# ARTICLES

# HOW MUCH DOES A BELIEF COST?: REVISITING THE MARKETPLACE OF IDEAS

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## I. INTRODUCTION

The metaphor of "the marketplace of ideas" may be one of the most successful products of the marketplace of legal ideas over the last century. From the metaphor's origin in a celebrated dissent by Justice Oliver Wendell Holmes, Jr.,[1] and its first exact formulation in a concurrence by Justice William Brennan,[2] the metaphor has become not only, to borrow Lee Bollinger's description of the Justice Holmes dissent, "one of the central organizing pronouncements for our contemporary vision of free speech,"[3] but also one of the few products of judicial rhetoric to circulate in the wider non-legal marketplace.[4]

It is not always obvious, however, what we mean when we speak of a marketplace of ideas. What, for example, would be traded in such a

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1. *See* Abrams v. United States, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting). Justice Holmes himself used the phrase "free trade in ideas," not the phrase "marketplace of ideas." *See generally infra* Part II.

2. Lamont v. Postmaster Gen., 381 U.S. 301, 308 (1965) (Brennan, J., concurring) ("It would be a barren marketplace of ideas that had only sellers and no buyers.").

3. LEE C. BOLLINGER, THE TOLERANT SOCIETY: FREEDOM OF SPEECH AND EXTREMIST SPEECH IN AMERICA 18 (1986).

4. *See, e.g.*, LOUIS MENAND, THE MARKETPLACE OF IDEAS: REFORM AND RESISTANCE IN THE AMERICAN UNIVERSITY (2010) (critiquing American higher education from a literary and cultural critic's perspective); RICHARD E. NISBETT, THE GEOGRAPHY OF THOUGHT: HOW ASIANS AND WESTERNERS THINK DIFFERENTLY . . . AND WHY 195 (2003) ("Westerners place an almost religious faith in the free marketplace of ideas."). The American pragmatist philosopher Sidney Hook discussed Justice Holmes's dissent and the notion of "the free market of ideas" as early as 1950. *See* Sidney Hook, *Heresy, Yes—But Conspiracy, No*, N.Y. TIMES MAG., July 9, 1950, at SM7.

market? If ideas are exchanged, how, concretely, do such exchanges work? Should we conceive of producers of ideas buying consumers' belief? Or consumers of ideas somehow paying for producers' labor? How? In what currency? If we take the notion of an idea-market literally enough, we will find ourselves asking these and other questions at the boundaries of intelligibility—like the question in this Article's title: How much does a belief cost? The intuitive appeal of the marketplace of ideas metaphor has often been accompanied by a less than perfect clarity regarding the precise nature of the market's components and their interactions.

This Article investigates whether it is possible to give any meaningful, worthwhile content to the notion of a marketplace of ideas, and concludes that it is. Viewing the creation, dissemination, and consumption of ideas through the lens of an economic approach to human behavior can provide valuable insights, even if we ultimately decide that this perspective should not play a determinative role in First Amendment jurisprudence.

Part II briefly surveys the history of the metaphor of the marketplace of ideas. The metaphor's early formulations offer little guidance in producing an economic model because, at its origin, the metaphor had little to do with what we would today tend to identify as specifically economic thinking. But as the metaphor has evolved, its economic structure has received increasingly sophisticated articulations, often in tandem with developments in the law and economics literature. For the most part, however, the articulations have remained somewhat one-sided, with the focus on either the production or the consumption of ideas, but not both.

Part III proposes a basic model of the marketplace of ideas. Part IV refines the basic model by examining various market failures that could arise in idea-markets. In an effort to lay the groundwork for future discussions, Parts III and IV devote particular attention to structural dissimilarities between a market in more traditional goods and a market in ideas.

This Article concludes by suggesting avenues for further research. The conclusion also illustrates the application of the marketplace of ideas model by showing how the model can help explain the centrality of sophisticated mathematical modeling in the contemporary economics profession.

## II. THE MARKETPLACE OF IDEAS METAPHOR: A HISTORICAL SKETCH

The common ancestor of all contemporary scholarship on the marketplace of ideas is a relatively brief passage from Justice Holmes's

dissent in *Abrams v. United States*.[5] After noting that "Congress certainly cannot forbid all effort to change the mind of the country,"[6] Justice Holmes goes on to say:

> [W]hen men have realized that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas—that the best test of truth is the power of the thought to get itself accepted in the competition of the market, and that truth is the only ground upon which their wishes safely can be carried out. That at any rate is the theory of our Constitution.[7]

From the perspective of the history of the marketplace of ideas metaphor, perhaps the most notable feature of Justice Holmes's discussion is how loosely it is tied to a distinctly economic approach to human behavior. Although Justice Holmes uses language drawn from economics (for example, "the competition of the market" and "free trade"), his argument is surprisingly light on identifiably economic reasoning. The basic theme of Justice Holmes's passage is simply that, in the absence of any reliable divining rod, our best method for identifying truth is to let individuals discuss various proposed ideas without constraint, and then see which ideas gain the most adherents. As a general rule, the ideas that end up the most widely accepted will tend to be truer than the ideas of any one individual. Many actively engaged minds, in other words, will tend to be better at identifying truth than any single mind, including one's own.[8]

As Justice Holmes's passage has been applied in subsequent Supreme Court opinions, it has also taken on the implication that we need not fear permitting the expression of falsehoods because where both truth and falsity may be freely spoken, falsity will tend to be discredited and the truth will emerge.[9] In other words, to Justice Holmes's defense of free speech as

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5. *Abrams*, 250 U.S. at 624–31 (Holmes, J., dissenting).

6. *Id.* at 628.

7. *Id.* at 630.

8. Cass Sunstein makes a similar point, with qualifications, in CASS R. SUNSTEIN, INFOTOPIA: HOW MANY MINDS PRODUCE KNOWLEDGE (2006).

9. *See, e.g.*, Smith v. United States, 431 U.S. 291, 320–21 (1977) (Stevens, J., dissenting) (rejecting "dire predictions about the baneful effects" of certain offensive pictures, because "we must rely on the capacity of the free marketplace of ideas to distinguish that which is useful or beautiful from what which is ugly or worthless"); McDaniel v. Paty, 435 U.S. 618, 642 (1978) (Brennan, J., concurring) ("The antidote which the Constitution provides against zealots who would inject sectarianism into the political process is to subject their ideas to refutation in the marketplace of ideas and their platforms to rejection at the polls."); Red Lion Broad. Co. v. FCC, 395 U.S. 367, 390 (1969) ("It is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail . . . ."). *But see* Cent. Hudson Gas & Elec. Corp. v. Pub. Serv.

the best way of identifying truth has been added a defense of free speech as safe, because self-correcting.

Economic terminology is not necessary for the expression of either of these ideas. Justice Holmes's central point might just as well have been phrased in democratic, as opposed to economic, terms: "The best test of truth is the power of the thought to attract supporters in the free election of ideas." Or Justice Holmes could have drawn on the language of Herbert Spencer,[10] an evolutionary theorist he admired: "In the evolution of opinion," he might have said, "the fittest beliefs will survive." Given the centrality of Spencer's thinking to the economic ideology of laissez-faire,[11] as well as Justice Holmes's own belief in social Darwinism,[12] we might even wonder whether Justice Holmes, in invoking the language of laissez-faire economics to defend free expression, was not already in some sense invoking Spencer's philosophy.[13]

For that matter, the English poet John Milton famously expressed an idea similar to Justice Holmes's using martial language:

> And though all the winds of doctrine were let loose to play upon the earth, so Truth be in the field, we do injuriously by licensing and prohibiting to

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Comm'n, 447 U.S. 557, 592–93 (1980) (Rehnquist, J., dissenting) (questioning the value of the marketplace of ideas metaphor, in part because market imperfections may confirm "our experience that the truth rarely catches up with a lie").

10. *See* RICHARD HOFSTADTER, SOCIAL DARWINISM IN AMERICAN THOUGHT 32 (Beacon Press rev. ed. 1955) (1944).

11. *See, e.g.*, Lochner v. New York, 198 U.S. 45, 75 (1905) (Holmes, J., dissenting) (criticizing the implicit role of "Mr. Herbert Spencer's Social Statics" in the majority opinion).

12. Despite Justice Holmes's objection in *Lochner* to reading Spencer's theories into the Constitution, Justice Holmes strongly believed in the school of thought to which Spencer belonged, a school that historian Richard Hofstadter would later label "social Darwinism." *See generally* HOFSTADTER, *supra* note 10, at 31–50. *Cf., e.g.*, Buck v. Bell, 274 U.S. 200, 207 (1927) (upholding a statute instituting compulsory sterilization of individuals deemed genetically unfit: "Three generations of imbeciles are enough."); Mary L. Dudziak, *Oliver Wendell Holmes as a Eugenic Reformer: Rhetoric in the Writing of Constitutional Law*, 71 IOWA L. REV. 833, 843 (1986) ("[Justice] Holmes shared this Social Darwinist concern regarding the effect of human actions on the process of evolution.").

13. What Justice Holmes meant when he used the terms "free trade" and "competition" may have had as much to do with Spencer's notion of the pitiless, unrestrained pursuit of self-interest leading to social progress through the merciful dying out of the competitively unfit as with any of our contemporary models of economic behavior. *See* HERBERT SPENCER, SOCIAL STATICS, ABRIDGED AND REVISED; TOGETHER WITH THE MAN VERSUS THE STATE 203–07 (D. Appleton & Co. 1893) (1850). Indeed, given the intertwining of Spencer's evolutionary and economic thought, it is unclear whether it would be more accurate to say that the general idea of "the survival of the fittest" is an evolutionary metaphor applied to the economy, or an economic metaphor applied to evolution.

> misdoubt her strength. Let her and Falsehood grapple; who ever knew Truth put to the worse in a free and open encounter? Her confuting is the best and surest suppressing.[14]

Likewise, President Thomas Jefferson used martial language to make more or less the same point. In the wake of the young republic's electoral rejection of the Federalists' Sedition Act,[15] Jefferson offered a defense of free speech in his First Inaugural Address: "If there be any among us who would wish to dissolve this Union or to change its republican form," he said, "let them stand undisturbed as monuments of the safety with which error of opinion may be tolerated where reason is left free to combat it."[16] Like Milton, Jefferson had no need for an economic figure of speech in order to convey the idea that public safety does not require a government to persecute the expression of false opinions, because in a community allowing free expression, truth will prevail on its own.

One way of looking at Justice Holmes's dissent in *Abrams* would thus be to say that it hardly presents a model of the marketplace of ideas at all. Its contribution to debates about free expression has ultimately been more rhetorical than substantive. It has offered an appealing shorthand figure for the primary truth-focused argument in favor of not regulating the expression of ideas—a justification that predates Justice Holmes's articulation of it.[17] The historical centrality of this justification to defenses

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14. JOHN MILTON, *Areopagitica*, *in* AREOPAGITICA AND OF EDUCATION 1, 50 (George H. Sabine ed., Harlan Davidson, Inc. 1951) (1644). But see ISAIAH BERLIN, *John Stuart Mill and the Ends of Life*, *in* FOUR ESSAYS ON LIBERTY 173, 187 (1969), for a response to Milton: "These are brave and optimistic judgments, but how good is the empirical evidence for them today? Are demagogues and liars, scoundrels and blind fanatics, always, in liberal societies . . . refuted in the end?" Stanley Fish, a scholar of both Milton and free speech, also notes that in practice, Milton supported the suppression of Catholic speech rather than allowing it to compete in a fair contest with the Anglican Church. STANLEY FISH, THERE'S NO SUCH THING AS FREE SPEECH: AND IT'S A GOOD THING, TOO 102–03 (1994).

