enough to afford a liberal profit, after paying interest, maintenance, and other charges on fixed capital invested under modern methods.").

[23] Pigou, *supra* note 21, at 66 ("[H]ow can [claimed low entry costs] be reconciled with the much vaunted 'economies of production' which Presidents of Consolidations so zealously described to the Industrial Commissioners?").

[24] *Id.* (emphasis omitted).

[25] *See infra* notes 127–134 and accompanying text (exploring these questions).

But early thinking about the relevance of potential competition did not stop at its latent beneficial effects. As noted previously, Clark devoted considerable attention to the ways in which firms might work to foreclose future entry, and thus forestall these beneficial effects.[26] He was particularly agitated by the ability of trusts to use exclusive dealing arrangements and cross-subsidized predatory prices to drive new entrants from the market,[27] and to deter others from entering at all.[28] Potential competitors who were too scared to enter posed no threat to incumbent trusts, and so provided none of the benefits they would otherwise have conferred.[29]

Clark therefore advocated for the protection of potential competition,[30] and for antitrust laws to prohibit certain types of conduct that would obstruct future entry. "What is needed," he said, "is to make each one of the practices by which competitors are terrorized legal evidence of the existence of a monopolistic power and to condemn, under the common law, any corporation that shall afford this evidence."[31] Protecting the future entry of potential competitors preserved both the future effects of corrective entry and the current effects of trusts moderating their behavior to avoid enticing entry. The difficulty, as Clark conceded, was in finding a way to structure this protection so that it would cut off the ability of trusts to avoid "fair competition" in dealing with entrants while not acting to "shield an independent producer from any legitimate rivalry."[32]

B. CONTINUED FLUIDITY FOR SEVERAL DECADES

As just described, early treatment of potential competition did not distinguish sharply between its beneficial effects and the need to protect these benefits from being squelched by incumbents. Both ideas arose from the same underlying theory, so sharp distinction between them would probably have seemed strange. Early discussion also did not clearly differentiate between the future corrective effects and the current preventative effects of potential

[26] Clark, *supra* note 15, at 226 ("An actual Trust of a strong type has the power to make outside rivalry perilous.").

[27] *E.g.*, CLARK, *supra* note 13, at 59–66.

[28] *Id.* at 74 ("By these means the trust can often crush a rival; and *the prospect that it will resort to them often terrorizes the rival in advance and prevents him from appearing in the field.*").

[29] *Id.* at 75 ("The certainty that a competitor will be ruined, if he appears, takes away all probability of his appearing; and this probability affords the only natural check of any importance on the action of the monopoly.").

[30] Clark, *supra* note 16, at 1077 ("Potential competition is the name of the force that holds monopolies in check; it is the force that must ever be kept active. The difference between a good system of industry and a radically bad one is made by the presence or the absence of this influence.").

[31] CLARK, *supra* note 13, at 79.

[32] *Id.* at 31.

competition (though, here, additional analytical separation would have been helpful). Fluid thinking about potential competition persisted as antitrust began to mature, making sporadic but increasingly frequent appearances throughout the first half of the 1900s.[33]

Several of these appearances sounded versions of Clark's concern about strategic efforts to blunt the beneficial consequences of potential competition. In 1911, the Supreme Court's review of the *American Tobacco* case listed among the factors showing "wrongful purpose and illegal combination" several practices whereby entry-critical assets had been consolidated in the hands of a few cooperating entities, erecting "perpetual barriers to the entry of others into the tobacco trade."[34] The Court returned to this reasoning in 1946 when American Tobacco and others stood convicted of a conspiracy to "establish a substantially impregnable defense against any attempted intrusion by potential competitors."[35] Noting the tremendous advertising and other expenses that an entrant would need to pay to compete with incumbent firms, the Court found it easy to understand why a conspiracy would form to exclude potential competitors. "Prevention of all potential competition," the Court reasoned, would be a natural object in this market, since obstruction of future entry would be "cheaper and more effective than any amount of 'cure.'"[36]

Other cases described anticompetitive concerns arising from an incumbent firm's acquisition of a potential competitor—not a major subject of Clark's writing, but a logical extension of his worry about trusts strategically foreclosing entry by potential competitors. For example, in 1922, the Third Circuit decided a dispute between the Aluminum Company of America (Alcoa) and the Federal Trade Commission.[37] Because the company whose stock Alcoa was acquiring was new and had not yet begun competing, Alcoa reasoned that the acquisition did not involve a concern engaged in commerce, and thus fell outside the scope of Section 7. The Third Circuit rejected this argument.[38] Supporting the Commission's finding of illegality, the court emphasized both the merger's effect on present competition and its

---

[33] *Cf.* Herbert Hovenkamp, *The Invention of Antitrust*, 96 S. CAL. L. REV. (forthcoming 2023) (in the section "Monopoly Power and Structure: Potential Competition, Barriers to Entry, and the Relevant Market," surveying scholarly commentary, judicial opinions, and survey evidence reflecting the evolving attitudes toward potential competition around this time).

[34] United States v. Am. Tobacco Co., 221 U.S. 106, 182–83 (1911).

[35] Am. Tobacco Co. v. United States, 328 U.S. 781, 800 (1946).

[36] *Id.* at 797.

[37] Aluminum Co. of Am. v. FTC, 284 F. 401 (3d Cir. 1922).

[38] *Id.* at 408.

"[destruction of] potential competition in a way later to make actual competition impossible."[39]

In 1948, the Supreme Court addressed a similar claim that Columbia Steel's acquisition of another company would "preclude and restrain substantial potential competition in the production and sale of . . . steel products."[40] The Court agreed with the government that "any acquisition of fabricating equipment eliminates some potential competition from anyone who might own or acquire such facilities."[41] It also accepted that "potential competition from producers of presently non-competitive articles . . . may be taken into consideration in weighing the effect of any acquisition of assets on restraint of trade."[42] Thus, though the defendants ultimately prevailed on the facts (the Court refused to speculate about entry without the support of record evidence), the opinion expressed no doubt that reductions in future competition brought about by the acquisition of a potential competitor were within the reach of Section 7.[43] Indeed, any hesitancy on that point would have been startling. Hardly a decade earlier, the Court had identified injury to potential competitors as a jurisdictional focus of the FTC Act:

> It is obvious that the word 'competition' imports the existence of present *or potential competitors*, and the unfair methods must be such as injuriously affect or tend thus to affect the business of these competitors—that is to say, the trader whose methods are assailed as unfair must have present *or potential rivals* in trade whose business will be, or is likely to be, lessened or otherwise injured.[44]

By the mid-1950s, charges of harm to potential competition were commonplace. In 1957, Jesse Markham observed that over 80 percent of recent public actions had charged "injury to both actual and potential competition."[45]

Concerns about the elimination of potential competitors were thus a fixture over several decades. In other cases, potential competition was seen to play the corrective and preventative roles that Clark had earlier articulated. In 1939, the Seventh Circuit addressed this view of potential competition in its

---

[39] *Id.*
[40] United States v. Columbia Steel Co., 334 U.S. 495, 528 (1948).
[41] *Id.*
[42] *Id.*
[43] *Id.* at 528–29.
[44] FTC v. Raladam Co., 283 U.S. 643, 649 (1931) (emphasis added).
[45] Jesse W. Markham, *Merger Policy Under the New Section 7: A Six-Year Appraisal*, 43 VA. L. REV. 489, 519 (1957).

review of the case against Socony-Vacuum.[46] The opinion saw potential competition from outside rivals as raising questions about the competitive significance of the challenged acts:

> [T]here are many large refiners outside the Mid-Western area but so near the territory that the product is readily obtainable. In many cases the freight rate from these outside refiners to important points within the territory is actually less than from refiners located within the territory. . . . [I]t is argued, not without logic, that potential competition from outside the territory would preclude the raising of prices within the territory to high and arbitrary levels.[47]

Other examples of defensive thinking used the existence of a fringe of potential competitors to narrow market power inquiries. In *Addyston Pipe*, then-Judge Taft reasoned that potential competition from distant manufacturers, who were not already in the market, constituted an imperfect constraint on the ability of a cartel to raise prices: the conspirators "could not impose prices on the public in excess of [the price at which more distant producers would be price competitive]," but "within that limit, they could fix prices as they chose."[48] Similar reasoning motivated Judge Hand's observation in *Alcoa* that "for aught that appears there may well have been a practically unlimited supply of [new] imports as the price of ingot rose," yet "within the limits afforded by the tariff and the cost of transportation, 'Alcoa' was free to raise its prices as it chose."[49]

As *Addyston Pipe* and *Alcoa* illustrate, the defensive implications of potential competition were not routinely separated from market power analysis at this time; instead, the competitive significance of potential competitors was sometimes reflected in perceived limits on the ability of firms to exercise market power. This approach was probably attributable to the still-nascent status of market definition.[50] The language of "entry" makes little sense outside the context of a well-defined relevant market—one must know the boundaries of a relevant market to be able to say which firms could and

---

[46] United States v. Socony-Vacuum Oil Co., 105 F.2d 809 (7th Cir. 1939), *rev'd*, 310 U.S. 150 (1940).

[47] *Id.* at 828.

[48] United States v. Addyston Pipe & Steel Co., 85 F. 271, 292 (6th Cir. 1898), *aff'd as modified*, 175 U.S. 211 (1899).

[49] United States v. Aluminum Co. of Am., 148 F.2d 416, 426 (2d Cir. 1945).

[50] *See* Hovenkamp, *supra* note 33 (in the section "From Potential Competition to the Relevant Market," describing the interdependent evolution of potential competition and relevant market analysis).

would enter it.[51] The modern language of entry analysis, grounded in market definition, thus awaited the Supreme Court's introduction of tests for defining markets in the late 1950s and 1960s.[52] An early example of more modern entry language is the report of the 1955 Attorney General's National Committee to Study the Antitrust Laws, recommending attention be paid to entry as a limit on monopoly and a factor tending to support "workable" or "effective" competition.[53] Of course, these considerations simply relabeled the defensive implications of potential competition, particularly the future corrective effects of entry by potential competitors.[54]

C. SEPARATION OF ENTRY AND POTENTIAL COMPETITION

The long reign of fluid and embracing references to potential competition appears not to have been marked by rampant confusion of harms with benefits. Still, this period was vulnerable to criticism for inadequately separating these implications. In 1958, James Rahl launched just such an attack. Rahl complained of opportunities for confusion when the term "potential competition" was used to mean different things in different contexts:

> We are, I believe, inviting endless trouble and confusion in merger cases unless we note the two legally different uses of the term [potential competition]. I believe that these two uses are to describe:
>
> 1. A condition of freedom of future entry in the market concerned.
>
> 2. An existing positive competitive force supplied by the immediate threat of new entry by an identified firm.[55]

Rahl apparently meant the first of these uses to describe an assessment of barriers to entry in competitive effects analysis, and the second to describe a violation resulting from the acquisition of a potential competitor.[56] Haltingly,

---

[51] *See* Franklin M. Fisher, *Economic Analysis and "Bright-Line" Tests*, 4 J. COMPETITION L. & ECON. 129, 131 (2008) ("[O]ne might reasonably say that [entry analysis] requires one to know what it is that is being entered.").

[52] *See* Sean P. Sullivan, *Modular Market Definition*, 55 U.C. DAVIS L. REV. 1091, 1098–117 (2021) (describing the Supreme Court's approach to market definition during the late 1950s and early 1960s).

[53] REPORT OF THE ATTORNEY GENERAL'S NATIONAL COMMITTEE TO STUDY THE ANTITRUST LAWS 318–39 (1955).

[54] *Cf. id.* at 323.

[55] James A. Rahl, *Applicability of the Clayton Act to Potential Competition*, 12 ABA SECTION ANTITRUST L. 128, 132 (1958).

[56] *Id.* at 132–33.

over the next several decades, Rahl's suggested bifurcation came to shape, define, and ultimately constrict this area of law.

Concerns about the obstruction of potential competition—particularly, the acquisition of a potential competitor as a theory of antitrust injury—were the first to be peeled away from the trunk. As has been well documented in other writing,[57] Supreme Court cases of the 1960s and 1970s identified, in situations involving mergers with potential competitors, two distinct theories of harm.

The first theory—and the only one to attain explicit Supreme Court sanction—was that involving the current preventative effects of potential competition.[58] Where the threat of future entry was already preventing existing firms from exercising market power, the elimination of that threat through acquisition would extinguish that present procompetitive influence.[59] Cases about acquisitions involving competitors "standing in the wings"[60] were extracted from the general concept of potential competition and assigned the awkward labels of harm arising from "the wings effect"[61] or from the elimination of "perceived potential competition."[62]

The second theory—infamously discussed but never sanctioned by the Supreme Court—concerned the future corrective effects of potential competition.[63] Where a potential competitor's future entry promised to cure the effects of any exercise of market power, the elimination of that potential competitor through acquisition would extinguish the promise of better future competitive conditions. Creaky Supreme Court skepticism notwithstanding,

---

[57] *See* Gregory J. Werden & Kristen C. Limarzi, *Forward-Looking Merger Analysis and the Superfluous Potential Competition Doctrine*, 77 ANTITRUST L.J. 109, 112–20 (2010) (summarizing the development of modern potential competition doctrine).

[58] United States v. Marine Bancorporation, Inc., 418 U.S. 602, 625 (1974) ("The elimination of . . . present procompetitive effects [of a potential competitor] may render a merger unlawful under § 7.").

[59] *Id.* (considering whether the presence of a potential entrant "tempered oligopolistic behavior on the part of existing participants in that market"); United States v. Falstaff Brewing Corp., 410 U.S. 526, 534 (1973) (discussing the possibility that a potential competitor "on the fringe of the market" could influence the behavior of existing competitors).

[60] *Marine Bancorporation*, 418 U.S. at 640.

[61] *Id.* at 625 (cleaned up).