15. *See* AKHIL REED AMAR, AMERICA'S CONSTITUTION: A BIOGRAPHY 61 (2005) (election of 1800 as "a referendum of sorts" on the 1798 Sedition Act).

16. THOMAS JEFFERSON, First Inaugural Address (Mar. 4, 1801), *in* WRITINGS 492, 493 (Merrill D. Peterson ed. 1984). It might be noted that although John Stuart Mill's name is sometimes invoked in discussions of the historical background of the marketplace of ideas metaphor—see for example Leonard M. Niehoff, *Rationing the Infinite*, 107 MICH. L. REV. 1019, 1022–23 n.9 (2009)—Mill's defense of liberty of thought and discussion did not rest in any explicit way on the assurance that truth would emerge victorious in a fair contest with falsity, and therefore that little need be feared from the expression of false but dangerously seductive ideas. Rather, Mill argued that the contest with falsity will strengthen our conviction in the truth, if we possess it; and if we do not possess it, will lead us to refine our opinions, rendering them truer than they otherwise would have been. *See* JOHN STUART MILL, *On Liberty*, *in* THREE ESSAYS 5, 26–28 (1975).

17. *Cf.* FREDERICK SCHAUER, FREE SPEECH: A PHILOSOPHICAL ENQUIRY 15–16 (1982) (identifying the use of the marketplace of ideas metaphor in First Amendment jurisprudence

of free speech, from Milton's time onward, may have prepared the way for the success of Justice Holmes's metaphor as much as or more than Justice Holmes's metaphor inspired, through anything we would recognize today as a specifically economic argument, the success of the truth-focused justification of free speech in American jurisprudence. During the decades in which Justice Holmes's words rose to prominence, became attached to the shorthand phrase "the marketplace of ideas," and developed into one of the canonical points of reference in First Amendment thought, specialized economic thinking about the metaphor played almost no role, especially in Supreme Court opinions.[18]

The first attempts to articulate the features of a marketplace of ideas from a specifically economic perspective only arrived with the advent of the law and economics movement. In fact, the history of economic analyses of the marketplace of ideas can be seen as a kind of epiphenomenon of the law and economics movement generally. The producers of what may be the two earliest scholarly articles working out the details and implications of the metaphor from an explicitly economic perspective were Aaron Director,[19] the founder of the *Journal of Law and Economics*,[20] and his co-editor, Ronald Coase,[21] who published in that journal one of the founding articles in the law and economics movement, "The Problem of Social Cost."[22] Both Director and Coase attempted to use political liberals'

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with a more general "argument from truth" approach to defending free speech); Robert Post, *Reconciling Theory and Doctrine in First Amendment Jurisprudence*, 88 CALIF. L. REV. 2353, 2363 (2000) ("The theory of the marketplace of ideas focuses on 'the truth-seeking function' of the First Amendment.").

18. The marketplace of ideas metaphor arguably did not receive an explicitly economic treatment in a Supreme Court opinion until *Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241, 251 (1974), which noted the difficulty of "entry into the marketplace of ideas served by the print media," and considered arguments that "the 'marketplace of ideas' is today a monopoly controlled by the owners of the market." *Id.* Even after *Miami Herald*, technical economic references to the marketplace of ideas have remained relatively rare. *But see, e.g.*, Leathers v. Medlock, 499 U.S. 439, 458 (1991) (Marshall, J., dissenting) ("[D]ifferential taxation *within* an information medium distorts the marketplace of ideas by imposing on some speakers costs not borne by their competitors.").

19. *See* Aaron Director, *The Parity of the Economic Market Place*, 7 J.L. & ECON. 1 (1964).

20. Press Release, Univ. of Chi. News Office, Aaron Director, Founder of the Field of Law and Economics (Sept. 13, 2004), *available at* http:www-news.uchicago.edu/releases/04/040913.director.shtml.

21. R. H. Coase, *The Market for Goods and the Market for Ideas*, 64 AM. ECON. REV. 384 (1974) [hereinafter *The Market for Goods and the Market for Ideas*].

22. R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960) [hereinafter *The Problem of Social Cost*].

fondness for governmental non-intervention in the marketplace of ideas to suggest that such liberals should, as a matter of principle, be equally fond of governmental non-intervention in economic markets.[23]

Since then, writings dedicated to the marketplace of ideas have tended to parallel developments in and around the law and economics literature in an almost mechanical fashion. Just as Judge Richard Posner remains the towering figure in the field of law and economics generally, Judge Posner's treatment of the marketplace of ideas metaphor remains arguably the most well-developed, despite having been produced early in the field's history.[24] In fact, it seems fair to say that no one has attempted to think through the legal implications of Justice Holmes's metaphor as thoroughly as Judge Posner did starting in the 1970s.[25]

Likewise, just as law and economics generally provoked radical leftist critiques in the 1980s,[26] so the marketplace of ideas received a radical leftist critique in a 1984 article as a "legitimizing myth."[27] As law and economics inspired more temperate and qualified resistance among

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23. *See* Director, *supra* note 19, at 3; *The Market for Goods and the Market for Ideas*, *supra* note 21, at 384–89.

24. *See, e.g.*, RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 308–17 (1st ed. 1972) (discussing the marketplace of ideas and the primacy of political over economic rights). *See generally* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 727–44 (7th ed. 2007) [hereinafter POSNER (7th ed.)] (discussing the protection of free markets in ideas and religion); Richard A. Posner, *Free Speech in an Economic Perspective*, 20 SUFFOLK U. L. REV. 1 (1986); Richard A. Posner, *Monopoly in the Marketplace of Ideas*, 86 YALE L.J. 567 (1977) (book review). The section of Judge Posner's treatise dealing with the freedom of speech has been continually updated, expanded, and refined through the most recent edition.

25. Judge Posner, however, argues that the metaphor is not a metaphor at all: "Ideas are a useful good produced in enormous quantity in a highly competitive market. The marketplace of ideas of which [Justice] Holmes wrote is a fact, not merely a figure of speech." POSNER (7th ed.), *supra* note 24, at 727. Much of the remainder of this Article attempts to draw attention to the significance of structural differences between the creation and dissemination of ideas and the operation of markets in more traditional economic goods. If it is true that ideas are almost never literally bought and sold through a monetary exchange or at a set price, that idea-consumers cannot choose which ideas they will buy (believe), that idea-producers cannot know ahead of time which specific ideas they will produce, and that idea-producers might just as well be said to buy idea-consumers' beliefs in many cases as to sell ideas to them, it seems difficult to deny that discussions of the marketplace of ideas involve at least some element of metaphor.

26. *See, e.g.*, Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387 (1981) (providing a leftist critique of law and economics in general).

27. *See* Stanley Ingber, *The Marketplace of Ideas: A Legitimizing Myth*, 1984 DUKE L.J. 1. "[W]e must pierce the myth of the neutral marketplace of ideas," Ingber concludes, "and expose the flawed market model assumptions of objective truth and the power of rationality . . . . [A] system of freedom of expression adds an aura of legitimacy to the governing system by protecting the appearance of individual autonomy." *Id.* at 90.

moderate liberals, the defense of free speech through the marketplace of ideas metaphor received its fair share of more moderate liberal critiques on progressive, humanist grounds.[28] These critiques often argued that there were more valuable and reliable justifications for free speech than the maximization of truth, and above all, that the assumptions underlying the marketplace of ideas metaphor were unrealistic.[29]

Finally, beginning in the 1990s, as law and economics became more entrenched in mainstream legal scholarship and education, and as more political progressives attempted to apply the ostensibly ideologically neutral tools of law and economics to progressive ends,[30] a corresponding shift in the marketplace of ideas literature took place. An increasing number of works suggested that there might be something like market failures in the current marketplace of ideas—especially with regard to pornography, the speech of wealthy interests, and hate speech—and that these failures might justify regulations that would seem objectionable under a classical liberal theory of the First Amendment.[31] With the rise of game

28. For a helpful summary of the critique of marketplace of ideas defenses of free expression in the early 1980s, see Christopher T. Wonnell, *Truth and the Marketplace of Ideas*, 19 U.C. DAVIS L. REV. 669, 669–70, 672–73 (1986). *See also, e.g.*, SCHAUER, *supra* note 17, at 33 (observing weaknesses in the truth-promoting defense of free expression); C. Edwin Baker, *Scope of the First Amendment Freedom of Speech*, 25 UCLA L. REV. 964, 974–78 (1978) (presenting assumptions of the marketplace of ideas model as unrealistic); Bill Shaw, *Corporate Speech in the Marketplace of Ideas*, 7 J. CORP. L. 265, 283 (1982) (arguing against taking the term "free trade in ideas" literally). For a typical expression of mainstream humanist reservations about law and economics in general, see RONALD DWORKIN, *Is Wealth a Value?*, *in* A MATTER OF PRINCIPLE 237 (1985). For more recent and explicit critiques of the economic approach to the marketplace of ideas model, see, for example, Darren Bush, *The "Marketplace of Ideas:" Is Judge Posner Chasing Don Quixote's Windmills?*, 32 ARIZ. ST. L.J. 1107, 1110 (2000) (addressing "the (in)appropriateness of the economic interpretation of [Justice] Holmes' metaphor as a tool for legal analysis" through attention to various market failures); Adam Candeub, *Media Ownership Regulation, the First Amendment, and Democracy's Future*, 41 U.C. DAVIS L. REV. 1547, 1561–66 (2008) (presenting the marketplace of ideas metaphor as inadequate for measuring diversity of viewpoints in contemporary media).

29. *See supra* note 28 and accompanying text.

30. *See* POSNER (7th ed.), *supra* note 24, at 26–27.