[62] *E.g.*, United States v. Siemens Corp., 621 F.2d 499, 509 (2d Cir. 1980) (discussing "the 'perceived' potential competition doctrine"); *see also Marine Bancorporation*, 418 U.S. at 625 (referring to "perceived potential entry").

[63] *Marine Bancorporation*, 418 U.S. at 625 (commenting, in the Court's last word on the subject to date, that it has "not previously resolved whether the potential-competition doctrine proscribes a market extension merger solely on the ground that such a merger eliminates the prospect for long-term deconcentration of an oligopolistic market").

this theory lives on in several circuits (often burdened with an asterisk).[64] It, too, has been peeled away from the main trunk and assigned a specific label: the fascinatingly oxymoronic moniker of harm to "actual potential competition."[65]

In contrast to these offensive implications of potential competition, Supreme Court cases of the 1960s and 1970s did not explicitly comment on defensive implications of potential competition. For years, lack of endorsement by the Court was grounds for arguing that future entry was not a valid defensive consideration in antitrust analysis.[66] As is clear upon even a moment's reflection, however, complete rejection of the defensive implications of potential competition is logically untenable. For acquisitions involving potential competitors to result in harm, the presence of potential competitors must play a beneficial role. One theory cannot stand without the other.

In 1984, the Second Circuit relied on essentially this reasoning in holding that, despite the silence of the Supreme Court on the topic, possible entry by potential competitors could mitigate the competitive concerns of mergers:

> The Supreme Court has never directly held that ease of entry may rebut a showing of *prima facie* illegality under *Philadelphia National Bank*. However, on several occasions it has held that appraisal of the impact of a proposed merger upon competition must take into account potential competition from firms not presently active in the relevant product and geographic markets. . . . Under [*Falstaff*], therefore, potential entrants must be considered in appraising a merger.[67]

---

[64] *See* Yamaha Motor Co. v. FTC, 657 F.2d 971, 980 (8th Cir. 1981) (assuming this theory of harm to be actionable); Mercantile Texas Corp. v. Bd. of Governors of Fed. Rsrv. Sys., 638 F.2d 1255, 1265–66 (5th Cir. Unit A Feb. 1981) (similar); *accord* Fraser v. Major League Soccer, L.L.C., 284 F.3d 47, 70–71 (1st Cir. 2002) (analyzing without deciding if the theory is actionable); Tenneco, Inc. v. FTC, 689 F.2d 346, 352 (2d Cir. 1982) (similar); FTC v. Atl. Richfield Co., 549 F.2d 289, 294 (4th Cir. 1977) (similar); *see also* Werden & Limarzi, *supra* note 57, at 120 ("No court of appeals has ever held that the 'actual potential' competition theory . . . was not legally cognizable.").

[65] *E.g.*, *Mercantile Texas*, 638 F.2d at 1264 (discussing the "actual potential competition doctrine").

[66] *See, e.g.*, Janusz A. Ordover & Daniel M. Wall, *Proving Entry Barriers: A Practical Guide to the Economics of New Entry*, ANTITRUST, Winter 1988, at 12, 12 (commenting that, a decade before writing, "[a]lmost without exception the courts . . . flatly rejected ease of entry as a mitigating factor in a merger on the ground that 'the existence of potential competition does not justify or excuse elimination of actual competition'").

[67] United States v. Waste Mgmt., Inc., 743 F.2d 976, 982 (2d Cir. 1984).

The Supreme Court quickly signaled agreement in opinions describing conditions of easy entry as precluding antitrust injury.[68] In *Baker Hughes*, the D.C. Circuit further emphasized the defensive role of potential entry in merger analysis.[69] Thus, by the early 1990s, defensive implications of potential competition had become a discrete and important step in nearly all competitive effects analysis.[70] As this happened, the relevant analysis was again peeled away from the potential competition trunk and given a separate label: the language of "entry," "ease of entry," or "absence of barriers to entry" came to identify the defensive implications of potential competition.

In contrast to offensive considerations, little effort was ever made to distinguish between the future corrective effects of entry and the current preventative effects of the threat of entry. In *Waste Management*, the Second Circuit articulated both theories in the span of one reporter page—not obviously appreciating the economic differences between these theories.[71] Current practice is little better. The 2010 Horizontal Merger Guidelines loosely describe entry as alleviating competitive concerns when entry "will *deter or counteract* any competitive effects."[72] Fair enough. But these are very different theories about the beneficial effects of potential competition.

To recap, offensive and defensive implications of potential competition did not diverge into distinct doctrinal lines until the 1960s. Theories of harm from

---

[68] *E.g.*, Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 591 n.15 (1986) ("Respondents offer no reason to suppose that entry into the relevant market is especially difficult, yet without barriers to entry it would presumably be impossible to maintain supracompetitive prices for an extended time."); Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 226 (1993) ("If market circumstances or deficiencies in proof would bar a reasonable jury from finding that the scheme alleged would likely result in sustained supracompetitive pricing, the plaintiff's case has failed. In certain situations—for example, . . . where new entry is easy . . . —summary disposition of the case is appropriate.").

[69] United States v. Baker Hughes Inc., 908 F.2d 981, 984, 987–89 (D.C. Cir. 1990).

[70] *See, e.g.*, Ordover & Wall, *supra* note 66, at 12 ("Ten years ago, entry barriers had a negligible role in antitrust law."); *id.* ("Today very few antitrust attorneys would contest the importance of entry barrier analysis in merger cases . . . ."); Mark Leddy, *Entry Issues in Merger Analysis*, 54 ANTITRUST L.J. 1257, 1257 (1985) ("It's fair to say . . . that over the past five years or so 'supply side' issues in merger analysis, including but not limited to ease of entry, have taken on a far more important role than in the past."); Richard Schmalensee, *Ease of Entry: Has the Concept Been Applied Too Readily*, 56 ANTITRUST L.J. 41, 41 (1987) ("The concept of ease of entry has certainly been applied with increasing frequency in the last few years.").

[71] *Waste Mgmt.*, 743 F.2d at 983 ("[W]e believe that entry into the relevant product and geographic market by new firms or by existing firms . . . is so easy that any anti-competitive impact of the merger before us would be eliminated more quickly by such competition than by litigation."); *id.* ("The existence of haulers in Fort Worth, therefore, constrains prices charged by Dallas haulers, much as Falstaff constrained pricing by northeast breweries.").

[72] 2010 Horizontal Merger Guidelines, *supra* note 7, at 28 (emphasis added).

the elimination of potential competition were the first to get pulled out. These theories differentiated between what we are calling forward and backward time travel. Defensive implications of potential competition became a highlight of antitrust analysis in the 1980s. These defensive theories did not differentiate between what we are calling forward and backward time travel, and it is still uncommon to see this temporal distinction emphasized today.

II. TIME TRAVEL ECONOMICS

As the previous discussion suggests, potential competition doctrine and the defense of easy entry arise from a common origin in economics. The underlying analysis differs little between these theories. This overlap is obscured, however, by a current overemphasis on litigation posture. We can see more clearly if we turn our focus away from the uninteresting question of who wins or loses if a theory is proved, to instead direct our attention to the economic reasoning involved in a particular theory. This perspective reveals holes in current doctrine and lays bare the remarkable fragility of all time travel narratives in competitive effects analysis.

A. BARRIERS TO ENTRY AND TO COMPETITIVE SIGNIFICANCE

We will soon turn to the distinct economics of forward and backward time travel in antitrust. To do so efficiently, however, we should start with common dependencies. Every time travel theory launches from the same foundational premise. Whatever the legal consequence of the claim, and whatever the timing of the claimed effect, every theory begins with the prediction that future entry could and would inject substantial competition into a relevant market.[73]

This prediction can be decomposed (with some redundancy) into two constituent claims. First, barriers to entry must be small enough, relative to the profits to be gained from entry, that the potential competitor is at least a plausible future entrant.[74] Second, the future competition that would result from this entry must be significant enough, given the probability of entry occurring, to warrant basing a claim or defense upon the possibility of that future entry. As the time-travel perspective makes clear, both claims must be proved to justify relying on *any* potential entry argument.

---

[73] *See supra* note 17 and accompanying text (observing that any present effects of potential competition derive from incumbent firms' recognition of the probable competitive significance of future entry by a potential competitor).

[74] Set aside, for now, the separate question of how probable future entry must be. We return to the subject of evidentiary standards in Part III.B.

1. *Barriers to Entry*

We start with the first foundational requirement: sufficiently low barriers to entry. To state either a violation or a defense based on potential competition, there must be at least a plausible basis for thinking that a potential competitor could and would enter a relevant market in the future. In some cases, markets may be difficult, if not impossible, to enter because of features like patent protection, regulatory requirements, or infrastructure requirements. In other cases, entry may be possible but unattractive. Profit-maximizing firms do not enter markets unless they expect to profit by doing so.[75] This does not rule out entry in pursuit of long-run profits at the cost of short-run losses. But it suggests that the probability of entry increases with the expected opportunity for post-entry profit and decreases with the cost of entry and the anticipated ferocity of post-entry competition, all else equal.[76] When evaluating entry and potential competition theories, this means that anything that decreases the benefits of entry, or that increases the costs of entry, is a *barrier to entry* that weighs against the plausibility of the theory.

This understanding of what constitutes a barrier to entry is looser than what one encounters in many opinions and articles on entry analysis. The difference illustrates the clarity that comes from looking at entry and potential competition theories from a unified perspective.

First, this same understanding of barriers to entry applies across all time travel theories. Every such theory launches from the prediction that future entry could and would inject new competition into a relevant market. Every such theory is thus vulnerable to evidence that entry is unattractive to outside firms. Entry defenses and complaints of illegal acquisition, claims about future benefits and claims about effects on current competition—*all* can be defeated by barriers to entry in the simple and functional way that we define the term.

Second, this simple and functional definition is the *only* understanding of barriers to entry that matters when evaluating entry and potential competition theories. We concede that scholars have devoted many pages to the battling definitions of barriers to entry proposed by Joe Bain, George Stigler, and

[75] *See, e.g.*, William J. Baumol & Robert D. Willig, *Fixed Costs, Sunk Costs, Entry Barriers, and Sustainability of Monopoly*, 96 Q.J. ECON. 405, 418 (1981) ("Entry can be expected to be profitable only if the profits expected in the event of success outweigh the unrecoverable entry costs that will be lost in the case of failure.").

[76] Where a potential competitor could enter and exit in quick succession, it makes sense to pay special attention to unrecoverable entry costs, typically called sunk costs. We return to this point in Part II.C.

others.[77] But the unified perspective reveals these debates to have been unproductive. No great mystery will be unlocked by searching for formal definitions of what constitutes a barrier to entry. No list of factors is needed.[78] Nothing of importance hangs upon whether a barrier can be characterized as "natural" or "unnatural,"[79] "purposeful" or "innocent."[80] Anything that reduces the attractiveness of entry tends to reduce the probability of entry; and anything that reduces the probability of entry is a barrier to entry in the only sense of consequence for competitive effects analysis.

This understanding of barriers to entry is both simplifying and complicating.[81] It simplifies by freeing us of irrelevant semantics and definitional arguments.[82] It complicates by revealing that there are more barriers to entry than casual inspection might suggest. Many considerations can reduce the attractiveness of entry to an outside firm. Each is a potential barrier to entry. Without attempting exhaustion, barriers to entry can include exogenous features of competition, strategic considerations surrounding entry, and strategic efforts by incumbent firms to preclude entry.[83]

---

[77] *E.g.*, Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47 (1982); Ordover & Wall, *supra* note 66; Schmalensee, *supra* note 70; Gregory J. Werden, *Network Effects and Conditions of Entry: Lessons from the Microsoft Case*, 69 ANTITRUST L.J. 87 (2001).

[78] *Cf.* Rebel Oil Co. v. Atl. Richfield Co., 51 F.3d 1421, 1439 (9th Cir. 1995) (attempting to enumerate "[t]he main sources of entry barriers").

[79] *Cf.* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 331 (Bork Publishing LLC 2021) (1978) ("Capital requirements exist and certainly inhibit entry—just as talent requirements for playing professional football exist and inhibit entry. Neither barrier is in any sense artificial or the proper subject of special concern for antitrust policy.").

[80] Steven C. Salop, *Strategic Entry Deterrence*, 69 AM. ECON. REV. 335, 335 (1979) ("An *innocent* entry barrier is unintentionally erected as a side effect of innocent profit maximization. In contrast, a *strategic* entry barrier is purposely erected to reduce the possibility of entry.").

[81] We are not the first to endorse this broad view of barriers to entry. *See, e.g.*, A. Michael Spence, *Entry, Capacity, Investment and Oligopolistic Pricing*, 8 BELL J. ECON. 534, 543–44 (1977) ("Entry barriers are a combination of structural and technological factors on the one hand, and obstacles that are put in place by the existing industry on the other. The latter include more or less irreversible investments in a variety of kinds of capital."); Baumol & Willig, *supra* note 75, at 418 ("The additional expected revenue that a potential entrant requires as compensation for the excess of its incremental cost and incremental risk over those of the incumbent becomes an entry cost as defined here, and permits the incumbent to earn corresponding profit (rent).").

[82] The time travel perspective also reveals the damage that definitional arguments have done in antitrust cases. *Cf.* Ordover & Wall, *supra* note 66, at 13 ("The disagreement among economists as to the conditions which constitute meaningful entry barriers has important ramifications for antitrust litigation. A case can be won or lost depending on whether a court is convinced to take a broad or narrow view of entry barriers.").

[83] The inclusion of strategic considerations among the list of barriers to entry is more novel in antitrust law than it is in economics. *See, e.g.*, Roger Sherman & Thomas D. Willett, *Potential Entrants Discourage Entry*, 75 J. POL. ECON. 400, 403 (1967) ("[I]n addition to technological determinants of the entry decision, we urge investigation of strategic considerations as well.").

Exogenous features of competition. Background characteristics of competition can constitute barriers to entry. Extreme examples include situations in which critical factors of production are finite and already exhausted or where incumbent firms enjoy the protection of critical patents.[84] Less extreme, but still important, are obstacles such as the need to obtain regulatory approval;[85] the need to overcome incumbent firm advantages in access to raw materials or prime locations;[86] and the need to catch up to incumbent firms in experience-based knowhow,[87] brand strength, and reputation.[88]

Courts and scholars have sometimes doubted whether these exogenous features of competition should count as barriers to entry since they are borne by incumbent firms as well as entrants. This framing device is objectionable for the implicit suggestion that the costs and benefits of entry are static over time. But a more fundamental objection is that it simply focuses on an irrelevant distinction. As the time travel perspective clarifies, the only question of consequence is whether the potential competitor could and would enter the market now or in the future. The fact that competitors have overcome

---

[84] *See* Ordover & Wall, *supra* note 66, at 16 (discussing "valuable patents, . . . regulatory constraints, . . . advantageous raw material sources, [and] strategic plant locations"). Note that patents can prevent entry even when they may be invalid. *See* Christopher R. Leslie, *The Anticompetitive Effects of Unenforced Invalid Patents*, 91 MINN. L. REV. 101, 132–39 (2006).

[85] Regulatory barriers have long been recognized by courts. *See* United States v. Citizens & S. Nat'l Bank, 422 U.S. 86, 118 n.30 (1975) ("The banking business is, of course, riddled with state and federal regulatory barriers to entry."); United States v. Marine Bancorporation, Inc., 418 U.S. 602, 629 (1974) ("[R]egulatory barriers to entry include federal and state supervisory controls over the number of bank charters to be granted."); S. Pac. Commc'ns Co. v. Am. Tel. & Tel. Co., 740 F.2d 980, 1001 (D.C. Cir. 1984) ("[T]he costs and delays of the regulatory process clearly constitute barriers to entry.").

[86] *See* Ordover & Wall, *supra* note 66, at 15 ("A natural absolute cost advantage can stem from better access to scarce assets (such as low cost natural resources or choice location), ownership of a patent, or government regulation."); *see also* K. Sridhar Moorthy, *Using Game Theory to Model Competition*, 22 J. MARKETING RES. 262, 269 (1985) ("One way in which the first-mover advantage is manifested is in the first-mover's preemption of the 'best' locations in attribute space.").

[87] Joseph E. Stiglitz, *Potential Competition May Reduce Welfare*, 71 AM. ECON. REV.: AEA PAPERS AND PROCEEDINGS 184, 184–85 (1981) (discussing how learning by doing influences entry).

[88] Advertising and brand loyalty are often related. *See* Demsetz, *supra* note 77, at 50 ("Because of brand loyalty, new rivals, seeking to sell as much as existing firms, may need to advertise more than existing firms (or offer some other special compensating advantage)."). Demsetz objected to calling these entry barriers, but on grounds not relevant here. Reputation may be a barrier as well. *See* John C. Hilke & Philip B. Nelson, *The Economics of Entry Lags: A Theoretical and Empirical Overview*, 61 ANTITRUST L.J. 365, 368 (1993) (discussing how entrants may "have to build up a reputation for product quality, reliable delivery, and service before they have a significant impact on the pricing of other firms in the market").

entry hurdles in the past is immaterial except as circumstantial evidence about current and future entry conditions.[89] In appropriate circumstances, any of the above factors could reduce the ability of a firm to profit by entry, so all are potential barriers to entry in the only sense that matters in antitrust analysis.

Strategic considerations surrounding entry. Strategic properties of competition may also constitute barriers to entry. Just like exogenous features of competition, strategic considerations act as barriers to entry when they reduce the expected profitability of entry. This type of barrier can be simultaneously intuitive and difficult to evaluate empirically.

One example is the availability of several potential competitors. It is often uncritically assumed that the probability of entry rises with the number of potential entrants.[90] This is not a safe assumption. The profitability of future entry depends on both the price responses of incumbent firms and the entry decisions of other potential competitors. Every potential competitor that elects to enter a market drives down the profitability of entry to all other potential competitors.[91] To any firm that is contemplating entry, the threat of entry by others is a risk that decreases the attractiveness of entry.[92] In some cases, an increase in the number of potential entrants can decrease the probability of entry by any of them. Partha Dasgupta and Joseph Stiglitz state this point with pith: "there are some circumstances . . . where markets may be less competitive, the greater the number of potential competitors."[93]

---

[89] *But cf.* Gopal Das Varma & Martino De Stefano, *Entry Deterrence, Concentration, and Merger Policy*, 61 REV. INDUS. ORG. 199, 214 (2022) (commenting that, when mergers increase the deterrence incentives of incumbent firms, "evidence of historical entry . . . may have limited usefulness with regards to assuring adequate likelihood of entry").

[90] *Compare* Donald F. Turner, *Conglomerate Mergers and Section 7 of the Clayton Act*, 78 HARV. L. REV. 1313, 1379 (1965) ("As has been pointed out, two potential entrants make actual new entry more probable than when there is only one."), *with* Sherman & Willett, *supra* note 83, at 403 ("That an increase in the number of potential entrants can raise rather than lower the entry-preventing price conflicts with the widespread view that entry should be kept open to as many firms as possible.").

[91] Sherman & Willett, *supra* note 83, at 400 ("The entry decision is greatly complicated when additional potential entrants are considered . . . . Each potential entrant's profit depends not only on the response of existing firms but also on whether other firms enter as well. Multiple entry could impose losses on all."). The profit-suppressing consequences of entry are vividly apparent in the pharmaceutical context. *See, e.g.*, FTC v. Actavis, Inc., 570 U.S. 136, 143–44 (2013) (noting that most of a generic drug's profits may accrue during the brief period of exclusivity before other generics enter the market).

[92] *See* P. Dasgupta & J. E. Stiglitz, *Potential Competition, Actual Competition, and Economic Welfare*, 32 EUR. ECON. REV. 569, 573 (1988) ("[A] firm's incentive to undertake the risk of entering a market . . . will be diminished if it believes that if it is initially successful in doing so, other firms will simply enter the market, to take its profits away.").

[93] *Id.*

Another example involves consumer expectations. In durable goods markets, consumer expectations about entry may act as self-fulfilling prophecies.[94] Where consumers expect future entry to lead to better prices or other improvements in the terms of trade, they may rationally delay purchases while waiting for future entry to occur.[95] This unfilled demand constitutes sales opportunities for potential entrants, increasing the profit opportunity for entrants and thus leading to entry—just as consumers had hoped. But the same logic works in reverse. Where consumers doubt that future entry will occur, and so satisfy demand through purchase from incumbent firms, sales opportunities contract, shrinking the profit opportunities for entrants and deterring entry—just as consumers had feared. The properties of this simple model do not generalize to every situation, but they reflect another way in which strategic properties of competition may act as barriers to entry.[96]

Strategic efforts to preclude entry. Finally, incumbent firms are unlikely to sit idly by, waiting for entry to occur. Instead, they will obstruct or deter entry wherever it is cost-justified to do so.[97] Cost justification is a question of both the costs of deterrence measures and the benefits of preventing entry.[98] This calculus leads to the perverse relationship that Donald Turner once noted: "the more threatening the [competitive effects of potential] entry the more likely that existing sellers will act to discourage it."[99]

Strategic efforts to deter entry can take myriad forms, but the most studied pattern is irrevocable investment, by incumbent firms, in assets or activities

---

[94] Jaehong Kim, *Fulfilled Expectations of Entry*, 24 RAND J. ECON. 681, 685 (1993) ("[W]hen the consumer expects future entry, the equilibrium allows entry, and when he believes a monopoly will prevail in the future, entry is deterred at equilibrium.").

[95] Hilke & Nelson, *supra* note 88, at 368 ("In some markets it is also possible for consumers to delay purchases until the entrant's facilities are completed.").

[96] The basic tension is general. *See* Sanford J. Grossman, *Nash Equilibrium and the Industrial Organization of Markets with Large Fixed Costs*, 49 ECONOMETRICA 1149, 1171 (1981) ("[T]he existence of fixed costs can create an 'externality' across the potential customers of the entrant. The entrant can enter only if enough customers jointly agree to leave the existing firm.").

[97] Cost justification will not be a high hurdle where cheap modes of exclusion are available. *See generally* Susan A. Creighton, D. Bruce Hoffman, Thomas G. Krattenmaker & Ernest A. Nagata, *Cheap Exclusion*, 72 ANTITRUST L.J. 975 (2005).

[98] *See generally* Das Varma & De Stefano, *supra* note 89 (showing that mergers may change incumbent incentives to engage in entry deterrence).

[99] Turner, *supra* note 90, at 1385; *see also* Avinash Dixit, *The Role of Investment in Entry-Deterrence*, 90 ECON. J. 95, 95 (1980) ("[F]aced with an irrevocable fact of entry, the established firm will usually find it best to make an accommodating output reduction. On the other hand, it would like to threaten to respond to entry with a predatory increase in output. Its problem is to make the latter threat credible given the prospective entrant's knowledge of the former fact.").

that decrease incumbents' post-entry marginal costs.[100] These cost reductions constitute credible threats of tough post-entry competition, reducing the profit opportunity of entry and thus reducing the probability of entry, all else being equal. An example is strategic over-scaling. By sinking resources into maintaining significant excess capacity, an incumbent firm presents potential competitors with the credible threat of aggressive post-entry competition.[101] Other examples include over-investing in cost-reducing technologies,[102] over-accumulating knowledge through research and "learning by doing,"[103] and over-investment in advertising.[104]

Two properties of these strategic acts of deterrence are noteworthy. First, while looking in some respects like desirable competition,[105] these strategies involve *inefficient* behavior. Incumbents waste resources trying to deter entry. They scale too much, learn too fast, and advertise too much, sometimes with the effect that outcomes are socially worse than if there had been no threat of potential entry at all.[106] Second, these acts by incumbent firms constitute barriers to entry in the same sense as all previous barriers we have considered. Credible threats of fierce post-entry competition decrease the profit incentive

---

[100] *E.g.*, Salop, *supra* note 80, at 337 (summarizing models of this type of entry deterrence); Dixit, *supra* note 99, at 96 (similar); *cf.* Christopher R. Leslie, *Rationality Analysis in Antitrust*, 158 U. PA. L. REV. 261, 301 (2010) (discussing reputation for irrationality as an entry deterrent).

[101] *E.g.*, Spence, *supra* note 81, at 534–35 ("[E]xcess capacity permits existing firms to *expand* output and reduce price when entry is threatened, thereby reducing the prospective profits of the new entrant who operates on the residual demand curve to zero."); Avinash Dixit, *A Model of Duopoly Suggesting a Theory of Entry Barriers*, 10 BELL J. ECON. 20, 30–31 (1979) (presenting a similar model); *see also* Turner *supra* note 90, at 1365 ("[T]he threat of potential entry may well have considerable influence upon the decision of oligopolists whether to expand capacity . . . . The threat of new entry renders it more likely that they will accelerate expansion in order to keep the new entrant out.").

[102] *E.g.*, Drew Fudenberg & Jean Tirole, *Capital as a Commitment: Strategic Investment to Deter Mobility*, 31 J. ECON. THEORY 227 (1983).

[103] *See* Partha Dasgupta & Joseph Stiglitz, *Learning-by-Doing, Market Structure and Industrial and Trade Policies*, 40 OXFORD ECON. PAPERS 246, 247 (1988) ("'[L]earning' may well be used for the creation of entry-barriers."); Stiglitz, *supra* note 87, at 184 ("[P]otential competition forces the existing firm to undertake research at a sufficient rate to deter the entry of the rival."); A. Michael Spence, *The Learning Curve and Competition*, 12 BELL J. ECON. 49, 68 (1981) ("The learning curve creates entry barriers and protection from competition by conferring cost advantages on early entrants and those who achieve large market shares. . . . The effects are similar to (though more pronounced than) those caused by economies of scale."); *see also* B. Curtis Eaton & Richard G. Lipsey, *Exit Barriers are Entry Barriers: The Durability of Capital as a Barrier to Entry*, 11 BELL J. ECON. 721 (1980).

[104] *E.g.*, Spence, *supra* note 81, at 542–43; Salop, *supra* note 80, at 336.

[105] *See, e.g.*, United States v. Penn-Olin Chem. Co., 378 U.S. 158, 174 (1964) (interpreting "expansion undertaken by [incumbent firms] as soon as they heard of the interest of [potential competitors]" as competition incentivized by the presence of potential competitors, as opposed to efforts by incumbents to prevent entry).

[106] *See infra* Part III.D.

for potential competitors to enter the market, and therefore decrease the probability of future entry.

Just like exogenous features of competition, courts have sometimes balked at the idea of counting the threat of aggressive future competition as an entry barrier. [107] These objections are category errors. As we have noted before, the question of importance in time travel theories is whether future entry will inject substantial competition into a relevant market. [108] As we have also noted, anything that reduces the attractiveness of entry decreases the probability that entry will be attempted, and thus decreases the probability of substantial competition being injected through entry. [109] If credible threats of aggressive post-entry competition reduce the attractiveness of entry in a way that deters potential competitors from entering, then these threats are barriers to entry in the only sense that matters for antitrust analysis. [110]

2. *Barriers to Competitive Significance*

Next, we consider the second foundational requirement: competitive significance of a potential competitor. To state either a violation or a defense based on potential entry, the outside firm's entry must constitute a significant source of post-entry competition. [111] Entry must matter. It would go too far to require an entrant to meet or exceed the competitive significance of incumbent firms at the moment of entry. [112] But an entrant that quickly fails or flounders—or accommodates incumbent firms in the exercise of market

---

[107] *E.g.*, United States v. Syufy Enter., 903 F.2d 659, 667 (9th Cir. 1990) ("[T]he government trots out a shopworn argument we had thought long abandoned: that efficient, aggressive competition is itself a structural barrier to entry."); *id.* at 668 ("The government is not claiming that Syufy monopolized the market by being too efficient, but that Syufy's effectiveness as a competitor creates a structural barrier to entry, rendering illicit Syufy's acquisition of its competitors' screens. We hasten to sever this new branch that the government has caused to sprout from the moribund Alcoa trunk.").