31. *See, e.g.*, OWEN M. FISS, THE IRONY OF FREE SPEECH 3–4 (1996) ("[T]he state may have to act to further the robustness of public debate in circumstances where powers outside the state are stifling speech."); CATHARINE A. MACKINNON, ONLY WORDS 9 (1993) ("[B]oth pornography and its protection have deprived women *of* speech, especially speech against sexual abuse."); CASS R. SUNSTEIN, DEMOCRACY AND THE PROBLEM OF FREE SPEECH 35 (1993) (proposing a "New Deal" for speech in which "government regulation of speech might . . . promote free speech as understood through the democratic conception"). On hate speech as a source of market failure in the marketplace of ideas see, for example, Kim M. Watterson, Note, *The Power of Words: The Power of Advocacy Challenging the Power of Hate Speech*, 52 U. PITT. L. REV. 955, 974 (1991). In recent years, the discussions in legal

theory and public choice theory as tools in the law and economics literature, game theoretical and public choice treatments of speech and information markets also appeared.[32]

In recent years, one of the most notable trends in the law and economics literature has been the diffusion of psychological concepts from behavioral economics.[33] It should not be surprising, then, that 2006 saw the arrival of a behavioral economics analysis of market failures in the marketplace of ideas.[34] The central contribution of behavioral economics may be to suggest that Milton, even in theory, is not right. Even given a level playing field, truth will not always emerge victorious over falsity,

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scholarship of market failures in the marketplace of ideas have continued, often in more specialized forms. *See, e.g.*, Tamara R. Piety, *Market Failure in the Marketplace of Ideas: Commercial Speech and the Problem that Won't Go Away*, 41 LOY. L.A. L. REV. 181 (2007) (discussing commercial speech regulation through the lens of market failures in the marketplace of ideas); Ellen P. Goodman, *Media Policy Out of the Box: Content Abundance, Attention Scarcity, and the Failures of Digital Markets*, 19 BERKELEY TECH. L.J. 1389 (2004) (discussing media regulation through the lens of market failures in the marketplace of ideas). Finally, since at least the 1960s, the economics profession has dedicated increasing attention to the importance of information. For two notable examples, see Kenneth J. Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941 (1963) and George J. Stigler, *The Economics of Information*, 69 J. POL. ECON. 213 (1961). Many of the developments in economics relating to the economics of information have left relatively few traces in the marketplace of ideas literature. There may be some misalignment between the two conversations. The economics of information literature generally takes the state of information as a given and attempts to use this given state to explain traditional economic phenomena, such as the trade in secondhand goods. On the other hand, the marketplace of ideas literature generally seeks to explain how the state of information came to be as it is, and in doing so treats information as though it were something like a traditional economic good. The economics literature relating to intellectual property thus comes closer to the concerns of the marketplace of ideas literature, insofar as the primary focus of both is the good-like behavior of information. But to the extent that the former's concern is largely confined to the economics of intellectual work for which literal payment might be provided, the latter remains much broader in scope.

32. *See generally* Daniel A. Farber, *Free Speech Without Romance: Public Choice and the First Amendment*, 105 HARV. L. REV. 554 (1991) (providing a public choice analysis of idea-markets); Paul Milgrom & John Roberts, *Relying on the Information of Interested Parties*, 17 RAND J. ECON. 18 (1986) (providing a game theoretical analysis of idea-markets). For a discussion of both works in the course of an extremely thorough theoretical investigation of the marketplace of ideas model, see Alvin I. Goldman & James C. Cox, *Speech, Truth, and the Free Market for Ideas*, 2 LEGAL THEORY 1, 11, 25–26, 28–29 (1996). Goldman and Cox identify several of the weaknesses in the existing marketplace of ideas scholarship that are also noted in this Article, such as the confusion of truth with efficiency as the outcome of a perfect economic market. *See id.* at 17.

33. *See, e.g.*, BEHAVIORAL LAW & ECONOMICS (Cass R. Sunstein ed., 2000) (arguing that behavioral economics can provide better predictions of human behavior than the rational choice models that have dominated economic analysis of law).

34. *See, e.g.*, Derek E. Bambauer, *Shopping Badly: Cognitive Biases, Communications, and the Fallacy of the Marketplace of Ideas*, 77 U. COLO. L. REV. 649 (2006).

because individuals have systematic, empirically verifiable tendencies to favor falsity over truth in certain contexts, such as the evaluation of risk.[35] Justice Holmes's more limited formulation of the point may still be valid, however, because he did not suggest that the free trade in ideas would inevitably lead to truth. He simply suggested that the free trade in ideas would lead to more reliable identifications of truth than could be provided by any alternative. Echoing what has sometimes been said of democracy as a form of government, Justice Holmes might have been willing to say of the free market in ideas that it is the worst method of arriving at the truth, except all the other methods that have ever been tried.[36]

Before proceeding to the presentation of a basic model of the marketplace of ideas in the next section, it may be worthwhile to say a few words about the tendency of the existing marketplace of ideas scholarship to focus on either producers or consumers, but not both. The chapter on the First Amendment in Judge Posner's *The Economic Analysis of Law*, for example, concentrates primarily on producers.[37] Judge Posner derives a justification for the constitutional protection of free expression above all from the weakness of incentives for producers to create valuable but unpopular ideas.[38] His account touches on consumer behavior, but for the most part approaches First Amendment law as an attempt to optimize producer incentives.[39] Because "it is not feasible to create property rights in pure ideas," valuable but unpopular ideas are generally "likely to be underproduced."[40] Given that "popular ideas are a good substitute . . . for

35. *See id.* at 673–97.

36. *Cf.* SCHAUER, *supra* note 17, at 34 ("The reason for preferring the marketplace of ideas to the selection of truth by government may be less the proven ability of the former than it is the often evidenced inability of the latter.").

37. *See* POSNER (7th ed.), *supra* note 24, at 727–44. Economist Kenneth Arrow's work on basic scientific research as a public good also focuses overwhelmingly on factors shaping the supply of ideas rather than those shaping their consumption. *See* Kenneth Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 616 (1962) ("The central economic fact about the processes of invention and research is that they are devoted to the production of information.").

38. *See* POSNER (7th ed.), *supra* note 24, at 727.

39. *See id.* at 727–44.

40. *Id.* at 727. Professor Daniel A. Farber's defense of free speech also relies heavily on ideas ("information" in his phrasing) displaying the features of a public good. *See* Farber, *supra* note 32, at 555. The underproduction of valuable ideas as a result of their nonexcludability may not only provide a justification for certain speech protections, as Judge Posner suggests, but may also suggest the potential efficiency of direct government subsidization of idea production— as in the United Kingdom with government funding of the BBC, or in the United States' funding of basic research in science through, for example,

valuable but unpopular ideas . . . any costs that government imposes on unpopular ideas may cause massive substitution away from them."[41] Finally, Judge Posner argues:

> Since voting has little private value, we should not expect people to invest heavily in becoming informed about the candidates and issues. This means that the private demand for political ideas and opinions is likely to be weak, which is an argument for minimizing the legal costs of producing such ideas and opinions.[42]

Judge Posner's argument suggests that constitutionally entrenched freedom of expression can be justified as a way of preventing the government from imposing added costs on the production of ideas that are already likely to be produced at a level below what would be socially optimal. A corollary is that types of expression whose production is already adequately incentivized, such as commercial speech, may not deserve as much constitutional protection.[43]

In contrast to Judge Posner's generally producer-focused approach, Justice Brennan, in coining the phrase "the marketplace of ideas," provides a slogan for emphasizing idea consumption: "It would be a barren marketplace of ideas that had only sellers and no buyers."[44] By focusing so intently on the creation of ideas, a supply-side model of the marketplace of ideas like Judge Posner's could lead us to believe a market was functioning optimally simply because producers' incentives were optimized—even if the true ideas they produced found no adherents, and even if false ideas, either repackaged from the past or newly created, received widespread acceptance. More generally, a focus on production will tend to neglect the significance of ideas that are not new—ideas whose producers have long since receded from the reach of incentives. Many potentially important ideas were created in the past, including many ethical, political, and religious ideas. The effect these ideas have on human welfare will depend

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the National Science Foundation. The U.S. Congress has also created for itself a state-funded idea-production facility, the Congressional Research Service, which performs research on request for any member of Congress. By contrast, the executive branch has no centralized research service, which may cause difficulties, for example, if a newly arrived political appointee at the White House is wary of prematurely signaling her deliberations by requesting a piece of information directly from another government entity.

41. POSNER (7th ed.), *supra* note 24, at 727.

42. *Id.* at 728.

43. *Id.* at 740.

44. Lamont v. Postmaster Gen., 381 U.S. 301, 308 (1965) (Brennan, J., concurring).

on how they are distributed and consumed. A production-focused model may be blind to their significance.[45]

Like Justice Brennan's opinion, most judicial and popular discourse dealing with the marketplace of ideas has tended to concern itself with consumption more than production. Even Justice Holmes's dissent in *Abrams* makes no mention of how ideas are produced.[46] He directs his attention toward consumer behavior, arguing that history suggests no individual is an infallible arbiter of truth and falsity—no single person a perfectly discriminating consumer of ideas—and that as a result, again, "the best test of truth is the power of the thought to get itself accepted in the competition of the market."[47] In Justice Holmes's brief invocation of the market, the existence of conflicting ideas is taken as a given. Production has already taken place.

Some of the more recent works on the marketplace of ideas have returned to Justice Holmes's focus on the behavior of consumers.[48] But this literature, like Judge Posner's producer-focused work, often stops short of clearly explaining how consumers and producers interact.[49] What does a transaction in the marketplace of ideas look like? If the marketplace of ideas is in fact a "missing market" because of the unfeasibility of establishing property rights in pure ideas, then how does the state of demand affect the behavior of producers, or the state of supply the behavior of consumers, if at all?

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45. I thank Dean Martha Minow for drawing my attention to the importance of this idea, as well as for her other helpful comments on an earlier draft of this Article.

46. *See* Abrams v. United States, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting).

47. *Id.*

48. *See*, *e.g.*, Bambauer, *supra* note 34 (emphasizing bounded rationality of consumers of ideas); Joseph Blocher, *Institutions in the Marketplace of Ideas*, 57 DUKE L.J. 821 (2008) (emphasizing transaction costs faced by consumers of ideas, and generally arguing for a heterodox "New Institutional Economics" perspective on the marketplace of ideas). *See also* CASS SUNSTEIN, REPUBLIC.COM 18 (2001) (emphasizing that "[c]onsumers' *attention* is the crucial (and scarce) commodity in the emerging market").

49. Similarly, until surprisingly recently, orthodox economists tended to explain the functioning of the economy—and in particular, the differences between the prices of various goods—either through a theory of value focused on the costs of production (the supply side) or, less commonly, one focused on the utility of goods to consumers (the demand side). *See* HARRY LANDRETH & DAVID C. COLANDER, HISTORY OF ECONOMIC THOUGHT 233, 239, 245 (4th ed. 2001). Only beginning with the work of Leon Walras and especially Alfred Marshall in the later nineteenth century did economists arrive at a synthetic view of how supply and demand interact in determining relative prices. *Id.* at 239, 282.

## III. A BASIC MODEL OF THE MARKETPLACE OF IDEAS

Professor Gary Becker suggests that economic modeling can be useful for predicting human behavior wherever there are scarce means and competing ends.[50] Given that both the production and the consumption of ideas requires, at the very least, time and mental energy that is scarce and might be dedicated to other endeavors, the economic approach would seem suited to the prediction of behavior in the marketplace of ideas.

But many often-neglected aspects of the market in ideas distinguish it from a market in more traditional economic goods. These differences require us to make choices about how we will conceive of the marketplace of ideas, decisions that have almost always been settled long ago in discussions of traditional economic markets. The following sections survey some of these decisions and propose tentative answers.

### A. TRANSACTIONS IN IDEAS

Ideas are rarely purchased like toasters. Though it is possible to imagine, in some small subset of cases, a consumer of ideas literally engaging in a monetary transaction in order to "purchase" some specific idea, such cases are rare and extremely peripheral to the interests that generally motivate discussion of the marketplace of ideas. First Amendment scholarship is interested, for the most part, in the ideas at the center of public deliberation, not those rare cases, such as the purchase of trade secrets or secret intelligence, in which one party has an idea, another wants the idea, and the latter literally pays the former specifically in order to obtain it.[51] Even in these cases, it would probably accord more with ordinary usage to say that the consumer purchased access to the idea, or the right to exploit the idea legally, as opposed to somehow "buying" the idea itself. It is not as though the idea is literally removed from one mind and placed in another, in the way that a toaster is moved from a retail shelf to a buyer's kitchen.