[108] *See supra* notes 76–79 and accompanying text.

[109] *See supra* notes 74–75 and accompanying text.

[110] *See* Richard J. Gilbert, *The Role of Potential Competition in Industrial Organization*, 3 J. ECON. PERSP. 107, 109 (1989) ("Modest entry barriers could translate into large incumbent profits if entrants expect that entry would trigger aggressive price-cutting behavior.").

[111] *See, e.g.*, Turner, *supra* note 90, at 1382 ("[T]here is a further problem of establishing with some degree of assurance that the loss of the acquiring firm as an independent new competitor probably has or would have significance.").

[112] Some commentators nevertheless demand this. *See, e.g.*, Rahl, *supra* note 55, at 133 ("[I]t should be a necessary part of the burden of proof to show that the potential element about which complaint is made possessed positive substantial competitive force of such degree as to rank with actual competition.").

power—does not significantly increase future competition and thus does not supply a justification for relying on its presence in either a claim or defense.[113]

Barriers to competitive significance are features of competition that reduce the likely competitive impact of future entrants. These are analytical cousins of barriers to entry and sometimes arise from common origins. This explains, but does not justify, the frequency with which barriers to significance are lumped together with barriers to entry. Barriers to competitive significance do not prevent entry; they dampen its competitive effects.[114]

Entry lags are an example. Often, there will be a significant delay between the point at which a potential competitor decides to enter a relevant market and the point at which it constitutes a significant competitor. This delay could reflect the need to acquire assets, to construct facilities, to acquire regulatory approval, or to acquire know-how and other inputs of competition. During this period of delay, the potential competitor may not be a significant competitive constraint on incumbent firms.[115]

Reputational hurdles illustrate this point. In areas of trades where a reputation for quality, consistency, or safety is critical for buyers, new and untested suppliers are not realistic options.[116] Reputational hurdles can be overcome with time and effort; significant buyers can sponsor the development of this reputation through small projects and continuous qualification of new products. But reputation development takes time.[117] Until it is earned, the entrant's competitive significance, and thus its importance in competitive effects analysis, will often be limited.[118]

---

[113] Worse than nothing, an entrant that does not substantially improve competitive conditions would likely decrease total welfare. *Cf.* Kaplow, *supra* note 8, at XXX (noting the complicated welfare implications of entry and observing that entry has the potential to decrease total welfare under plausible conditions); *id.* ("Indeed, it is possible that the greatest social cost of some mergers is attributable to the subsequent, wasteful entry that they induce.").

[114] Our terminology overlaps with that of the 2010 Horizontal Merger Guidelines. What we call barriers to entry, the Guidelines address under the heading of likelihood of entry. 2010 Horizontal Merger Guidelines, *supra* note 7, at 29. What we call barriers to competitive significance, the Guidelines address as issues of timeliness and sufficiency. *Id.*

[115] Hilke & Nelson, *supra* note 88, at 367 ("The term 'entry lag' could be defined as the period between the time when a monopolistic price increase is implemented and the time when profitable price constraining entry has been completed.").

[116] *Id.* at 368 ("In some markets, entrants have to build up a reputation for product quality, reliable delivery, and service before they have a significant impact on the pricing of other firms in the market, which can extend the entry period well past the time when the entrant produces and/or sells its first unit of output."); Demsetz, *supra* note 77, at 51 ("A reputable history is an asset to the firm possessing it and to the buyer who relies on it because information is not free.").

[117] Hilke & Nelson, *supra* note 88, at 371–72 ("Long entry lags are sometimes present because the entering firm needs time to build its reputation as a quality supplier.").

[118] *See infra* notes 126–127 (discussing specific timing considerations in forward time travel); *infra* notes 161–169 (discussing specific timing considerations in backward time travel).

As alluded to already, entry lags and entry barriers can arise from common sources. It seems reasonable to assume that entry costs will often increase with the duration of entry lags. If entry lags can be shortened by spending more for faster entry, the distinction becomes even fuzzier.[119] But the direct and necessary effect of entry lags is to delay the constraining influence of a potential competitor, even when it commits to enter a market.[120] This delayed competitive significance is relevant to the assessment of every invocation of potential entry in antitrust analysis.

A related barrier to competitive significance arises when production or service provision exhibits significant economies of scale. An entrant that is unable to obtain at least minimum viable scale for the industry may be forced to exit, but even those that attain viable scale may impose only limited competitive constraints upon larger-scale incumbent firms. Depending on the context, the relevant concept of scale can comprehend anything from plant size to geographic footprint to size of customer base.

Network effects can be seen as a special form of scale effect on the demand side. Where the value of a dominant incumbent firm's products is enhanced and insulated by the size of its user base, for example, potential competitors may need to invest heavily in growing their market share to have any chance of competing with the incumbent firm.[121] Any such entrant begins life at a disadvantage; without disruptive innovations or similar opportunities, it may never constitute a significant competitive threat to an incumbent firm.[122]

Finally, entrants that fail to quickly overcome reputation, scale, and similar challenges may exit the market. Statistically, failure and rapid exit are the fate

---

[119] Hilke & Nelson, *supra* note 88, at 370–71 (observing that costs may rise with entry lags while profit opportunities decline).

[120] Colo. Interstate Gas Co. v. Nat'l Gas Pipeline Co. of Am., 885 F.2d 683, 695 n.21 (10th Cir. 1989) ("Barriers to entry are market characteristics which make it difficult or time-consuming for new firms to enter a market."); FTC v. Elders Grain, Inc., 868 F.2d 901, 905 (7th Cir. 1989) ("And since entry into the industry is slow . . . colluding sellers need not fear that any attempt to restrict output in order to drive up price will be promptly nullified by new production."); Ball Mem'l Hosp., Inc. v. Mut. Hosp. Ins., Inc., 784 F.2d 1325, 1335 (7th Cir. 1986) ("To put these points a little differently, the lower the barriers to entry, and the shorter the lags of new entry, the less power existing firms have.").

[121] Werden, *supra* note 77, at 108 ("Network effects are among the determinants of the conditions of entry in many industries, and they can create a truly formidable entry obstacle, sufficient to permit prices to persist above competitive level for a substantial period of time without attracting entry.").

[122] *Id.* at 91–92 ("Without some offsetting advantage, the potential entrant has no prospect of success, and the stronger the network effects, the greater the potential entrant's offsetting advantage must be.").

of many entrants.[123] Since firms that exit a relevant market cease to be competitive constraints, the probability of rapid failure can act as both a barrier to entry and a barrier to competitive significance.

* * *

While the competitive predictions of forward and backward time travel differ in important respects, the absence of dispositive barriers to entry and competitive significance is a common requirement of all such theories. With this foundational step in analysis in place, we now turn to considerations that vary with the timing of the effect being claimed.

B. FORWARD TIME TRAVEL

The focus of forward time travel is on future competitive effects. It asks whether a potential competitor would enter a relevant market in the future. Assuming this entry occurred, forward time travel then asks how the entry of this competitor would affect competition in that future state of the relevant market. The legal significance of this exercise comes from how it changes the assessment of some challenged act of current conduct. Perhaps it suggests that the challenged conduct poses little threat because entry is so easy that any harm would be quickly corrected (a defensive implication). Perhaps it suggests that challenged conduct poses a greater threat than meets the eye because it forecloses the beneficial future competition that would have resulted from the independent entry of the potential competitor (an offensive implication). Either way, the focus is on the future entry of a potential competitor and what this entry would mean for future competition.

The questions sketched out above are fraught with the economic fragility of forward time travel stories. Future entry is unlikely to occur if barriers to entry are too large relative to profit opportunities.[124] Unless expected profits outweigh the costs, even modest barriers to entry can make the prospect of entry unappealing—and therefore make entry unlikely.[125] And even if potential competitors do in fact enter a market, they may still fail to introduce

---

[123] *See* JOHN R. BALDWIN, THE DYNAMICS OF INDUSTRIAL COMPETITION: A NORTH AMERICAN PERSPECTIVE 17–21 (1995) (providing empirical summaries of entry lifecycles and noting that "greenfield entrants have a high infant mortality rate," though some do persist for decades); Timothy Dunne, Mark J. Roberts, & Larry Samuelson, *Patterns of Firm Entry and Exit in U.S. Manufacturing Industries*, 19 RAND J. ECON. 495, 513 (1988) (presenting data in which failure rates for newly entered firms range from around 50–60 percent in the first five years of competition to 70–80 percent within a decade of entry).

[124] *See supra* Part II.A.1 (discussing barriers to entry).

[125] *See* Gilbert *supra* note 110, at 109 ("Modest entry barriers could translate into large incumbent profits if entrants expect that entry would trigger aggressive price-cutting behavior."); Ordover & Wall, *supra* note 66, at 14 (noting that "entry occurs because it is potentially profitable, not merely because it is possible").

significant competition. [126] Barriers to significance can blunt the competitive pressure of entrants upon incumbent firms, at least in the early years of entry. Indeed, even if a potential competitor enters a market and could significantly influence competition, it should not be uncritically assumed that post-entry competition *would* have that result. Nothing prohibits entrants and incumbents from accommodating one another in the continued exercise of market power in the post-entry market. [127] Thus, the entrant's primary motivation to enter may be the expectation of mutual accommodation and the hope of participating in ongoing exercises of market power.

Taken together, these considerations can supply ample reasons to doubt that a potential competitor will enter a relevant market in the future in a competitively significant way. At the very least, they compel a sobering picture of the likelihood of competitively significant entry. But these are not the only challenges facing forward time travel theories. Some other challenges apply asymmetrically to offensive and defensive considerations (a point to which we will soon return), but one important challenge is generic to all instances of this form of time travel. This challenge arises from a wrinkle in how entry and significance considerations interact in the forward time travel narrative.

Here is the wrinkle. As discussed previously, a profit-maximizing firm will not enter a market if it cannot expect to earn an adequate profit by doing so. [128] In Part II.A.1, we discussed a number of barriers to entry arising from threats to the profitability of the potential competitor. But that discussion omitted one important factor: the competition introduced by a potential competitor's entry dampens its own post-entry profitability. In other words, in forward time travel theories, entrants can be their own barriers to entry.

Many discussions of future entry miss this point. In doing so, they fall victim to the same trap that caught Robert Bork when he claimed that, upon entering a previously monopolized market, "available profits [would] more than cover the costs of advertising" for the new competitor. [129] Pigou warned

---

[126] *See supra* Part II.A.2 (discussing barriers to competitive significance).

[127] Dasgupta & Stiglitz, *supra* note 92, at 573 ("[O]nce the entrant has entered, it may pay the incumbent firm to accommodate to that entry; in particular, the perfect equilibrium may entail collusion.").

[128] *See supra* notes 75–76 and accompanying text.

[129] BORK, *supra* note 79, at 325–26 ("The entrant can find an advertising agency just as easily as the monopolist. Indeed, he will have agencies clamoring for the account. Since the incumbent has, by hypothesis, been taking a monopoly profit, the available profits more than cover the costs of advertising.").

about this error decades earlier.[130] If entry by the potential competitor injects substantial competition into the market (as it must for that entry to matter in competitive effects analysis), then that future entrant cannot rationally expect to reap profits at pre-entry levels after it enters.[131] Its own competition in the post-entry market reduces the profitability of entry.

Indeed, if future entry by the potential competitor is significant enough to correct whatever exercise of market power has attracted it to enter, then the entrant will soon find itself needing to be content with nothing more than the competitive rate of return.[132] This invites a curious empirical question: if the potential competitor would find entry profitable even when limited to a competitive rate of return, then why has it not entered the relevant market long ago?[133] Is not its absence from the relevant market evidence that it would not find future entry profitable? And, if so, is this not strong reason to doubt that the potential competitor would really enter the relevant market in the future?

Satisfying responses to these questions are possible in some situations. A potential competitor's recent invention of new, disruptive technology could, for example, explain why it is not a competitor today but would still find it profitable to enter in the future. Or perhaps a demand shock in an adjacent market has made entry into the relevant market attractive. Or perhaps a potential competitor has come upon a way to differentiate its product or service, so as to segment or expand the addressable market. In cases where current exercises of market power arise from the exit of an independent competitor, opportunities for profit may also be present despite competitive post-entry conditions. Mergers leading to output suppression are an example.[134] Finally, as noted previously, nothing compels post-entry

---

[130] Pigou, *supra* note 21, at 66.

[131] Jonathan B. Baker, *The Problem with Baker Hughes and Syufy: On the Role of Entry in Merger Analysis*, 65 ANTITRUST L.J. 353, 363 (1997) ("If the committed entry solves the competitive problem, the postmerger price will quickly return to the premerger level or fall below it. Thus, the prospective committed entrant must determine whether its entry plan would be profitable assuming that it would receive no more than the premerger price."); Kaplow, *supra* note 8, at XXX (similarly noting the importance of accounting for how the entrant's own competition influences the expected profitability of entry).

[132] Steven C. Salop, *Comments and Discussion* on Robert D. Willig, *Merger Analysis, Industrial Organization Theory, and Merger Guidelines*, 1991 BROOKINGS PAPERS ON ECON. ACTIVITY: MICROECONOMICS 282, 313–16.

[133] *See* Baker, *supra* note 131, at 364 ("If entry at premerger prices would be profitable after the transaction, wouldn't it have been profitable before? And wouldn't the firm have entered already? In short, does the 'likelihood' analysis guarantee that we will never find a likely entrant because all likely entrants already would be incumbents?").