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50. *See* GARY S. BECKER, THE ECONOMIC APPROACH TO HUMAN BEHAVIOR 3–14 (1976). Becker identifies the heart of the economic approach as "[t]he combined assumptions of maximizing behavior, market equilibrium, and stable preferences," *id.* at 5, and states that "[t]he applications of the economic approach . . . are as extensive as" an extremely broad conception of economics that would equate it with the investigation of the consequences of "scarce means and competing ends," *id.* at 8.

51. Indeed, we would not generally speak of the kind of information purchased by intelligence agencies as "ideas" at all. In ordinary usage, we often reserve the term "idea" for more lofty, speculative, or debatable objects of thought. But, in one of its many simplifying gestures, this Article will provisionally define an idea as any claim that can be believed or disbelieved.

It is true that there is a more common category of cases in which an idea-consumer purchases a book or rents a movie in order to learn something specific, or pays for information of some kind, such as a medical opinion or legal advice. At a stretch, we might say that the consumer "buys" an idea in these cases. Alternately, one could speak of the producers and disseminators of ideas "buying" consumers' beliefs, rather than consumers doing the purchasing. Nearly every instance of advertising (or its pejorative twin, propaganda) can be seen as the exchange of money for access to consumers' attention, often with the aim of communicating an idea to the idea-consumer or perhaps a desire somehow attached to an idea.[52] In cases where the consumer deliberately chooses to be exposed to the advertising—say, by not closing a web browser window or not changing channels while a commercial plays, in order to gain access to the entertainment following the advertisement—the consumer has fairly literally exchanged his attention for a desired good.[53]

Still, we might be skeptical of the value of the marketplace of ideas model if it required connecting the dots between each of a believer's ideas and some literal, often distant monetary transaction. Many of our beliefs seem to come from interactions in which no money is exchanged, such as exchanges between parents and children or casual conversation with friends. Indeed, in perhaps the most thorough conceptual exploration of the marketplace of ideas metaphor to date, the philosopher Alvin Goldman and the economist James Cox note that "[i]f messages are not goods or products at all, then there is no *market* in messages. But if there is no market in messages, then [the marketplace of ideas thesis] seems to lack even surface plausibility."[54] Based in part on this analysis, as well as other critiques of the plausibility of the assumptions underlying discussions of the marketplace of ideas,[55] Goldman and Cox conclude that "economic

52. James Gleick describes Google as selling its users' attention to advertisers: "The merchandise of the information economy is not information; it is attention. These commodities have an inverse relationship. When information is cheap, attention becomes expensive. Attention is what we, the users, give to Google, and our attention is what Google sells—concentrated, focused, and crystallized." James Gleick, *How Google Dominates Us*, N.Y. REV. BOOKS, Aug. 18, 2011,

http://www.nybooks.com/articles/archives/2011/aug/18/how-google-dominates-us.

53. A final example of a reasonably tight nexus between ideas and monetary transactions can be found in "prediction markets"—attempts to aggregate the self-interested intelligence of participants by allowing them to bet on the occurrence or likelihood of future events. These markets, however, deal only with ideas about the future, and play a negligible role in the current overall production, dissemination, and consumption of ideas.

54. Goldman & Cox, *supra* note 32, at 27.

55. *See id.* at 16–29.

analysis lends no theoretical support" to the marketplace of ideas thesis,[56] namely, that "[m]ore total truth possession will be achieved if speech is regulated only by free-market mechanisms rather than by other forms of regulation."[57]

Without disputing Goldman and Cox's ultimate judgment of what they identify as the marketplace of ideas thesis, and the plausibility of its underlying assumptions, this Article aims to suggest that the economic approach to the creation, dissemination, and consumption of ideas might nevertheless prove predictively useful. How can the marketplace of ideas metaphor be salvaged, if there is often no literal market in messages?

As a first step, we can adopt a different way of conceiving of transactions in the marketplace of ideas. It happens to accord with a common figure of speech. We often say—or at least used to say, colloquially, in the United States—that someone "buys" an idea when he believes it. "Joe said he'd pay me back next week," someone might lament, "but I didn't buy it for a second. He never has a cent to his name."[58] If we focus on the moment of belief as the closest equivalent in the marketplace of ideas to the moment of trade, purchase, or the contractual "meeting of the minds" in more conventional economic markets, we will not distract ourselves with the hunt for connections between every idea and a literal exchange of money. We will also remain in accord with the roots of the tradition surveyed above in Part II. When Justice Holmes speaks of the free trade in ideas, he speaks of consumers accepting ideas in the market (believing them), not merely being exposed to them or gaining the right to exploit them.

So let us focus our attention on the processes by which the consumers of ideas come to believe producers' ideas in the marketplace. A second fundamental difference between the marketplace of ideas and markets in more traditional goods will then emerge. Provided one has sufficient funds, one can choose whether or not to buy a toaster; but in the vast majority of cases, one cannot choose whether or not to believe an idea. Belief is rarely, if ever, a phenomenon of the will.[59] One is exposed to an idea, one

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56. *Id.* at 32.

57. *Id.* at 4.

58. This figure of speech seems to have a lengthy heritage. *See, e.g.*, *Proverbs* 23:23 ("Buy truth, and do not sell it . . . .").

59. *But see* William James, *The Will to Believe*, *in* NEW WORLD, Mar. 1896, at 327, *reprinted in* WRITINGS 1878–1899, at 457 (Gerald E. Myers ed. 1992) (defending the right to religious faith). It is easy, however, to misconstrue the extremely limited circumstances in which James thought that willed belief might be possible. *See* Gregory Brazeal, *The Supreme Fiction: Fiction or Fact?*, J. MODERN LITERATURE, Fall 2007, at 80, 95–98

considers it, and one either believes it or not. If one does not believe it, "Try harder!" will rarely be an appropriate response. To the extent that belief is not willed or chosen, we might wonder whether it makes any more sense to apply the economic approach to the human behavior of belief than it would to apply such an approach to predicting the behavior of a machine, or of the collision of billiard balls.

A first response might be that even if consumers of ideas are rarely able to choose what to believe, they make countless decisions that indirectly shape their beliefs. They choose, for example, which television programs to watch, which printed matter to read, whether to pursue continuing education, where to live, with whom to talk, and how much time to dedicate to thinking about various matters. All of these conscious or even deliberative choices shape the ideas encountered as potential objects of belief.

But this response has its limits. It would be misleading to conceive of consumers as simply choosing their beliefs by indirect means, because the choices that indirectly shape belief may, in many cases, have only a random relation to the content of the beliefs thus acquired. The consumer who chooses to walk down a street may accidentally notice a billboard and come to believe a message displayed on it. The incidental consumer of advertisements rarely intends in advance to consume any specific ideas being advertised. In addition, in many cases—perhaps even the majority of cases—ideas may be absorbed passively, without the consumer either having deliberately chosen to be exposed to the idea or having applied much thought to the evaluation of its truth.[60] The consumer who comes to believe the message on the billboard may do so without ever questioning whether it is true, or without thinking much about it at all. The consumer

(describing the popular misreading by James's contemporaries of the "will to believe"). For a general survey of contemporary philosophical debates on volition and belief, see Andrew Chignell, *The Ethics of Belief*, STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Fall 2010), http://plato.stanford.edu/entries/ethics-belief, especially section three, "Belief, its aims, and our control over it."

60. Or perhaps the consumer formed an impression of the idea's truth earlier on, but passively accepts its truth later. Apparently, idea-consumers store information about many ideas separately from the ideas themselves and have a tendency over time to forget whether an idea was presented as true or false. *See* Sam Wang & Sandra Aamodt, Op-Ed., *Your Brain Lies to You*, N.Y. TIMES, June 27, 2008, at A19 *available at* http://www.nytimes.com/2008/06/29/opinion/29iht-edwang.1.14069662.html. Wang and Aamodt note the practical implication that "[j]ournalists and campaign workers may think they are acting to counter misinformation by pointing out that it is not true. But by repeating a false rumor, they may inadvertently make it stronger." *Id. See also* CASS R. SUNSTEIN, ON RUMORS: HOW FALSEHOODS SPREAD, WHY WE BELIEVE THEM, WHAT CAN BE DONE (2009).

watching a television program or visiting a website may passively absorb an idea. It is not inconceivable that the vast majority of our beliefs are simply passively absorbed through processes more akin to a person contracting influenza than to a rational adult engaging in a critical, enlightened group deliberation with well-informed companions.[61]

This Article's response to the preceding difficulties will be, in the grand tradition of economics, to assume them away. The remainder of this Article will simply approach belief as if it were a volitional process based on idea-consumers' preferences. The assumption may not be as flagrantly unrealistic as it initially seems, considering that consumers with very strong preferences for the truth might end up adopting precisely the beliefs that a non-volitional believer would adopt. It has also been a commonplace since long before behavioral economics identified the self-serving bias that people have a tendency to believe what it is in their self-interest to believe, almost as though they were choosing what to believe willfully. As Arthur Schopenhauer notes, "it is natural to man to believe true what he desires to be true, and to believe it because he desires it."[62] Or, in Upton Sinclair's words: "It is difficult to get a man to understand something, when his salary depends on his not understanding it!"[63]

In any case, it has been argued that an economic model stands or falls not based on the accuracy of its assumptions, but based on its ability to produce useful and accurate predictions.[64] The decision to model idea-

61. For explorations of the analogy between the spread of ideas and the self-propagation and mutation of viruses, see GEORGE A. AKERLOF & ROBERT J. SHILLER, ANIMAL SPIRITS: HOW HUMAN PSYCHOLOGY DRIVES THE ECONOMY, AND WHY IT MATTERS FOR GLOBAL CAPITALISM 56 (2009) (explaining the epidemic spread of confidence and pessimism); RICHARD DAWKINS, THE SELFISH GENE 192 (30th anniversary ed. 2006) (introducing the term "meme" and applying it to the viral spread of ideas); Jeffrey Evans Stake, *Are We Buyers or Hosts? A Memetic Approach to the First Amendment*, 52 ALA. L. REV. 1213 (2001) (proposing a memetic metaphor as an alternative to the marketplace metaphor in First Amendment jurisprudence). The analogy was anticipated by the Framers. *See* THE FEDERALIST No. 78, at 469 (Alexander Hamilton) (Clinton Rossiter ed., 1961) ("[I]ll humours which the arts of designing men . . . sometimes disseminate among the people themselves . . . speedily give place to better information . . . .").