[134] *E.g.*, Janusz A. Ordover & Jonathan B. Baker, *Entry Analysis under the 1992 Horizontal Merger Guidelines*, 61 ANTITRUST L.J. 139, 143 (1992) ("If the merger has the feared anticompetitive effect, industry output will decline, thereby creating additional potential sales for an entrant beyond what had previously been available.").

behavior to be highly competitive.[135] In some circumstances, modest competitive improvements following future entry may be consistent with both entry motives and antitrust significance—a point to which we will return shortly.

But even these responses cannot unseat cause for doubt. In the merger context, if post-merger entry would really correct the anticompetitive potential of the merger, then it seems doubtful that the merger would be attempted in the first place—evidence of a merger might thus be taken as weighty evidence that at least the merging parties do not perceive significant entry to be likely.[136] At any rate, in addition to various exogenous and strategic barriers to entry, a potential competitor must account for its own profit-reducing competition in the post-entry market. The non-entered status of a potential competitor can be, in many cases, powerful evidence against the claim that future entry is probable for that firm. And this is *still* not the end to the challenges facing forward time travel theories. Here, however, it becomes important to differentiate between defensive and offensive implications of forward time travel.

Start with the defensive implication of forward time travel: the "corrective entry" argument that a potential competitor's future entry would quickly correct any exercise of market power that is attempted by incumbent firms.[137] Suppose, for example, that there is credible evidence that a horizontal merger will lead to near-term price elevation. When would corrective entry suffice to justify this merger? Logically, the corrective entry theory would need to establish two things. First, future entry would need to introduce enough competitive pressure to make substantial post-entry price elevation

[135] *See supra* note 127 and accompanying text.

[136] Caradonna, Miller, and Sheu make a formal version of this point in the context of differentiated product Bertrand competition. Peter Caradonna, Nathan H. Miller & Gloria Sheu, *Mergers, Entry, and Consumer Welfare* (Georgetown McDonough School of Business Research Paper No. 3537135, June 27, 2022), ssrn.com/abstract=3537135. Spector does the same in an undifferentiated Cournot context. David Spector, *Horizontal mergers, entry, and efficiency defences*, 21 INT'L J. INDUS. ORG. 1591, 1597 (2003); *see also* Gregory J. Werden & Luke M. Froeb, *The Entry-Inducing Effects of Horizontal Mergers: An Exploratory Analysis*, 46 J. INDUS. ECON. 525 (1998) (providing reasons to doubt that mergers would induce corrective entry in both Bertrand and Cournot contexts); Das Varma & De Stefano, *supra* note 89 (considering how mergers may increase incentives to engage in entry deterrence).

[137] *See* Colo. Interstate Gas Co. v. Nat'l Gas Pipeline Co. of Am., 885 F.2d 683, 695–96 (10th Cir. 1989) ("If the evidence demonstrates that a firm's ability to charge monopoly prices will necessarily be temporary, the firm will not possess the degree of market power required for the monopolization offense.").

unsustainable. Second, future entry would need to cause this correction quickly.

The need for both elements is inherent in modern articulations of the elements of the defense: requiring entry to be not just likely, but also sufficient and timely. If future entry were not sufficient to undo the anticompetitive effect of the merger, then it would only soften the harm of the merger and would not generally suffice to rebut illegality.[138] If future entry were sufficient to undo price elevation, but not until several years after the potential competitor had entered,[139] then the defense would again be inadequate. Harm would still accrue in those interim years. The incredulity of some courts notwithstanding, future entry really does need to be "quick and effective" to support a defense to illegality.[140]

Interestingly, the offensive implications of forward time travel are not saddled with this demanding standard. Suppose, for example, that an incumbent firm's acquisition of a potential competitor is challenged on the grounds that it forecloses the possible benefits that would flow from the potential competitor's independent future entry into the relevant market. The claimed injury requires that the future competitive significance of the potential competitor be greater than zero, but nothing requires that it be of any particular magnitude to establish illegality.[141] A loss of even modest future competition is still a loss. There is also no special need for the benefits of that future competition to be rapidly felt in the relevant market. True, the loss of earlier benefits implies a greater injury. But even if the benefits of future entry were not felt for several years, foreclosure of those future benefits would still

---

[138] *See* Kaplow, *supra* note 8, at XXX (discussing conditions under which merger-induced entry would not restore premerger competitive outcomes and noting that "[t]he degree of this shortfall—that is, the magnitude of the residual postmerger price increase—will depend on the nature of entry costs, production costs, competitive interaction, and demand, all factors that will vary by context"); Chi. Bridge & Iron Co., 138 F.T.C. 1024, 1071 (2004) ("[T]he mere fact that new entrants and fringe firms have an intent to compete does not necessarily mean that those firms are significant competitors capable of replacing lost competition"), *aff'd sub nom.* Chi. Bridge & Iron Co. N.V. v. FTC, 534 F.3d 410 (5th Cir. 2008); FTC v. CCC Holdings Inc., 605 F. Supp. 2d 26, 47, 57-59 (D. D.C. 2009) (finding that the claimed new entrant was "very unlikely to be able to compete effectively, *i.e.*, affect pricing, within five years or even soon thereafter").

[139] Gilbert, *supra* note 110, at 124 ("A host of studies find that some industries change in ways that are consistent with the dynamic limit pricing model. Profits are eroded over time as new entry occurs, but the success rate of new entrants is low and above-normal profits persist for a long time.").

[140] *Cf.* United States v. Baker Hughes Inc., 908 F.2d 981, 987 (D.C. Cir. 1990) (wrongly rejecting as a "novel and unduly onerous standard" the logical requirement that future entry be "quick and effective" to state a defense).

[141] *See* Brown Shoe Co. v. United States, 370 U.S. 294, 321 (1962) (commenting that Congress "did [not] adopt a definition of the word 'substantially,' . . . by which a merger's effects on competition were to be measured").

constitute a loss of future competition. The logical implication is that it is easier to prove harm in a forward time travel theory than it is to prove a defense, at least in this respect.[142]

Proving harm to future competition from the acquisition of a potential competitor does, however, entail one element not so keenly felt in the defensive posture: there must not be other potential competitors with equal or better prospects of entering the market. The need for this is obvious. If many potential competitors were equally situated to enter the relevant market, then the acquisition of any one of these potential competitors would have little consequence for future competitive conditions.

This additional step in proving injury does require attention but tends to be overstated in descriptions of the "actual potential competition" doctrine.[143] Other potential competitors will often face the same entry barriers as the acquired firm, if not more. These other potential competitors will also face any profit-suppressing influences that the acquired firm's assets will have when added to the post-acquisition market—perhaps lending excess capacity to an incumbent firm, for example. Even a modestly strong case for future independent entry by the potential competitor may thus suffice to establish its distinctiveness as a potential future entrant.

Another shortcoming in current doctrine is an uncritical tendency to assume that uniqueness is irrelevant in evaluating the defensive implications of entry. As previously discussed, it is wrong to assume that more potential competitors necessarily equates to a stronger entry defense. There are cases in which the probability of entry falls with the number of potential entrants.[144] In any event, the substantive force of the corrective entry defense depends on the likelihood of entry actually occurring. The mere identification of a number of candidate firms is not itself evidence that any one firm would enter in the way that the corrective entry defense requires. Nor is evidence that one potential competitor would enter a relevant market generally persuasive evidence that other potential competitors would enter as well.

---

[142] Of course, the more distant the claimed future benefits of entry, the less confidence one can maintain in the accuracy of the predicted benefits. Offensive and defensive implications of forward time travel share this sensitivity. Forecasting far into the future eventually devolves into speculation. *Cf.* United States v. Marine Bancorporation, Inc., 418 U.S. 602, 622–23 (1974) ("But it is to be remembered that § 7 deals in 'probabilities,' not 'ephemeral possibilities.'" (citing *Brown Shoe*, 370 U.S. at 323)).

[143] *Cf.* Turner, *supra* note 90, at 1382 ("Unless a firm possesses unique capabilities, its preparation to enter a market . . . suggests that the market presents attractive opportunities that at least one other firm will be likely to seek.").

[144] *See supra* notes 91–93 and accompanying text.

C. BACKWARD TIME TRAVEL

The focus of backward time travel is on current competitive effects based on perceptions and expectations about alternate futures. By definition, a potential competitor is not a current competitor, and so its actions are not directly affecting competition in a relevant market. Instead, the theory of backward time travel centers on predictions made by current competitors about alternate states of future competition, and their adjustments of market behavior based on such predictions. As the story goes, incumbent firms predict that significant exercises of market power will attract entry by potential competitors. Seeing a potential competitor on the horizon, and not wanting to cause its entry, these incumbent firms moderate their conduct and decline to exercise the market power they otherwise possess. In this way, the potential competitor exerts a current procompetitive constraint, even though it has not yet entered the relevant market (and may not even have come into being).

Backward time travel is an intuitively appealing narrative because the prediction ostensibly comes from the market participants themselves; the trier of fact does not need to engage in his or her own scrying. Perhaps this explains why it has found such ready acceptance among courts and commentators. [145] The economic basis for the story is, unfortunately, not a justification for its acceptance. Upon even brief reflection, it becomes clear that backward time travel depends upon the satisfaction of two unlikely conditions. First, the potential competitor must be a plausible future entrant, satisfying all the relevant requirements of forward time travel (as previously discussed). [146] Second, something unusual about the mode of entry must make it rational for incumbent firms to react to the potential competitor even before it enters, rather than in response. In practice, evaluation of the second condition subsumes the first condition, so the second condition is the place to focus our attention.

There is no general justification for expecting incumbent firms to moderate their conduct to discourage entry. [147] For one thing, doing so is costly, as it

---

[145] *Cf. Marine Bancorporation*, 418 U.S. at 624 ("Unequivocal proof that an acquiring firm actually would have entered de novo but for a merger is rarely available. Thus . . . the principal focus of the doctrine is on the likely effects of the premerger position of the acquiring firm on the fringe of the target market." (footnote omitted)); Rahl, *supra* note 55, at 138 ("A mere showing that the acquired firm might enter . . . would not qualify. Imminent entry, with full capability to enter, and with demonstrated present effective *restraint* upon the acquiring company's conduct must be shown.").

[146] *See* PHILIP E. AREEDA & HERBERT HOVENKAMP, 5 ANTITRUST LAW ¶ 1221b, at 57 (4th ed. 2016), (noting that the "'harder' present effect tests would be satisfied by few mergers that have not already been condemned under the 'easier' future effect tests").

[147] *See* Moorthy, *supra* note 86, at 275 (explaining this point and exceptions to it).

means sacrificing present profit opportunities. Why not exploit these present profit opportunities while they are available, responding competitively only after entry occurs—*if* entry occurs?[148] Another alternative to moderated conduct is for incumbent firms to engage in strategic efforts to deter or exclude entry.[149] While not costless, these options may be less costly than leaving present profit opportunities to waste.

For another thing, one has to explain why the exercise of pre-entry market power (or the refusal to exercise it) changes anything in the entry calculus of potential competitors.[150] As previously discussed, a profit-maximizing potential competitor enters a relevant market when it expects to earn adequate post-entry profits.[151] Just as rational potential entrants must recognize that high pre-entry prices are no guarantee of post-entry profit opportunities,[152] they should recognize that strategically suppressed pre-entry prices do not foreclose post-entry profit opportunities.[153] Some instances of low pricing could be rationalized as efforts by incumbents to signal their low costs to potential competitors,[154] but since this behavior involves no deception,[155] once low costs have been credibly signaled, it becomes difficult to see why incumbents would not return to setting more profitable prices.[156]

---

[148] Paul Milgrom & John Roberts, *Limit Pricing and Entry under Incomplete Information: An Equilibrium Analysis*, 50 ECONOMETRICA 443, 444 (1982) ("[A]ny attempt at limit pricing would serve only to squander pre-entry profits and so there would be no limit pricing. Friedman's argument will be generally valid in any complete-information, game-theoretic model. . . . In such a model, then, the intuitive idea underlying the traditional concept of limit pricing—that potential entrants would read the pre-entry price as a signal concerning the price and market shares they can expect to prevail after entry—finds no formal justification." (citing James W. Friedman, *On Entry Preventing Behavior and Limit Price Models of Entry*, *in* APPLIED GAME THEORY, (S. J. Brams, A. Schotter, & G. Schwodiauer, eds., 1979)).

[149] *See supra* notes 97–106 and accompanying text.

[150] Milgrom & Roberts, *supra* note 148, at 443 ("If the entrant is a rational decision maker with complete information, pre-entry prices will not influence its entry decision, so the established firm has no incentive to practice limit pricing.").

[151] Gilbert, *supra* note 110, at 110 ("If equilibrium after entry is unaffected by the behavior of incumbent firms before entry, there is no scope for limit pricing. In this case, entry will be prevented only if the market cannot sustain an additional firm when established firms act without regard to the effects of their behavior on entry.").

[152] *See supra* notes 124–125 and accompanying text.

[153] A potential competitor that expects to enter an arrangement of tacit collusion after entry has no general reason to care that incumbent firms feign competition in the pre-entry period.

[154] *E.g.*, Milgrom & Roberts, *supra* note 148, at 444–45 (summarizing a model in which incumbents use low prices to credibly signal their private cost information).

[155] *Id.* (noting that, in equilibrium, "the entrant is not fooled by this strategy").