62. ARTHUR SCHOPENHAUER, ESSAYS AND APHORISMS 168 (R.J. Hollingdate trans., Penguin Books 1970) (1851).

63. UPTON SINCLAIR, I, CANDIDATE FOR GOVERNOR: AND HOW I GOT LICKED 109 (Univ. of Cal. Press 1994) (1934).

64. *See* MILTON FRIEDMAN, *The Methodology of Positive Economics*, *in* ESSAYS IN POSITIVE ECONOMICS 3 (1953). I cite Friedman not as the source of this idea, but because it has become customary to nod to Friedman at this point. Choosing to judge economic models by their predictive power requires no more philosophical or methodological ballast than choosing to judge hammers by their nail-driving effectiveness. Others are always free to disagree and evaluate economic models by the truth of their assumptions, or their beauty, just as others are always free to evaluate a hammer based on its shape or scent. But

consumers as though they were choosing which ideas to believe would be sufficiently justified if it cleared away an obstacle to the generation of such predictions.

The preceding discussion leads the way to a third difference between idea-markets and markets in more traditional goods. While this Article has assumed that one either believes or does not believe an idea, just as one either buys or does not buy a toaster, the matter may not be so clear cut. It often may be highly unclear whether an individual believes an idea, even to that individual. Sometimes we may not know exactly what we think. At other times our belief might be qualified. Such qualification includes the modal sense of believing that something may be true, could be true, or must be true; the strength of a belief, the degree to which it is believed; or the belief in something "in a sense," that is, provided that one thing is meant and not another.

The notion of belief also overlaps with many related phenomena that are different from belief but are often difficult to distinguish in an individual case—such as the passive repetition of an idea, the use of an idea in the course of an argument out of convenience, the hypothetical proposal of an idea, or the recognition of the validity or legitimacy of an idea without belief. Our precise relation to an idea may also shift, perhaps imperceptibly, from one moment to the next.

As in the case of volition and belief, however, the remainder of this Article will ignore the problem of qualified belief in the interest of simplicity. It will be assumed that belief is a clear-cut, binary phenomenon: one either adopts an idea, or one does not.

### B. IDEA-PRODUCERS

Differences between markets in ideas and markets in more traditional goods also exist for producers. Whereas the producers of toasters can usually decide what kind of toaster to produce, the producers of ideas, to the extent that they have control over whether to produce an idea at all, often have a very limited ability to determine what kind of idea they will produce. It is sufficient for our purposes, however, that producers of ideas, in most of the cases that concern us, can choose to dedicate their energies to the exploration of a particular subject or question, even if at the outset

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objecting to a predicatively useful economic model on philosophical grounds may remind some of the apocryphal French diplomat who, at the end of a lengthy negotiation, objected to the proposed resolution by saying: "Yes, it will work in practice—*but will it work in theory*?"

they cannot know what their conclusions, if any, will be. All ideas are in some sense produced on speculation, but the same might be said of many more traditional economic endeavors. We do not assume that corporate research and development programs are beyond the scope of economic inquiry simply because of their unpredictable outcomes.

What would idea-producers maximize? It might be tempting to conceive of producers as primarily aiming to maximize the number of people who believe their ideas, or the total quantity of truth they produce. But there is no need to limit the elements in producers' utility functions in this way. In particular, there is no reason to assume that truth is every idea-producer's goal. Many organizations that play a prominent role in the contemporary American marketplace of ideas have strong incentives to create and disseminate false ideas.[65] As Judge Posner said of judges, idea-producers may maximize "[t]he same thing everybody else does"—wealth, power, and so on.[66] Some of the more common and significant constraints on idea-producers might be limited time, creativity, intelligence, education, and resources for research.[67] As noted above, they will also operate under the constraint of uncertainty about what idea they will produce.

It might also be worthwhile to distinguish a few possible modes of production of ideas, especially in order to combat any assumption that idea-producers are primarily individuals. Professor Yochai Benkler helpfully distinguishes three general models of cultural production: the "market-based model," in which prices provide signals that orchestrate the behavior of producers; the "firm-based model," in which managerial commands take the place of prices; and the "model of peer-production," in which neither prices nor managerial commands are present, but diversely-motivated, uncoordinated individuals use information networks to produce

65. *See, e.g.*, Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420, 1468–1571 (1999) (discussing the manipulation of consumers' perceptions of risk by the tobacco industry).

66. *See* Richard A. Posner, *What Do Judges and Justices Maximize? (The Same Thing Everybody Else Does)*, 3 SUP. CT. ECON. REV. 1, 39 (1993).

67. In his Nobel lecture, Gary Becker identifies limited time as "the most fundamental constraint" in human actions. Gary S. Becker, *Nobel Lecture: The Economic Way of Looking at Behavior*, 101 J. POL. ECON. 385, 386 (1993). Yochai Benkler emphasizes two scarce resources in today's cultural-production economy: "first, human creativity, time, and attention; and second, the computation and communications resources used in information production and exchange." YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM 107 (2006). *See also* GARY S. BECKER, HUMAN CAPITAL: A THEORETICAL AND EMPIRICAL ANALYSIS, WITH SPECIAL REFERENCE TO EDUCATION (3d ed. 1993) (discussing education as a constraint).

collaboratively.[68] Each general model encompasses a variety of subtypes, and there can be hybrids between the three models.[69] Within the third category, we might include the informal production of ideas—socially, through conversation, or even alone, given that relatively solitary idea-producers can generally be seen as a node in some peer network, no matter how spatially and temporally dispersed it might be.

In each model, and in the production of ideas in society as a whole, we can expect that idea-production will be aided by specialization and the division of labor,[70] just as in Adam Smith's example of the pin factory.[71]

### C. IDEA-CONSUMERS

What do consumers of ideas maximize? It might be tempting to conceive of them as primarily maximizing the quantity and significance of true beliefs they possess. But there is no reason to limit our conception of their utility functions in this way. It is true that as a general matter, an economically rational actor would probably prefer true ideas to false ones, because true ideas will tend to be more useful for achieving the actor's ends. However, it is not implausible that in many of the political contexts that lie at the center of scholarly interest in the marketplace of ideas, truth and consumer utility part ways.

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68. *See* BENKLER, *supra* note 67, at 59–60; Yochai Benkler, *Coase's Penguin, Or, Linux and the Nature of the Firm*, 112 YALE L.J. 369, 375 (2002) [hereinafter Benkler, *Coase's Penguin*]. Benkler argues that "nonproprietary strategies have always been more important in information production than they were in the production of steel or automobiles." BENKLER, *supra* note 67, at 4. He further argues that under certain conditions, "nonmarket collaborations can be better at motivating effort and can allow creative people to work on information projects more efficiently than would traditional market mechanisms and corporations." *Id.* at 6–7.

69. *See* Benkler, *Coase's Penguin*, *supra* note 68, at 373 (discussing "hybrid models"). For examples of subtypes of the models of production, see BENKLER, *supra* note 67, at 43 tbl.2.1 ("Ideal-Type Information Production Strategies").

70. *See* Manuel A. Utset, *Back to School with Coase: The Production of Information and Modes of Knowledge Within and Across Academic Disciplines*, 75 B.U. L. REV. 1063, 1071–72 (1995). Specialization and the division of labor can also be expected to take place among idea-consumers, for example in the obtaining of ideas about a political candidate or policy. Consumers may base their opinions about an unknown candidate on statements about the candidate by popular representatives of one or another political viewpoint. *See* James A. Stimson, *A Macro Theory of Information Flow*, *in* INFORMATION AND DEMOCRATIC PROCESSES 345, 347–48 (John A. Ferejohn & James H. Kuklinski eds., 1990) (positing that "the normal economics of specialization and division of labor are applicable also to the collection of political information").

71. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF THE NATIONS 8–9 (Edwin Cannan, ed., Univ. of Chicago Press 2010) (1776).

The analysis of voter beliefs, for example, has repeatedly shown that voters possess remarkably low levels of political knowledge.[72] The usual explanation for this phenomenon (already noted above by Judge Posner[73]) is that it would be economically irrational for the individual voter to devote resources to seeking out the truth in political matters. With regard to those voters who do inform themselves, it may be that they receive intangible benefits from engaging in civic republicanism, such as a heightened sense of righteousness. It might also be that the goal of the consumer of political information is often not the maximization of the possession of true ideas, but the maximization of the psychic benefits that accompany being a "fan" of one or another political "team."[74] If the latter is the case, true ideas might interfere with the consumer's enjoyment of the political spectacle, and thus a consumer might rationally avoid exposure to them.

More generally, once we recognize the theoretical possibility of divergences between an idea's truth and the utility for a consumer of believing in the idea, it becomes possible that a perfectly economically rational consumer of ideas—that is, one who believes if and only if belief is in her perceived best interest, in all cases—might in practice be so stubbornly irrational in the epistemic sense that we would consider her insane.

For most consumers on most occasions, however, the truth of an idea (if we pretend for a moment that this is an easily recognized property) and its utility will probably go hand in hand. It is difficult even to imagine what it would be like for a consumer to generally favor false ideas over true ones. Given the vast range of possible false ideas, from the doorknob being an elephant to the floor consisting of radioactive clouds, which ideas would the individual choose to believe?[75]

As a final note, consumers of ideas, like producers, will operate within a variety of constraints, including scarcities of attention, intelligence,

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72. *See* Ilya Somin, *Political Ignorance and the Countermajoritarian Difficulty: A New Perspective on the Central Obsession of Constitutional Theory*, 89 IOWA L. REV. 1287, 1304 (2004).

73. See *supra* text accompanying note 40.

74. *See* Ilya Somin, *Knowledge About Ignorance: New Directions in the Study of Political Information*, 18 CRITICAL REV. 255, 261 (2006).

75. Some philosophers have even attempted to define truth in terms akin to "justified usefulness." *See, e.g.*, William James, *What Pragmatism Means*, *in* PRAGMATISM: A NEW NAME FOR SOME OLD WAYS OF THINKING, Apr. 1907, at 479, *reprinted in* WRITINGS 1902–1910, at 520 (Bruce Kuklick ed., 1987) ("The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite, assignable reasons.") (emphasis omitted).

education, availability of useful partners for deliberation, and money to purchase or facilitate access to ideas.

### D. INTERMEDIARIES

In many contexts, there are intermediaries between idea-consumers and idea-producers. The paradigmatic intermediary would be the news media, and for the last half century especially the television news media, which both selects the ideas it will present to consumers, and often serves as a kind of idea-rating agency through the way it presents and evaluates the ideas of others.

There are many other intermediaries as well. Teachers often serve to channel the attention of their students toward one or another set of ideas. The algorithms employed by Internet search engines emphasize certain results and effectively bury others. Even if an idea-producer manages to publish an idea on the web, the idea may reach no consumers at all if, for some reason, the page where it is published never appears near the top of any search results. The same could be said of filtering software, which by definition stands as a barrier between some consumers and the general pool of expression available on the Internet.[76] These intermediaries will operate based on incentives that may not be aligned with the preferences of either consumers or producers.[77]

Given the relative rarity of ideas being purchased through actual monetary transactions, especially transactions between the producer of the idea and a consumer, it might be best in some contexts to conceive of producers depositing the ideas they have produced into the public sphere, as though it contained a general pool of ideas. We could then conceive of consumers acquiring ideas from this general pool. Intermediaries would stand both between the producer and the pool and between the consumer and the pool. The notion of a general pool of ideas also helps draw

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76. *See generally* Lawrence Lessig, *What Things Regulate Speech: CDA 2.0 Vs. Filtering*, 38 JURIMETRICS J. 629 (1998) (examining the constitutional implications of filtering software).

77. On the media's incentives, see generally the work of C. Edwin Baker, for example, *Media Concentration: Giving up on Democracy*, 54 FLA. L. REV. 839, 902–13 (2002) and *Advertising and a Democratic Press*, 140 U. PA. L. REV. 2097, 2139–68 (1992). *Accord* EDWARD S. HERMAN & NOAM CHOMSKY, MANUFACTURING CONSENT: THE POLITICAL ECONOMY OF THE MASS MEDIA (2002) (providing a popular presentation of corporate media as vehicles of propaganda). *But see, e.g.*, Book Note, *And Now, a Word from Our Sponsor*, 108 HARV. L. REV. 489 (1994) (reviewing C. EDWIN BAKER, ADVERTISING AND A DEMOCRATIC PRESS (1994)) (providing a critical review of Baker's portrayal of media incentives and behavior).

attention to the fact that many of the ideas in circulation may be very old and of uncertain provenance.

### E. IDEAS AS GOODS

Several peculiar features of ideas as goods might be noted. First, unlike in many traditional markets, producers of ideas are almost always consumers of ideas as well. Economists refer to this as the "on the shoulders of giants" effect.[78] One result is that imposing burdens on the use of ideas, such as copyright restrictions, will also tend to impose burdens on the production of ideas.[79]

Second, ideas are public goods in the sense that they are nonexcludable. That is, the costs of preventing all non-paying individuals from obtaining the benefits of an idea would generally be impracticably high, just as it would be impracticably costly to exclude all Americans who do not pay their taxes in full from benefiting from the country's national security. This is another way of putting Judge Posner's point, already cited, that "it is not feasible to create property rights in pure ideas."[80] Jefferson may have put it best:

> If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of every one, and the receiver cannot dispossess himself of it.[81]

So far, we have been discussing ideas almost as though they were concrete, individual things, reproduced as they spread from mind to mind. But from the producer's perspective, at least, the nonexcludability of ideas makes it equally appropriate to think of them in a more Platonic way, as though every idea in the public sphere were only one thing, and every mind

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78. BENKLER, *supra* note 67, at 37.

79. *See generally* LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD (2001) (discussing the harmful effects of excessive copyright restrictions on creativity).

80. *See supra* note 40 and accompanying text. *Accord* SUNSTEIN, *supra* note 31, at 68–71 (discussing how information about public issues displays the features of a public good and is thus likely to be underproduced). There may, however, be exceptions to the nonexcludability of ideas. Consider the case of a cult whose members must pay to be exposed to certain secret doctrines, and are contractually bound not to disclose the doctrines to anyone. Theoretically, given adequate surveillance and enforcement mechanisms, we could imagine a legal regime in which unauthorized propagation of these protected ideas by anyone would result in some sanction.

81. Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), *in* WRITINGS, *supra* note 16, at 1286, 1291 [hereinafter Letter from Thomas Jefferson, WRITINGS].

perceived that one thing as it considered the idea. Because toasters are an excludable good, the creator of a quality toaster oven can produce one for each paying consumer. The creator of a fine idea, by contrast, can only produce the idea once, and once the idea is in the public sphere, everyone can in theory appreciate it without paying the producer. As a result, socially valuable ideas (like all public goods) will tend to be produced at a suboptimal level—a subject discussed at greater length below in Part IV.E.[82]

Third, ideas are also public goods in the sense of being nonrivalrous. One person's access to an idea does not decrease the availability of the idea for someone else's enjoyment, just as one American's enjoyment of the nation's security in no significant way detracts from another's enjoyment of it. Again, Jefferson provides a memorable formulation:

> He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation.[83]

In less eloquent terms, just as the marginal cost of extending the benefits of national security to an additional resident is, for all practical purposes, zero, so will the marginal cost of "a copy of an idea" being created in another person's mind be nil.

## IV. MARKET FAILURES IN THE MARKETPLACE OF IDEAS

The term "market failure" refers to an endogenous, usually non-self-correcting feature of a market that systematically obstructs the realization of efficient outcomes by economically rational actors.[84] What kind of market? In theory, we could imagine identifying market failures in any type of trade arrangement, from those obtaining in a relatively classical liberal state, such as the United States of the later nineteenth century; to those in a state of relative anarchy, as today in Somalia; to those in a highly centrally controlled economy, such as contemporary North Korea; to those in a

82. *See infra* Part IV.E ("Externalities (and Transaction Costs)").

83. Letter from Thomas Jefferson, WRITINGS, *supra* note 81, at 1291.

84. *See* JOSEPH E. STIGLITZ, ECONOMICS, at A13 (2d ed. 1997).

modern, liberal welfare state, such as Sweden. In each case, the government would enforce through its laws various rules that would structure the economic interactions between residents—or, in the case of Somalia, the absence of an effective government would leave residents to make their own trades and other arrangements in the absence of any government enforcement or rules. In each case, we could identify various ways in which the rules of the game would lead to inefficient outcomes even if all the participants in the game behaved economically rationally. These aspects of the market structures would be sources of market failure.

In practice, however, this is not how discussions of market failure usually proceed. Though many legal scholars since the New Deal have rejected the notion that a "free market" deductively entails something like the contingent, internally conflicted, frequently changing jumble of rights and liabilities that happened to govern in the later nineteenth century United States,[85] most discussions in economics still assume such a classical liberal market as a baseline. That is, economists refer to one or another idealized form of the classical liberal market as "the free market," and then refer to departures from that baseline—especially those that involve an expansion in the size of government or an increase in the actual interactions between government and private economic actors—as "government interventions in the market."[86] So if a judge fines someone for squatting on private property, that is the free market operating, but if the same judge fines someone for selling toxic toothpaste, that is government intervention in the market.[87]

85. For one of the earliest articulations of this view, see Robert Hale, *Coercion and Distribution in a Supposedly Non-Coercive State*, 38 POL. SCI. Q. 470 (1923).

86. Even economists who emphasize the value of regulation routinely distinguish between market failure and government or regulatory failure. *See, e.g.*, Joseph Stiglitz, *Regulation and Failure*, *in* NEW PERSPECTIVES ON REGULATION 11, 17–18 (David Moss & John Cisternino eds., 2009). At first glance, the distinction makes intuitive sense: on the one hand, there are systemic failures that arise from the private trades of private actors; on the other hand, there are systemic failures that arise when the government attempts to regulate these private trades. But once one recognizes that the government plays an essential role in the ostensibly private trades by enforcing various legal rules, such as property and contract rights, the distinction becomes less clear. What was called a "market failure" can also in many cases be seen as a failure created by the government through its choice of legal rules. Only when one defines "the market" not as the trading of private actors apart from any governmental interference, but rather as something akin to a classical liberal market, do distinctions like the one between "market failure" and "government failure" gain their intuitive appeal.

87. For a thorough critique of the notion that classical liberal markets, in the context of property law, provide a natural baseline in the discussion of free markets, or markets in general, see JOSEPH WILLIAM SINGER, ENTITLEMENT: THE PARADOXES OF PROPERTY (2000).

As a result of the tendency to define "the free market" as an idealized classical liberal or laissez-faire market, the kind of market existing in a so-called "night-watchman state," discussions of market failure tend in practice to focus only on those failures that would arise in such a market.[88] Failures that would arise as a result of departures from the classical liberal baseline tend to be defined instead as "government failures."[89] The consequence for our discussion is yet another series of terminological complications. What should count as a market failure in the marketplace of ideas? What should count as a government failure, if anything? What is our baseline for free speech?

To begin with, it seems inappropriate to treat the speech market of the later nineteenth century United States as a baseline for defining a free market in ideas, because government policies at the time were substantially less laissez-faire than they are now. As late as 1919, *Abrams v. United States*—as discussed above, the origin of the marketplace of ideas metaphor—was a 7–2 decision to uphold convictions for the distribution of some fairly tame anti-war leaflets.[90] Justice Holmes's dissent would not be fully vindicated until the late 1960s when *Brandenburg v. Ohio* held it unconstitutional "to forbid or proscribe advocacy of the use of force or of law violation except where such advocacy is directed to inciting or producing imminent lawless action and is likely to incite or produce such action."[91] Should the late Warren Court's view of the First Amendment thus serve as a baseline of the free market in ideas? Or perhaps the current Roberts Court's view?

In an effort to avoid the conceptual muddle surrounding the distinction between market failures and government failures, this Article will attempt to avoid invoking any baseline for a free market in ideas. Instead, markets of all kinds will be taken as they are found, and market failures will refer, as originally suggested, to any endogenous features of the market (including all governmental policies shaping the market) that systematically obstruct the realization of efficient outcomes by economically rational actors. The category of government failure will drop out of the picture entirely.

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88. *See* STIGLITZ, *supra* note 84, at 327 (providing Stiglitz's introduction to typical market failures in classical liberal markets), 430–53 (discussing imperfect information), 335–81 (discussing imperfect competition), 505–19 (discussing externalities).

89. *See supra* note 86 and accompanying text.

90. Abrams v. United States, 250 U.S. 616 (1919).

91. Brandenburg v. Ohio, 395 U.S. 444, 448 (1969).

Two final conceptual matters should be addressed before turning to specific market failures: the distinction between economic and epistemic rationality, and the distinction between efficiency and truth.

### A. ECONOMIC VERSUS EPISTEMIC RATIONALITY

Because we are discussing a market in ideas, it may be worth emphasizing the difference between what is called "rationality" in economics and rationality in its more ordinary, intellectual, epistemic sense. Economic rationality consists of making those choices that will maximally satisfy the economic actor's preferences.[92] Far from requiring perfect adherence to the highest standards of deliberative thought, or even adherence to the minimum standards of logical consistency, economic rationality does not require that the relevant decisions be made consciously. As Judge Posner writes: "Rational choice need not be conscious choice. Rats are at least as rational as human beings when rationality is defined as achieving one's ends (survival and reproduction, in the case of rats) at least cost."[93]

Economic rationality bears no necessary conceptual relation to non-economical, epistemic conceptions of rationality. Like the rat, an individual can possess a great deal of the former and little or none of the latter; or, like a fine philosopher plagued by a horrible investment sense, vice versa.

### B. EFFICIENCY VERSUS TRUTH

We often seem drawn to assume that truth should be the goal of a marketplace of ideas, just as efficiency is often presented as the goal of traditional economic markets. But can it make sense to speak of

92. For a popular introduction to rationality in its economic sense, see GRAHAM ALLISON & PHILIP ZELIKOW, ESSENCE OF DECISION 17–20 (2d ed. 1999). Some have objected to "the linguistic imperialism of economics, which appropriates important words in the common lexicon, like 'rational,' and gives them technical meanings which over time change their ordinary meanings." ROBERT SKIDELSKY, KEYNES: THE RETURN OF THE MASTER, at xv (2009) (also criticizing "economists' definition of rational behaviour as behaviour consistent with their own models" for being "a huge project to reshape humanity into people who believe the things economists believe about them"). *Accord* JERRY L. MASHAW, GREED, CHAOS, & GOVERNANCE 3 (1997) (explaining that the emphasis of microeconomic analyses on "rational self-interest" may "suggest that the steely-eyed calculation of personal gains and losses is the decisional posture that we *should* cultivate in ourselves" to avoid being "irrational—perhaps a dupe"). This Article treats economic rationality and epistemic rationality as mere homonyms with no more necessary logical relation than the fluvial and financial senses of "bank."

93. Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551, 1551 (1998).

maximizing the quantity of truth in an economy of ideas? Some have expressed skepticism.[94] A number of issues might be raised:

> (1) Truth: Is there only one kind of truth, or are there several? If the latter, do we include all kinds in the measurement? Also, should we place more weight in significant truths than in trivial ones?
>
> (2) Distribution: Do we care only about the sum total of truth in the economy, or also about how it is distributed among consumers? If the latter, do we care most about the quantity of truth possessed by those with the least truth, the median consumer, or the degree of inequality between those with the most and the least? Do we care only about access to true ideas, or about belief in them as well?
>
> (3) Diversity: Do we care about the number of unique truths in the market as a whole, or do we simply count each true belief of each individual?
>
> (4) Falsity: Do we care only about maximizing truth, or about minimizing falsity as well?[95]

The challenge to the marketplace of ideas metaphor posed by the ambiguity of terms like "maximal truth," however, does not seem insurmountable. So long as one makes some decision regarding the questions above, and applies the resulting standard consistently, there seems to be no reason to conclude that the notion of a quantity of truth, or even the notion of an optimal truth-outcome, is inherently paradoxical or impossible to conceive. We can choose a standard, and based on this standard, we can envision different actual and potential idea-economies containing different quantities of truth. We can do so even if in practice measuring such quantities accurately is unfeasible—not least because of the difficulty of determining what is true in the first place.

Still, even if we define a perfectly functioning marketplace of ideas as one that maximizes the quantity of truth given scarce resources, we should keep in mind the distinction between truth and efficiency. In a perfectly efficient economic market, the self-interested behavior of economically rational consumers and producers would result in an ideal allocation of resources for all—as if under the guidance of an invisible hand.[96] In a perfectly efficient marketplace of ideas, consumers and producers would

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94. *Cf.*, *e.g.*, Candeub, *supra* note 28, at 1563 ("Identifying an optimal output in viewpoints is a far more fraught endeavor. It seems absurd to talk about a 'well-performing' marketplace of ideas.").

95. For proposed answers to some of these questions, see Goldman & Cox, *supra* note 32, at 5–6.

96. For the most common economic definitions of efficiency, see JULES L. COLEMAN, MARKETS, MORALS AND THE LAW 95–132 (1988).

behave in similarly self-interested ways, and a similarly efficient allocation of resources, including intellectual work and attention, would result. No new ideas could be produced and no consumer's set of beliefs could be altered without the alteration resulting in more cost than benefit, however those terms are conceived.

The important point is that a perfectly efficient marketplace of ideas would almost certainly not be one that maximized the quantity of truth on any of the conceptions proposed above. Assuming that it is efficient for some true ideas not to be produced, or for some individuals to hold less than perfectly true or even false beliefs,[97] a perfectly efficient market will not result in the maximization of truth. The ideally efficient allocation of ideas may not even be one in which every individual's beliefs regarding a given proposition are the same. Differences in the way idea-consumers are situated, and thus in the consequences that the consumer's belief in an idea would have, will mean that dissensus may sometimes be more efficient than consensus. There is no more reason to assume that an ideally efficient idea-market is one in which all consumers arrive at the same conclusions than there is to assume that an ideally efficient appliance-market is one in which all consumers possess toasters of the same size and color. Similarly, it is no more the case that a perfectly efficient market in ideas will produce only the truest ideas than it is the case that a perfectly efficient market in automobiles will produce only luxury sedans.[98]

Markets are the focus of exceptional attention precisely because of their ability to produce efficient outcomes. The uncanny magic of the invisible hand lies in its tendency to promote efficiency, and efficiency alone. The hand cannot be retrained to perform any other trick—such as magically producing a maximal quantity of truth, beauty, or goodness out of the self-interested actions of market actors—simply because we would like it to do so. If it makes sense to speak of the natural end of a marketplace of ideas, that end would be the maximization of efficiency

97. It has often been suggested that belief in the truth does not always benefit the believer, or even society as a whole. *See* T.S. ELIOT, *Four Quartets*, *in* THE COMPLETE POETRY AND PLAYS: 1909–1950 115, 118 (Harcourt, Brace & World, Inc. 1971) ("Go, go, go, said the bird: human kind/Cannot bear very much reality."); Donald C. Langevoort, *Taking Myths Seriously: An Essay for Lawyers*, 74 CHI.-KENT L. REV. 1569 (detailing the psychological and other benefits of many systematically erroneous heuristics and biases, and describing how groups construct self-serving myths and illusions). *Cf.* FRIEDRICH NIETZSCHE, BEYOND GOOD AND EVIL § 39, at 37 (Rolf-Peter Horstmann & Judith Norman eds., Judith Norman trans., Cambridge Univ. Press 2002) (1886) ("Something could be true even if it is harmful and dangerous to the highest degree.").

98. *See* Goldman & Cox, *supra* note 32, at 17.

rather than truth, even if the reason we originally began discussing the marketplace of ideas had more to do with truth than efficiency.

Keeping in mind the distinctions between economic and epistemic rationality and between efficiency and truth, the following sections discuss several potential sources of market failure in a marketplace of ideas.

### C. IMPERFECT COMPETITION

The paradigmatic example of imperfect competition is a monopoly, which could take a variety of forms in a marketplace of ideas. One idea-producer, for example, could control all available public avenues of idea dissemination and prevent the ideas of competing producers from reaching idea-consumers. We could imagine a situation like the one prevailing in North Korea, where the government appears to have more or less effectively seized control of all channels of public communication, in part through a ban on mobile phones, the management of all educational institutions, censorship of printed material, the threat of internment even for private expression of dissent, and the requirement that all televisions and radios receive only government stations.[99] The North Korean government's unprecedented monopoly over the production and dissemination of politically sensitive ideas presumably results in both inefficiencies and suboptimal truth outcomes.

But does imperfect competition in an idea-market always correlate to the stifling of truth? Professional associations that regulate the dissemination of medical and legal advice impose a kind of oligopoly in the marketplace of ideas, and it may not be the case that a more perfectly competitive idea-market would result in greater truth. (In the case of the law, the truth is intimately bound up with whatever the oligopoly says it is. This creates special difficulties in evaluating the relative truth of non-oligopolists' claims.) The possibility of a monopoly or oligopoly resulting in superior truth-outcomes becomes especially plausible if one agrees with Goldman and Cox that "[d]omains of opinion where speech is totally unregulated, or is at most regulated by the market, are arguably the domains where maximum error and falsity are to be found."[100] As evidence, they point to "domains in which rumor, gossip, old-wives' tales, and superstition flourish, where astrology and the occult are purveyed and apparently believed," and contrast these domains with those in which

99. *Background Note: North Korea*, U.S. DEP'T OF STATE (Oct. 31, 2011), http://www.state.gov/r/pa/ei/bgn/2792.htm.

100. *Id.* at 12.

"formal education, which might serve to combat popular misconceptions and unfounded folklore, takes place."[101] Indeed, the best test of the truth of an idea about astrology, an urban legend, evolution, or the characteristics of a minority, is apparently not the power of the thought to gain acceptance in the competition of the market.

On the other hand, neither the formal education of economists nor the regulation of expression by their peer-reviewed journals and other institutions succeeded in preventing superstitions about the self-correcting powers of finance markets from flourishing prior to the financial crisis.[102] Nor did the highly regulated creation and dissemination of ideas within various intelligence bureaucracies succeed in generating an accurate consensus among intelligence professionals on the likelihood of the collapse of the Soviet Union before it happened, or the threat posed by Al Qaeda prior to September 11, 2001, or the non-existence of weapons of mass destruction in Iraq in 2003.[103]

Imperfect competition in the marketplace of ideas also occurs when the promotion of ideas is subsidized unequally. This is the focus of the "antidistortion rationale" for restricting corporate campaign expenditures discussed in *Austin v. Michigan Chamber of Commerce*, the Supreme Court decision overruled by *Citizens United v. FEC*.[104] *Austin* upheld a state regulation that limited the use of corporate treasury funds for independent campaign expenditures.[105] There, the Court stated, "the mere fact that corporations may accumulate large amounts of wealth is not the justification for [the statute]; rather, the unique state-conferred corporate structure that facilitates the amassing of large treasuries warrants the limit on independent expenditures."[106] The regulation had been aimed at "the corrosive and distorting effects of immense aggregations of wealth that are accumulated with the help of the corporate form and that have little or no correlation to the public's support for the corporation's political ideas."[107]

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101. *Id.*

102. *See infra* Part IV.E.

103. *See generally* HAROLD L. WILENSKY, ORGANIZATIONAL INTELLIGENCE: KNOWLEDGE AND POLICY IN GOVERNMENT AND INDUSTRY 41–74 (1967) (providing a general description of how ideas tend to be produced, disseminated, and consumed within bureaucracies).

104. *See* Austin v. Mich. State Chamber of Commerce, 494 U.S. 652, 660 (1990), *overruled by* Citizens United v. FEC, 130 S. Ct. 876 (2010). The term "antidistortion rationale" was first used by the Supreme Court in *Citizens United* to describe the analysis in *Austin*. *Citizens*, 130 S. Ct. at 883.

105. *Austin*, 494 U.S. at 659–60.

106. *Id.* at 660.

107. *Id.*

The notion that the amplified speech of wealthy interests could have distorting effects on the marketplace of ideas may have an intuitive appeal, but like so many other subjects that have come up in the course of this Article, it proves surprisingly difficult to articulate in concrete terms. The idea of distortion assumes the existence of a baseline from which the distortion takes place. But, as noted above at the start of Part IV, it is just as difficult to identify a natural baseline for truly free speech as it is to identify a natural baseline for free markets generally.

### D. IMPERFECT INFORMATION

Imperfect information is arguably the most significant and pervasive source of market failure in a marketplace of ideas.[108] The problem is not that all ideas in the marketplace of ideas are somehow examples of imperfect information, but that consumers possess imperfect information about the ideas that they encounter. In particular, consumers often possess imperfect information about whether an idea is true. Ideas do not come with labels attached indicating their truth content.

The importance of imperfect information can perhaps best be understood by considering, counterfactually, how an idea-market might operate if the truth of any idea were as obvious as the price of a can of beets in the grocery store. Even if consumers could believe at will, but especially if they could not, it is difficult to imagine that many would choose to believe what is false. This would be the case even if no true beliefs on a subject happened to be available. In a world with perfect information about ideas, more or less the only ideas being purchased in the idea-market would be the true ones. The primary function of the idea-market might simply be to allocate resources into the most efficient generation, dissemination, and consumption of the most efficient amounts of truth on the subjects about which the generation of truth would be most efficient—a function for which markets would be quintessentially suited.