[156] *Cf.* Andrew Sweeting, James W. Roberts & Chris Gedge, *A Model of Dynamic Limit Pricing with an Application to the Airline Industry*, 128 J. POL. ECON. 1148, 1149 (2020)

For backward time travel to make sense, some property of competition must make it rational for incumbents to react competitively to the hint of potential competition before entry has occurred (or concrete steps have been taken). As noted, there is overlap between the hypothesized behavior and strategic entry-prevention behavior (though it would be a mistake to interpret entry-prevention strategies as efficient forms of competition) [157] as well as costly signaling in games with incomplete information. [158] But the economic model that best matches the backward time travel narrative, and has been invoked to formalize it, is limit pricing in contestable market theory. [159]

Stated simply, contestable market theory posits a situation in which incumbent firms react to the possibility of fast and easy entry by limiting their prices to just below the point at which new firms would be incentivized to enter. [160] This is good news in that it identifies an economic basis upon which backward time travel is at least theoretically possible. It is bad news in that the strength of assumptions required by contestable market theory is positively eye-watering. Competitive conditions must permit ephemeral flashes of competition from outside firms: "hit-and-run entry" in standard

---

(observing this uncertainty and proposing a model in which private information is stochastic but serially correlated in a way that supports repeated signaling in equilibrium).

[157] *See supra* notes 96–107.

[158] *See* Milgrom & Roberts, *supra* note 148 (presenting entry models in which limit pricing is possible under incomplete information); *see also* Kim, *supra* note 94 (presenting entry models in which limit pricing is possible in the presence of time-dependent demand).

[159] *See, e.g.*, US Dep't of Justice, 1982 Merger Guidelines 21 (1982), justice.gov/sites/default/files/atr/legacy/2007/07/11/11248.pdf ("The economic theory of limit pricing suggests that monopolists and groups of colluding firms may find it profitable to restrain their pricing in order to deter new entry that is likely to push prices even lower by adding capacity to the market."); Werden & Froeb, *supra* note 136, at 526 n.8 (noting that "merger case law's treatment of entry appears to have been influenced by the contestability literature of the 1980s," and listing influential sources in this literature).

[160] *See generally* WILLIAM J. BAUMOL, JOHN C. PANZAR, & ROBERT D. WILLIG, CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE (1982); William J. Baumol, *Contestable Markets: An Uprising in the Theory of Industry Structure*, 72 AM. ECON. REV. 1 (1982); Baumol & Willig, *supra* note 75.

lingo.[161] The assumptions required for hit-and-run entry to occur are roughly these:[162]

1. Potential competitors must be able to enter the market instantly and at any scale of operation.
2. Consumers must be able to respond instantly to the new competitors' entry and pricing, while incumbent firms must be *unable* to change prices or terms until after a lag of non-trivial duration.
3. Newly entered firms must be able to exit instantly, cashing out at no (or very little) sunk cost.

None of these assumptions can generally be relaxed without changing the behavioral predictions of the theory.[163] This makes backward time travel about as plausible as each of these three assumptions on the facts of a case.[164]

The first assumption is difficult to defend in almost any practical context. It may fit areas of trade in which economies of scale are insignificant, or where

---

[161] Marius Schwartz & Robert J. Reynolds, *Contestable Markets: An Uprising in the Theory of Industry Structure: Comment*, 73 AM. ECON. REV. 488, 488 (1983) ("The crucial feature of a perfectly contestable market is its vulnerability to hit-and-run entry. A potential entrant could exploit even the most transient profit opportunity by instantaneously entering, collecting his profit, and exiting before incumbents could lower price."); Gilbert, *supra* note 110, at 112 ("[W]hen 'contestable market' is used in the active voice, it presumes the existence of 'hit and run' entrants who are able and willing to enter an industry whenever profit opportunities arise. Such entry makes sense only if the potential entrant has little at risk.").

[162] *See, e.g.*, Schwartz & Reynolds, *supra* note 161, at 488 ("[P]erfect contestability requires two implausible conditions: (i) in response to high prices, an entrant can enter instantaneously at any scale, that is, there is no entry lag; and (ii) an entrant can undercut an incumbent's price and exit with no loss of fixed costs before the incumbent can adjust price, that is, the incumbent's price adjustment lag exceeds the exit lag.") (footnote omitted); Michael Spence, *Contestable Markets and the Theory of Industry Structure: A Review Article*, 21 J. ECON. LIT. 981, 986 (1983) ("[F]or hit-and-run entry one needs essentially two assumptions: (1) If t is the response time required for incumbents to make price changes and if τ is the period for which a new entrant's costs are sunk, after which the investment is costlessly reversible, then t > τ. (2) Demand responds instantaneously to price changes or to price differentials."); William G. Shepherd, *Potential Competition Versus Actual Competition*, 42 ADMIN. L. REV. 5, 16–17 (1990) ("'Contestability's' three assumptions are heroic: . . . [1] The entrant can duplicate immediately and replace entirely any existing firm, . . . [2] [T]he entrant can establish itself before an existing firm makes any price response. . . . [3] Exit is perfectly free, at no sacrifice of any cost. Sunk cost is zero for the entrant, so it can depart freely.").

[163] *See* Schwartz & Reynolds, *supra* note 161, at 488 ("If these conditions are relaxed even slightly, the results can differ dramatically from those obtained under perfect contestability."); *id.* at 489 ("[O]nce we deviate even slightly from the strict assumptions of perfect contestability, pricing and entry decisions depend upon the nature of firm interactions.").

[164] *Cf.* Turner, *supra* note 90, at 1362–63 (propounding inadequately restrictive "minimum conditions" for backward time travel to occur).

scale is important but can be treated as a variable cost of production. In most settings, however, one struggles to imagine a new firm deciding to enter a market and being in that market, days later, at the same scale and competitive importance as incumbent firms.[165] Scale that is purchased with significant sunk cost violates the third assumption and so is not a solution.[166]

For different reasons, the second assumption is difficult to defend. Where nontrivial delay would separate a potential competitor's decision to enter and its first act of competition, incumbent firms would not be constrained to limit prices to competitive levels.[167] Even where entry was instantaneous, however, it is difficult to imagine the additional facts that would be necessary to prove that consumers would be able to respond to the emergence of the new competitor while incumbent firms would not.[168] Without some delay between the pricing decisions of entrants and the response of incumbent firms, incumbents are again not constrained to limit prices in the pre-entry period.[169] They would do better to keep prices high until immediately after entry occurs.

Finally, the implausibility of the third assumption bears special emphasis. Because hit-and-run entry is ephemeral, the focus of entry analysis is not on the profitability of permanent entry (comparing entry costs against streams of future revenues) but the profitability of short bursts of competition (comparing short-term revenues against whatever entry costs remain after the entrant terminates its leases and liquidates its assets upon exit). It is the rare market that could be entered and exited at *zero* sunk cost.[170]

True, sufficiently small sunk costs can be consistent with the theory, but as the magnitude of sunk costs rises, the significance of potential competition as a constraint on pre-entry behavior quickly fades.[171] When balanced against

---

[165] *See* Spence, *supra* note 162, at 986 (noting that "[a] certain amount of controversy has centered around the notion of hit-and-run entry and its relation to scale economies" particularly as scale economies relate to the assumption of zero sunk costs).

[166] *See* Richard Schmalensee, *Sunk Costs and Antitrust Barriers to Entry*, 94 AM. ECON. REV. 471, 474 (2004) (noting that "[s]cale economies associated with sunk costs can deter new competition" (emphasis omitted)).

[167] *See* Hilke & Nelson, *supra* note 88, at 369 ("[E]ntry lags may allow established firms to profitably raise prices above competitive levels for a substantial period of time before entry forces prices back to competitive levels.").

[168] Shepherd, *supra* note 162, at 23 (criticizing the internal inconsistency of assuming entrants are small enough to be disregarded by incumbent firms while also assuming entry to be significant enough to replicate the competition of an incumbent firm).

[169] Schwartz & Reynolds, *supra* note 161, at 489 (noting that the possibility of instantaneous price responses by incumbent firms allows for monopolistic pricing).

[170] *See* Schmalensee, *supra* note 70, at 47 ("[T]he case of no sunk costs is an empty box."); Spence, *supra* note 162, at 987 ("I am not yet persuaded that sunk costs are negligible for most goods. But my impressions should not substitute for empirical research.").

[171] *See* Ordover & Wall, *supra* note 66, at 16–17 (observing this property).

modest—and time-limited—profit opportunities, even small sunk costs can mute the competitive significance of potential competitors in backward time travel. Put another way, small sunk costs can be all that is required for incumbent firms to rest comfortably while engaging in significant exercises of market power. [172]

In sum, the mechanics of backward time travel involve an exquisitely fragile story. This story is perhaps a bit more tenuous in an offensive use of backward time travel, since proving causality requires showing the acquired firm is unique in satisfying the requirements of contestable market theory, [173] a constellation of facts that is hard to imagine. But the dubious basis for inferring harm on the basis of backward time travel applies nearly as forcefully to arguments defending challenged conduct on the basis of competition waiting in the wings. The basic fragility of the underlying theory is thus ever present for both offensive and defensive implications.

Whether backward time travel ever materializes is an interesting question. There are doubtless cases where firms pause to contemplate how their behavior might attract imitators or reveal profit opportunities to potential entrants. But backwards time travel involves more than this, and the idea of entrants engaging in low-risk hit-and-run entry rarely seems to fit the facts. Gregory Werden and Kristen Limarzi note that perceived potential competition (offensive backward time travel) "is such a rare bird that neither [the Supreme] Court nor any appeals court has ever seen it." [174] Thomas Leary once remarked that uncommitted entrants (defensive backward time travel) "have proven as elusive as the Abominable Snowman." [175] The underlying economics offer few hints about where to look for these elusive creatures. [176]

---

[172] *See* Dasgupta & Stiglitz, *supra* note 92, at 575 ("Potential competition may be relatively ineffective in the presence of even small sunk costs. Expenditures on R&D, and the process of improvement in production capabilities through learning by doing, fundamentally entail sunk costs."); *id.* at 576 (noting that "even small barriers to entry can give rise to large degrees of monopoly power").

[173] *See supra* note 143 and accompanying text (discussing the related requirement in forward time travel).

[174] Werden & Limarzi, *supra* note 57, at 119; *see also id.* ("Two sightings by district courts have been reported, but neither can be confirmed because the reports did not include direct evidence of the tempering effect the Supreme Court required.").

[175] Thomas B. Leary, *The Essential Stability of Merger Policy in the United States*, 70 ANTITRUST L.J. 105, 121 (2002).

[176] *See supra* note 162 and accompanying text (describing the unlikely circumstances needed for backward time travel to work as predicted). There do exist a few empirical reports consistent with potential competitors exerting effects on incumbent firms. *See* John Kwoka, *Eliminating Potential Competition*, *in* 2 ABA SECTION OF ANTITRUST LAW, ISSUES IN COMPETITION LAW AND POLICY 1437, 1444–46 (W. Dale Collins ed., 2008).

There is a not coincidental parallel between this situation and an old challenge to those who believe that humans will one day develop the technology for backward time travel. "If backward time travel is really possible," the challenge goes, then "where are all the time travelers?" [177]

III. TIME TRAVEL PARADOXES

Antitrust time travel is replete with complexities and paradoxes. As Thomas Schelling once noted in anticipation of entry deterrence strategies by incumbent firms, "these tactics . . . rest on the paradox that the power to constrain an adversary may depend on the power to bind oneself." [178] This oddity does not stand alone. In what follows, we discuss five paradoxes of antitrust time travel. The first three are artificial consequences of asymmetries in the treatment of different types and implications of time travel. The final two are inescapable truths about the economic machinery that makes time travel possible—both cast shadows over the apparent promise of potential competitors to serve the public ends of antitrust law.

A. ASYMMETRIC ACCEPTANCE

One remarkable paradox in the treatment of potential competition is the maintenance of logically inconsistent positions regarding the legal recognition of different ways of looking at the past, present, and future. We have discussed one example of this already. From the 1960s to the 1980s, precedent recognized that antitrust injury could flow from acquisitions involving potential competitors without clearly recognizing that defensive implications could also flow from the presence of potential competitors. [179] Thus, one finds categorical statements like that of the FTC in *Ekco Products*:

> A merger may violate Section 7 even though there do not appear to be formidable barriers to entry into the market affected by the acquisition; the existence of potential competition does not justify or excuse elimination of actual competition. [180]

---

[177] Stephen Hawking is said to have once illustrated this question with an experiment. He threw a party with an invitation to all time travelers but did not announce the party until after it had ended. Attendance from the future was apparently thin.

[178] THOMAS C. SCHELLING, THE STRATEGY OF CONFLICT 22 (1980); s*ee also id.* ("[I]n bargaining, weakness is often strength, freedom may be freedom to capitulate, and to burn bridges behind one may suffice to undo an opponent.").

[179] *See supra* note 66 and accompanying text.

[180] Ekco Prods. Co, 65 F.T.C. 1163, 1208 (1964). The opinion provides some defense for this claim in assertions that future entry would not correct the loss of competition because it would take too long and that current pressure from potential competitors might not suffice to hold prices as low as current competition would. *Id.*

As we noted previously, harm from the elimination of potential competitors cannot be recognized without also acknowledging the benefits created by potential competition. [181] Rejection of one implication cannot stand alongside acceptance of the other. Of course, courts have since come to accept the role of entry defenses in competitive effects analysis. But, in doing so, they have promoted a new and equally absurd inconsistency.

This new inconsistency emerges from continued doubts about the legal recognition of "actual potential competition" (the offensive implications of forward time travel) as a theory of harm. In *Falstaff*, the Supreme Court infamously left "for another day" the question whether an acquisition would be "challengeable under [Section] 7 only on grounds that the company could, but did not, enter *de novo* . . . and that there is less competition than there would have been had entry been in such a manner." [182] Nearly fifty years later, that day still has not come. [183] And so, while at least one circuit apparently does unconditionally recognize challenges based on the elimination of actual potential competition, [184] others continue to wince at the possible invalidity of this theory. [185] Doubts that the statutory language of Section 7 covers loss of future competition are frequently cited for this hesitancy. [186]

Strong arguments can be made for the validity of actual potential competition theories, [187] but no justification could be stronger than simple

---

[181] *See supra* Part I.C.

[182] United States v. Falstaff Brewing Corp., 410 U.S. 526, 537 (1973).

[183] The Court reserved the question once again in its last case on potential competition. United States v. Marine Bancorporation, Inc., 418 U.S. 602, 639 (1974) ("[S]ince the preconditions for that theory are not present, we do not reach it, and therefore we express no view on the appropriate resolution of the question reserved in *Falstaff*.").

[184] *See* Yamaha Motor Co. v. FTC, 657 F.2d 971, 980 (8th Cir. 1981); *see also* Mercantile Tex. Corp. v. Bd. of Governors of Fed. Rsrv. Sys., 638 F.2d 1255, 1265 (5th Cir. Unit A Feb. 1981) ("[T]he doctrine has logical force and is consonant with the language and policy of the Clayton Act.").

[185] *E.g.*, Fraser v. Major League Soccer, L.L.C., 284 F.3d 47, 70 (1st Cir. 2002) ("It is uncertain how the Supreme Court will ultimately resolve the issue [whether actual potential competition is cognizable]. Plaintiffs' view bumps up against the most straightforward reading of the phrase 'may ... lessen competition' in which 'competition' is understood to refer to the existing level of competition prior to the merger in question.").

[186] *E.g.*, *id.*; AREEDA & HOVENKAMP, *supra* note 146, ¶1124 at 62 ("Where the outside firm is relevant only because it might otherwise enter in the future and thereby increase competition at that time, the merger does not reduce competition; it only eliminates a future opportunity to increase it."); Rahl, *supra* note 55, at 143 (similarly asserting inconsistency with the statutory language of Section 7).

[187] *E.g.*, Werden & Limarzi, *supra* note 57, at 120 (suggesting that "the proper understanding of 'lessen competition' entails a forward-looking comparison of competition with and without a challenged merger"); Turner, *supra* note 90, at 1379–80 (similarly noting that the linguistic issue can be solved by adopting an appropriate frame of reference).

observation of the absurdity of recognizing the defensive implications of future corrective entry while doubting that reductions in these same benefits could constitute a competitive harm. One implication of forward time travel cannot stand without the other. To make that point less abstractly, the Second Circuit cannot logically reserve judgment on the validity of actual potential competition theory [188] while invoking that same theory to justify a merger on the grounds that future entry would cure anticompetitive effects. [189]

As two implications of the same underlying exercise in forward time travel, recognition of these doctrines must stand or fall together. Setting aside possible differences in burdens of proof (see the next section), courts may elect to recognize both future corrective entry and challenges to the elimination of actual potential competition, [190] or courts may elect to recognize neither future corrective entry nor challenges to the elimination of actual potential competition. What courts cannot do is bless one but not the other.

B. ASYMMETRIC STANDARDS

A different but related asymmetry arises in responses to the evidentiary difficulty of assessing time travel theories. Beyond the diversity of barriers to entry and competitive significance that must be considered, [191] there are further difficulties in evaluating those barriers on the basis of available evidence, [192] and still further difficulties in resolving competing economic interpretations of the evidence, particularly where relevant models involve strategic dynamics and other opportunities for indeterminacy. Since all time travel theories involve predictions about future states of competition, what

---

[188] Tenneco, Inc. v. FTC, 689 F.2d 346, 352 (2d Cir. 1982) (avoiding judgment on validity); BOC Int'l, Ltd. v. FTC, 557 F.2d 24, 25 (2d Cir. 1977) (same).

[189] United States v. Waste Mgmt., Inc., 743 F.2d 976, 983 (2d Cir. 1984) ("[E]ntry into the [relevant market] . . . is so easy that any anti-competitive impact of the merger before us would be eliminated . . . quickly by such competition."); *see also* note 67 and accompanying text (noting *Waste Management'*s reliance on potential competition doctrine as the justification for considering the possibility of entry as a defense).

[190] This assumes the evidence satisfies an appropriate standard. In merger cases, for example, *Brown Shoe*'s reminder that Section 7 is concerned with probabilities, not ephemeral possibilities, precludes reliance on speculative offensive time travel stories. Brown Shoe Co. v. United States, 370 U.S. 294, 323 (1962). If speculation cannot support an offensive implication of time travel, then it should not support a defensive implication either.

[191] *See supra* Part II.A.

[192] *See* Ordover & Wall, *supra* note 66, at 17 ("The difficulties in identifying and measuring the significance of entry barriers are manifold."); Schmalensee, *supra* note 70 at 41 ("[W]hile entry is important, entry is also difficult to assess as a practical matter and, thus, presumptions, burden of proof, and the way evidence is weighed in this area are critical.").

little can be measured in this context provides at best only a few toeholds for what is otherwise an unavoidably subjective predictive exercise. [193]

In the case of challenges to the elimination of potential competition, this uncertainty has been unflinchingly held against plaintiffs in the form of judicial refusals to engage in speculation. The Supreme Court adopted a firm anti-speculation stance as early as 1948, in the *Columbia Steel* decision. [194] It reaffirmed this position in *Brown Shoe*, requiring evidence to establish at least "a reasonable probability that the merger will substantially lessen competition," [195] and applied that requirement in *Marine Bancorporation* to reject one of the government's arguments about the acquisition of a potential competitor as "little more than speculation." [196] Lower courts have found no shortage of opportunities to follow in rejecting potential competition claims on the basis that the plaintiff is engaging in speculation. [197]

The perceived complexity of offensive time travel has been cited by some courts and commentators as justifying the requirement that plaintiffs meet an unusually high bar in proving harm to potential competition. [198] Decades ago, Turner's undefended assertion [199] that acquisitions of potential competitors should not be found to violate Section 7 without "clear proof that the firm

---

[193] In 1965, Turner remarked that "Except in the most obvious cases, economic theory simply does not permit confident judgments on these issues even when all the economically relevant facts have been duly assembled." Turner, *supra* note 90, at 1318. This remains accurate today.

[194] United States v. Columbia Steel Co., 334 U.S. 495, 528–29 (1948) (expressing concern that "[t]he government's argument . . . takes us into highly speculative situations" and ultimately concluding that the evidence failed to support the government's theory of harm).

[195] Brown Shoe Co. v. United States, 370 U.S. 294, 325 (1962).

[196] United States v. Marine Bancorporation, Inc., 418 U.S. 602, 641 (1974). We do not mean to suggest we disagree with this aspect of the decision.

[197] *E.g.*, Tenneco, Inc. v. FTC, 689 F.2d 346, 354 (2d Cir. 1982) ("unsupported speculation"); United States v. Siemens Corp., 621 F.2d 499, 510 (2d Cir. 1980) ("lack of sufficient evidence, as distinguished from speculation"); BOC Int'l, Ltd. v. FTC, 557 F.2d 24, 29 (2d Cir. 1977) ("uncabined speculation"); Mercantile Texas Corp. v. Bd. of Governors of Fed. Rsrv. Sys., 638 F.2d 1255, 1266 (5th Cir. Unit A Feb. 1981) (struggling to decide whether more evidence would "separate probabilities from 'ephemeral possibilities'").

[198] *Cf.* Rahl, *supra* note 55, at 137 (suggesting that "[t]he burden of proof on the plaintiff" in potential competition cases "must be a very heavy burden").

[199] The surrounding text gives few clues why Turner thought a heightened standard was required. *See* Turner, *supra* note 90, at 1384 ("Given the less than overwhelming case for prohibition to begin with, [doubts about the probability of entry] come close to annihilating it. I therefore conclude that when the *only* alleged anticompetitive consequence of a merger is the elimination of what would have been a new entrant in a tight oligopoly, there must, in order to support prohibition, be clear proof that the firm would in fact have entered."). Substantive proof problems may frustrate efforts to seek relief on this theory, but this does not explain or justify why plaintiffs should be saddled with a heightened burden of persuasion.

would in fact have entered"[200] was cited by the Fourth Circuit to support requiring a "higher burden of proof to show anticompetitive effect" in acquisitions of potential competitors.[201] The Second Circuit similarly relied upon Turner's assertion in expressing a preference for "clear proof" in this context,[202] and at least one FTC opinion went so far as to require it as well.[203]

Not every court has held plaintiffs to a heightened standard in this context,[204] and not every challenge can be evaporated with the label of "speculation."[205] But winning challenges to acquisitions of potential competitors remains an unquestionably difficult task. Joseph Bauer complained as far back as 1978 that "[b]oth branches of the potential competition doctrine [had] lost their effectiveness."[206] Over thirty years later, Werden and Limarzi confirmed Bauer's prognosis with the observation that "it has now been three decades since a federal court has held a merger unlawful on the basis that it eliminated 'potential' competition."[207]

This judicial incredulity toward the elimination of potential competition contrasts with the limited factual inquiries that have sufficed to establish defenses on assertions of easy entry. The decision of *Waste Management* prompted an obviously exasperated Mark Leddy to complain:

> The Antitrust Division had lost something like nineteen out of twenty potential competition cases because we couldn't convince courts to preserve potential entrants as present and future independent competitive forces in the market. Then we win a straightforward horizontal merger suit in the trial court . . . and Judge Winter says that potential entrants will guarantee there will be no ill effects from the merger.[208]

---

[200] *Id.*

[201] FTC v. Atl. Richfield Co., 549 F.2d 289, 295 (4th Cir. 1977).

[202] *Siemens Corp*., 621 F.2d at 506.

[203] B.A.T. Indus. Ltd., 104 F.T.C. 852, 926 ("Our review of the legal and economic bases for the actual potential competition doctrine has persuaded us that clear proof that independent entry would have occurred but for the merger or acquisition should be required to establish that a firm is an actual potential competitor.").

[204] *E.g.*, Yamaha Motor Co. v. FTC, 657 F.2d 971, 977 (8th Cir. 1981) ("We stress the word 'probably' . . . because the question . . . is not whether competition was actually lessened, but whether it 'may be' lessened substantially.").

[205] *See, e.g.*, *id.*

[206] Joseph P. Bauer, *Challenging Conglomerate Mergers under Section 7 of the Clayton Act: Today's Law and Tomorrow's Legislation*, 58 B.U. L. REV. 199, 225 (1978).

[207] Werden & Limarzi, *supra* note 57, at 141.

[208] Leddy, *supra* note 70, at 1258.

Indeed, the court in *Waste Management* did not insist upon "clear proof" of future entry or any similarly heightened standard,[209] and it engaged in such a cursory review of the relevant evidence as to be accused of speculation in its entry analysis.[210] A decade later, the D.C. Circuit accepted an entry defense on a similarly sparse record in *Baker Hughes*.[211] The court balked at the suggestion of holding defendants to a demanding standard in proving their entry defense, explaining—apparently without irony—that to require such a "degree of clairvoyance" would be "alien" to Section 7.[212]

The tendency of courts of the 1980s and early 1990s to uncritically accept entry defenses did not go unnoticed or uncriticized.[213] Changes to the Horizontal Merger Guidelines have helped to correct this flawed approach by injecting a *bit* more rigor into the analysis of entry as a defense.[214] But palpable differences in difficulty of proof remain between offensive and defensive implications of potential competition. Distrust of the "rather peculiar theory" of harm to actual potential competition[215] still sits uncomfortably close to Bork's colorful promise that potential competitors would enter "in sky-darkening swarms" at the first hint of profit opportunity.[216]

To state the obvious: these positions cannot both be true. The time travel perspective makes transparent that whatever evidentiary standard is appropriate for an offensive implication of time travel must also be appropriate for a defensive implication, and the reverse. Yes, there are modest differences in the mechanics of offensive and defensive implications of time travel. We have discussed, for example, how a defense of future corrective

---

[209] United States v. Waste Mgmt., Inc., 743 F.2d 976, 983 (2d Cir. 1984) (treating the possibility of "entry by potential competitors" simply as part of "appraising whether a merger will 'substantially lessen competition'").

[210] *Id.* at 983–84 (devoting a hair more than one reporter page to evidence on potential entry with opposing evidence rejected on the basis of judicial assumptions).

[211] United States v. Baker Hughes Inc., 908 F.2d 981, 988–89 (D.C. Cir. 1990).

[212] *Id.* at 987.

[213] *E.g.*, Robert Pitofsky, *Merger Analysis in the '90s; The Guidelines and Beyond—Overview*, 61 ANTITRUST L.J. 147, 148 (1992) (sharply criticizing "the way the enforcement agencies and the courts were willing to buy stories about entry" throughout the 1980s).

[214] *See id.* (noting that the 1992 guidelines were revised to address uncritical review of entry arguments); FTC v. Cardinal Health, Inc., 12 F. Supp. 2d 34, 54–58 (D.D.C. 1998) (relying on the revised merger guidelines in a careful review of the evidence, ultimately leading to rejection of an entry defense).

[215] B.A.T. Indus. Ltd., 104 F.T.C. 852, 919 (1984) ("The actual potential competition doctrine represents a rather peculiar theory of competitive injury . . . . the *actual* potential competition doctrine postulates that a merger or acquisition may prevent the relevant market from *becoming* as competitive as it might otherwise become.").

[216] BORK, *supra* note 79, at 240.

entry can be more demanding than a claim of actual potential competition in requiring speed and significance of entry while less demanding in not expressly requiring proof of uniqueness.[217] But these narrow and technical differences do not justify broad asymmetries in evidentiary standards. As different facets of the same underlying factual question, offensive and defensive implications of time travel should rise and fall together. They deserve and require the same degree of credulity in antitrust analysis.

C. ASYMMETRIC REFORM EFFORTS

The previous point takes on special significance as a warning about efforts to change one implication of time travel but not another. Today, for example, there is growing consensus among antitrust scholars on the desirability of stronger enforcement of Section 7 against acquisitions of potential competitors,[218] especially in cases where the acquiring company is seen to occupy a dominant position.[219] Efforts to deliver this result are apparent in recent legislative proposals[220] and agency policy discussions.[221] The background to this recent activity is decades of maintained advocacy on the need for stronger enforcement against acquisitions of potential competitors.[222]

The problem with these calls for reform is not that the changes they request are intrinsically problematic. To the extent that the result is a leveling of the previously noted asymmetries in treatment between offensive and defensive

---

[217] *See supra* notes 139–144 and accompanying text.

[218] Carl Shapiro, *Antitrust in a Time of Populism*, 61 INT'L J. INDUS. ORG. 714, 741 (2018) (commenting that "there would be a big payoff in terms of competition and innovation" if enforcement agencies could "selectively prevent" appropriate mergers involving potential competitors).

[219] *E.g.*, Kevin A. Bryan & Erik Hovenkamp, *Startup Acquisitions, Error Costs, and Antitrust Policy*, 87 U. CHI. L. REV. 331 (2020); C. Scott Hemphill & Tim Wu, *Nascent Competitors*, 168 U. PA. L. REV. 1879 (2020); Eleanor M. Fox, *Platforms, Power, and the Antitrust Challenge: A Modest Proposal to Narrow the U.S.–Europe Divide*, 98 NEB. L. REV. 297 (2019); Carl Shapiro, *Protecting Competition in the American Economy: Merger Control, Tech Titans, Labor Markets*, J. ECON. PERSP. 69, 78 (2019).

[220] *E.g.*, Competition and Antitrust Law Enforcement Reform Act, S. 225, 117th Cong. § 4(b) (2021) (compelling courts to find a basis for illegality when, among other things, a firm with a 50 percent share of a relevant market acquires another firm with entities or assets that "have a reasonable probability of competing with the acquiring person in the same relevant market").

[221] *E.g.*, US DEP'T OF JUSTICE & FED. TRADE COMM'N, REQUEST FOR INFORMATION ON MERGER ENFORCEMENT 6 (2022), downloads.regulations.gov/FTC-2022-0003-0001/content.pdf ("What changes in standards or approaches would appropriately strengthen enforcement against mergers that eliminate a potential competitor?").

[222] Bauer, *supra* note 206, at 226 ("Success in challenging conglomerate mergers will thus require increased reliance upon alternative approaches, changed judicial attitudes and, ultimately, legislative reform."); Eleanor M. Fox, *Toehold Acquisitions, Potential Toehold Acquisitions, and Section 7 of the Clayton Act*, 42 ANTITRUST L.J. 573, 584 (1973) (similarly suggesting a need for reform in this area).

time travel implications,[223] the anticipated reforms would be an improvement for antitrust law. And to the extent that the result is more searching study of acquisitions of potential competitors, and greater willingness to challenge these acquisitions, this too could be a net improvement. But we understand at least some of these proposals to go further than that: to envision a new regime in which acquisitions of potential competitors could be blocked on less proof than would be required to state an entry defense. This asymmetry lacks economic grounding and risks unintended consequences.

Lack of economic grounding is essentially the same point addressed in the previous paradox, only with the direction of the inequality reversed. Just as there is no warrant for holding offensive implications of time travel to a higher standard than defensive implications, there is no warrant for holding offensive implications of time travel to a lower standard than defensive implications. Excessive focus on the outcome implications of challenges to acquisitions and defensive invocations of entry masks the critical point that both arise from the same underlying concept of potential competition.

Unintended consequences of the effort may flow from at least two sources. One is a change in the viability of entry defenses. To the extent that recent cases evidence a tempering of judicial confidence in the ability of entry to cure competitive problems,[224] renewed enthusiasm for the importance of potential competitors as a check on market power seems intuitively likely to embolden parallel enthusiasm about the strength of entry defenses. If so, we warn that the net effects of potential competition reform could look quite different than proponents might expect. The second source of unintended consequences is the next subject we address—a paradox in its own right.

D. EFFICIENCY PARADOX

Senator Amy Klobuchar's recently proposed *Competition and Antitrust Law Enforcement Reform Act* proclaims that "nascent or potential rivals—even those that are unprofitable or inefficient—can be an important source of competitive discipline for dominant firms."[225] The parenthetical part of this claim is questionable,[226] but the idea that potential competitors can act to

---

[223] *See supra* Part III.B.

[224] *See supra* notes 213–215 and accompanying text.

[225] Competition and Antitrust Law Enforcement Reform Act, S. 225, 117th Cong. § 2(a)(20) (2021).

[226] In terms of backward time travel, for example, conditions that would render the potential competitor "unprofitable or inefficient" are hard to reconcile with the assumptions of contestable market theory. *See supra* notes 162–164 and accompanying text.

constrain incumbent firms is obviously correct, provided the necessary conditions are met for the relevant form of time travel.[227]

This raises, but does not answer, the larger policy question implicated by legislation modifying the treatment of potential competitors: "Do we want antitrust policy to preserve or even affirmatively encourage the presence of potential rivals in relevant markets?"[228] Perhaps surprisingly, the answer to this question is "Not necessarily." While the presence of potential competition can indeed have important implications for antitrust analysis, this does not mean that potential competition necessarily inspires efficient, welfare-enhancing behavior.[229] Paradoxically, potential competition can in some cases be less efficient than no competition at all.

One reason to hesitate before seeking to encourage potential competition is uncertainty about whether it would improve social welfare.[230] Given the high rate of business failure by new entrants,[231] one question is whether entry may sometimes be driven by overconfidence rather than socially productive profit opportunities. In a simple experiment to test this question, Colin Camerer and Dan Lovallo report substantial evidence of overconfidence-induced entry, with one treatment showing so much excess entry than the average subject lost money nearly 70 percent of the time.[232]

These experimental results run parallel to what are often called "excess entry theorems." Even without cognitive biases in the works, several common models of competition exhibit the property that free entry by potential competitors results in too many firms entering a market from a social welfare perspective.[233] This result is not generic to all forms of competition. It does

---

[227] *See supra* Parts II.B–C.

[228] *See, e.g.*, S. 225 § 4(b) (making it more difficult for firms with market power to acquire potential competitors); *id.* § 9 (creating new prohibitions on conduct by incumbent firms that would "materially disadvantage" potential competitors).

[229] Kofi O. Nti, *Potential Competition and Coordination in a Market-Entry Game*, 71 J. ECON. 149, 150 (2000) (summarizing research on simultaneous entry models as supporting the claim that "competition may not be served by increasing the number of potential competitors").

[230] *See id.* at 153–55 (describing a model of competition in which social welfare is decreasing in the number of potential entrants).

[231] *See supra* note 123 and accompanying text.

[232] Colin Camerer & Dan Lovallo, *Overconfidence and Excess Entry: An Experimental Approach*, 89 AM. ECON. REV. 306 (1999).

[233] *E.g.*, C. C. von Weizsacker, *A Welfare Analysis of Barriers to Entry*, 11 BELL J. ECON. 399 (1980); N. Gregory Mankiw & Michael D. Whinston, *Free Entry and Social Inefficiency*, 17 RAND J. ECON. 48 (1986); Kotaro Suzumura & Kazuharu Kiyono, *Entry Barriers and Economic Welfare*, 54 REV. ECON. STUD. 157 (1987); Hideki Konishi, Masahiro Okuno-Fujiwara, & Kotaro Suzumura, *Oligopolistic Competition and Economic Welfare: A General Equilibrium Analysis of Entry Regulation and Tax-Subsidy Schemes*, 42 J. PUB. ECON. 67 (1990).

not necessarily hold in differentiated product spaces,[234] or where vertical interactions are incorporated in the entry model.[235] Influences like price discrimination can either mute or exacerbate the excess entry effect.[236] But the message of excess entry theorems is worth keeping in mind: when entry is costly and incumbent firms accommodate entry by reducing output, entry is not necessarily efficient or desirable as a matter of economic policy.

And will incumbent firms accommodate entry? This, too, raises a question about the efficiency of potential competition. As previously discussed, incumbent firms, facing the risk of entry by potential competitors, may act to discourage entry.[237] These deterrence tactics may themselves cause inefficiencies.[238] Long ago, Michael Spence noted this feature of potential competition: "[The threat of entry] does not necessarily improve resource allocation. The price may not fall. In some instances it may rise."[239] Not even consumers are guaranteed to fare better in the presence of potential competition than in its absence.[240] Not only may potential competition not lower the price, but it may also not improve quality or expand variety. Consumers may just get more of the same thing. In sum, the underlying economics do not support a simple more-is-better policy stance.[241] As Stiglitz summarized the situation nearly forty years ago: "Both the pure monopoly and the monopoly faced with potential entry act in ways which are not socially optimal, but there is no presumption that one is better than the other."[242]

E. GRANDMOTHER PARADOX

We turn now to one final paradox of time travel. This paradox is not unique in casting doubt upon the credibility of a time travel narrative. As we have discussed, in offensive implications of time travel, for example, inherent

---

[234] Kotaro Suzumura, *Excess Entry Theorems After 25 Years*, 63 JAPANESE ECON. REV. 152, 165–66 (2012).

[235] Arghya Ghosh & Hodaka Morita, *Free Entry and Social Efficiency under Vertical Oligopoly*, 38 RAND J. ECON. 541 (2007).

[236] *See* Mark Armstrong, *Price Discrimination*, *in* HANDBOOK OF ANTITRUST ECONOMICS 433, 449 (Paolo Buccirossi ed., 2008).

[237] *See supra* notes 99–110 and accompanying text.

[238] *See supra* note 106 and accompanying text.

[239] Spence, *supra* note 81, at 544.

[240] Stiglitz, *supra* note 87, at 188 ("In a variety of circumstances I have been able to establish that consumers are unambiguously worse off. Moreover, the monopolist is worse off, and, since *R&D* competition drives profits of entrants to zero, they are indifferent: *potential competition may be Pareto inferior*.").

[241] Dasgupta & Stiglitz, *supra* note 92, at 571 ("Just as there is no clear relationship between potential competition and economic welfare, the relation between potential competition and actual competition is also complex.").

[242] Stiglitz, *supra* note 87, at 185.

suspicion lurks in the agreement of potential competitors to enter by acquisition as opposed to some other means.[243] And in both offensive and defensive implications of time travel, any persistent period of market-power exercise is itself serious, if not compelling, evidence that potential competition is unlikely to prevent or correct subsequent exercises of market power.[244] But there is an even deeper and more profound contradiction at the center of the time travel story.

In discussions about the possible physics of human time travel, the *grandmother paradox* confounds efforts to rationalize backward time travel. In brief, it asks "What would happen if a person traveled back in time to kill their own grandmother (before she can give birth to that person's parent)?" Different answers have been suggested, but the puzzle forces believers in time travel to reckon with uncomfortable tensions between the exercise of time travel (here, backward time travel) and the possibility of time travel in the first place.

In antitrust, analytical time travel exhibits a similar paradox. As previously discussed, a profit-maximizing potential competitor enters a relevant market only when there exists an adequate profit motive to do so. But the competition introduced by a competitive significant entrant itself depresses profit opportunities.[245] Competitively significant entry also spurs competitive responses from incumbents, whether on price or non-price dimensions, and these, too, would depress the entrant's profit opportunities.[246] All this means that—for both forward and backward time travel, across a range of economic models—entry is least likely to occur when the post-entry market would be most competitive, and is most likely to occur when the post-entry market would be least competitive.[247] Put another way, the future entry of a potential competitor is most credible when it would not have the competition-enhancing effects for which an antitrust litigant is invoking the time travel

---

[243] Bauer, *supra* note 206, at 207–08 ("The proposed merger itself gives contradictory evidence: it indicates some interest in the product and geographic market of the acquired firm, but, at the same time, suggests that the acquiring company has considered and rejected competitively preferable alternatives.").

[244] 2010 Horizontal Merger Guidelines, *supra* note 7, at 28 ("Lack of successful and effective entry in the face of non-transitory increases in the margins earned on products in the relevant market tends to suggest that successful entry is slow or difficult."); Ordover & Wall, *supra* note 66, at 14 ("If past attempts at entry (or announced planned entry) triggered significant weakening in industry prices, then future entrants may be deterred from entering by the fear of a strategic retaliatory response by incumbents.").

[245] *See supra* notes 24, 129–133 and accompanying text.

[246] *See supra* notes 167–168 and accompanying text.

[247] *See* Dasgupta & Stiglitz, *supra* note 92, at 572 ("A general principle emerges: *the more competitive ex post competition* (competition is after entry) *the less effective is the market discipline provided by potential competition*.").

theory. And it is least credible when it would have the effects for which it is invoked. From an antitrust perspective, legally significant entry by a potential competitor would often kill its own grandmother. This leaves time travel theories, like the grandchild who could never have been born, flittering in the twilight of impossibility.

IV. CONCLUSION

Every incumbent firm was once an entrant, and thus was once a potential competitor. Entry (and exit) are as inevitable in the long run of competition as the turning of the seasons. But only a specific type of entry matters in antitrust analysis. To challenge the acquisition of a potential competitor, and to defend challenged conduct on grounds of easy entry, the promise of future entry must satisfy a battery of specific and sometimes conflicting requirements. It is this time travel exercise that demands our attention today.

Entry and potential competition arguments are complicated, often paradoxical, competition stories. Nothing in this Article changes that. These doctrines are, however, currently stunted by artificial bifurcation into separate doctrinal silos. This separation fails to acknowledge the common analytical foundations of entry and potential competition arguments and masks important economic differences between forward and backward time travel theories. Siloed thinking also cabins and inhibits the searching inquiries that are needed to differentiate the time travel stories that matter from a competition perspective from those that do not.

This Article illustrates the clarity that comes from focusing less on litigation consequences and more on the underlying economics in entry and potential competition analyses. The mechanics of forward and backward time travel overlap in some respects but differ in others. Our approach brings these substantive considerations to the surface. The time travel perspective also surfaces paradoxes and fragilities in all time travel stories. Finally, the time travel perspective advances one goal that we believe should be axiomatic throughout antitrust law: it forces the symmetric treatment of symmetric stories.