Unfortunately, imperfect information in idea markets is not only pervasive, but, in many cases, is more problematic than the imperfect information found in more traditional economic contexts. The economist's standard example of imperfect information involves the difficulty for

108. Imperfect information is so pervasive even in traditional economic markets that Hayek, known for defending free markets on the basis of their superiority in disseminating relevant information by comparison to any centralized economic system, hinted that government might have a role to play in organizing certain "channels of information." F.A. HAYEK, THE ROAD TO SERFDOM 38–39 (Routledge Classics 2001) (1944).

consumers of determining whether a used car is a "lemon."[109] But in many cases, determining whether an idea is true, or a lemon of falsehood, can be even more difficult. It may require a lifetime of research, and even then the solution may elude the investigator. Material information may simply be unavailable. Or there may be no reliable test by which to determine whether an idea is true. Even in cases where belief in an idea is wholly justified, various forms of skepticism and uncertainty remain possible. In the case of used cars, a lemon will reveal itself to be a lemon within a relatively short period of time. In the case of ideas, a lemon may not reveal itself for centuries, if ever, or reasonable deliberators might disagree about the idea's truth indefinitely.

As a result of the frequently large costs involved in determining whether an idea is even probably true, idea-consumers rely in the vast majority of cases on what might be considered "idea-rating agents" to perform the evaluation for them: the media, teachers, family, and experts. Like credit-rating agencies, however, idea-rating agents can fail. They can also have interests that are adverse to those of consumers. For example, a cable news network identified with a certain ideological or partisan brand might have a variety of incentives to rate ideas emanating from the brand as true even if the ideas were false and the network's viewers would benefit from being informed of their falsity.

### E. EXTERNALITIES (AND TRANSACTION COSTS)

Externalities exist when those who are not parties to a transaction nevertheless receive some cost or benefit as a result of the transaction.[110] In the case of positive externalities, the non-transacting parties receive a benefit for which none of the transacting parties have a right to demand compensation.[111] In the case of negative externalities, the non-transacting parties bear a cost for which they have no right to demand compensation from the transacting parties.[112]

The problem of externalities is related to the issue of transaction costs in the sense that if it were feasible to create property rights in the costs and benefits resulting from a transaction, and the costs of bargaining were

109. For the used car market as illustrative of the effects of asymmetric information, see George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970).

110. *See* J.J. Laffont, *Externalities*, *in* THE NEW PALGRAVE DICTIONARY OF ECONOMICS (2d ed., 2008), *available at*

http://www.dictionaryofeconomics.com/article?id=pde2008_E000200.

111. *Id.*

112. *Id.*

sufficiently low, those responsible for positive externalities would theoretically negotiate with the beneficiaries of such externalities for compensation. Meanwhile, the victims of negative externalities would theoretically negotiate with those responsible for compensation, or would pay for the reduction of the activity producing the negative externality. Under ideal conditions, efficient levels of production and consumption would result.

For the significance of the phenomenon of externalities to the marketplace of ideas, consider a type of bad idea: ideas that result in greater costs to believers than benefits to the producer. Why are such bad ideas so often produced? One reason may be the problem of imperfect information, noted above, which can prevent producers and consumers from recognizing such an idea when they see one. But another may be that insofar as producers and distributors of these ideas are able to recoup the benefits of producing and distributing them without compensating others for the costs incurred as a result of the ideas' spread and adoption, these ideas will tend to be overproduced and overdisseminated.

As an example, consider a hypothetical industry trade association that accrues benefits from producing and disseminating false ideas about, say, climate change, but does not have to pay the full costs of its misinformation. Theoretically, if transaction costs were low enough, adequate property rights were in place, wealth inequality were not an issue, and the unidirectionality of time posed no hurdle, anyone whose life would be disrupted as an indirect result of the trade association's misinformation would be able to negotiate with the association. This would ideally produce a socially optimal level of falsehood and uncertainty regarding climate change.[113] Because, however, transaction costs are not low enough, time is unidirectional, wealth inequality will prevent negotiations from maximizing welfare, and property rights are inadequate in many of the developing regions that would probably be hardest hit by the effects of climate change, the industry trade association could be expected to overproduce its idea-pollution. While the trade association accrued the resultant benefits of political opposition to greenhouse gas emissions regulation, the costs of such opposition would be externalized to future refugees, famine victims, subjects of human rights violations in conflicts

113. This level might, in fact, approach zero. Misinformation about climate change is not the unfortunate byproduct of some socially beneficial process, like the toxic waste produced in the manufacture of carpet. Rather, it is the primary product of the hypothetical industry association's idea-factory. The association's media shop can be seen as a factory that exists solely in order to produce waste.

over arable land and water, and the taxpayers and military personnel who would pay the costs of increased global instability.[114]

Clearly, the excess production of idea-pollution and other results of the phenomenon of externalities—such as the underproduction of investigative journalism, with its positive externalities—are inefficient. This is true of a market failure by definition. But it may be worth noting, once again, that it is not necessarily true that externalities contribute, in all cases, to a decrease in the quantity of truth. One can easily imagine the existence of negative externalities, for example, encouraging gadflies to produce and disseminate true but unwanted—indeed, overall harmful—ideas that they would not have disseminated had they been economically rational and forced to bear the ideas' full costs. Conversely, the existence of positive externalities could disincentivize the production and dissemination of beneficial but false ideas. Aggregate welfare might increase if more people believed that good deeds are inevitably, magically rewarded. If it were possible for the disseminator of this idea to profit from its dissemination by bargaining with the future recipients of believers' good deeds, the disseminator's incentives for promoting the idea would be greatly increased. Because such bargaining is not possible, however, the false but beneficial idea will tend to be promoted at an inefficiently low level.

Finally, transaction costs will play an important role in idea-markets even when such costs are not involved in the generation of externalities. Ideas whose distribution or acceptance involves lower transaction costs will tend to find more adherents than ideas with higher transaction costs. This raises the possibility that in a free, fair contest between a false idea with low transaction costs and a true idea with high ones, the former idea might emerge victorious, contrary to Milton's suggestion.[115] For example, a claim that can be conveyed in an easily digestible sound bite will have a better chance of being disseminated through the mass media than one requiring a lengthy explanation or the questioning of deeply held assumptions.[116]

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114. On the likely economic costs of climate change, see NICHOLAS STERN, THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW (2007).

115. MILTON, *supra* note 14. *See supra* Part II and text associated with *supra* note 14.

116. Psychologists sometimes speak of the broader phenomenon of "cognitive fluency"—the consequences of the relative ease or difficulty of thinking about something. *See, e.g.*, Adam L. Alter & Daniel M. Oppenheimer, *Predicting Short-Term Stock Fluctuations by Using Processing Fluency*, 103 PROC. NAT'L ACAD. SCI. 9369 (2006) (finding that the cognitive fluency of stock names is positively correlated with short-term performance). On the other hand, it is not inconceivable that in some social contexts, the difficulty of understanding an idea adds to its attractiveness, thus contributing to its success in the marketplace of ideas. It is a commonplace that academics sometimes favor novel,

Conversely to what was said regarding externalities, adopting easily understood but false ideas over relatively more challenging but true ones does not necessarily constitute a market failure, though it will by definition decrease the quantity of truth in the economy of ideas.

## V. CONCLUSION: APPLYING THE MARKETPLACE OF IDEAS MODEL

Contemporary economic thought is defined by its commitment to modeling—in particular, to sophisticated mathematical modeling.[117] In the words of a leading history, "[m]odern economic analysis requires that the work be expressed in a mathematical model, yield interesting insights, and, in principle, be empirically testable."[118] Economist Robert Solow goes so far as to say that "modern mainstream economics consists of little else but examples" of the modeling process.[119]

Could the marketplace of ideas model introduced above be used as a basis for testable mathematical modeling? To the extent that the public's beliefs are quantifiable and open to empirical analysis through tools such as public opinion polling, there seems to be no reason why the marketplace of ideas should lie outside the purview of the contemporary economic approach. This Article has suggested a conceptual framework for investigating the relations between incentives and belief—in other words, the economics of belief. It seems plausible that general laws giving rise to predictable behavior within the marketplace of ideas could be identified within this framework. It may be that political campaign consultants have already begun proceeding in this direction.[120]

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complex, paradoxical, obscure, or counterintuitive ideas over simple, boring, or obvious ones. Highly technical or difficult-to-understand ideas may have other built-in structural advantages as well. *See infra* discussion of anti-competitive benefits in text accompanying footnote 138.

117. *See* LANDRETH & COLANDER, *supra* note 49, at 382–83. The mathematics involved go far beyond the two-dimensional geometrical techniques still used in discussing, for example, supply and demand curves in undergraduate introductory textbooks; beyond the use of multivariate calculus emphasized by Paul Samuelson and John Hicks in the 1960s; and into higher-level techniques such as set theory, game theory, linear programming, and topology. *See id.* at 382, 396–98.

118. *Id.* at 382.

119. *Id.* (quoting Robert M. Solow, *How Did Economics Get That Way and What Way Did It Get?*, 126 DAEDALUS 39, 43 (1997)).

120. Consider, for example, the following anecdote from Vice President Al Gore, which suggests that even the title question of this Article—intended not so much to be answered as to suggest the difficulty of making sense of the notion of a marketplace of ideas—may sometimes be susceptible to resolution.

To take perhaps the most basic example, one can imagine contexts in which a supply and demand curve could be applied to the marketplace of ideas, despite the many differences between idea-markets and markets in more traditional goods discussed above. A graph could be created with the number of believers in an idea along its horizontal axis, and along its vertical axis the amount of money spent on some scalable mode of persuasion, such as the purchase of the most cost-effective available television airtime for a commercial. For any given idea in any given community, there should presumably exist an upward-sloping curve representing the supply of believers at a given level of expenditure. The curve will begin at the number of people who believe the idea in the absence of any expenditures on persuasion; from there, the greater the aggregate expenditures, the greater the number of believers in the idea—assuming that the expenditures are effective at all. Likewise, there should exist an upward-sloping demand curve representing the amount of money that those interested in persuading the believers would be willing to spend, in the aggregate, to obtain a given quantity of believers.

The intersection point of the two curves, if they happened to intersect at all, could be used to predict the point at which the buyers of belief would stop spending on persuasion if they were perfectly rational.[121] Once the level of belief reached the point of intersection, the buyers would theoretically decide that it was not worth spending another dollar.

The most interesting aspect of a geometrical supply-demand model for belief might be to consider the differing shapes of the curves for differing ideas. Are there characteristics of certain ideas that make the supply of believers more or less inelastic? One might hope that all other things being equal, it would cost less to marginally increase the number of believers in a truth than it would to increase the number of believers in a contrary falsehood by the same amount. But is this in fact true as a general rule?

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> After a long and detailed review of all the polling information . . . my campaign advisers made a recommendation and prediction that surprised me with its specificity: "If you run this ad at this many 'points' . . . the net result after three weeks will be an increase of 8.5 percent in your lead in the polls." I authorized the plan and was astonished when three weeks later my lead had increased by exactly 8.5 percent.

AL GORE, THE ASSAULT ON REASON 9 (2007). *See also* DONALD P. GREEN & ALAN S. GERBER, GET OUT THE VOTE!: HOW TO INCREASE VOTER TURNOUT (2d ed. 2008) (synthesizing the results of randomized social science studies of the relative effectiveness of various political campaign tactics, though with a focus on voter mobilization rather than persuasion).

121. Though it is difficult to imagine how the buyers could know the shape of the belief-supply curve in advance, perhaps we can imagine them more or less obtaining the benefits of such knowledge through regular polling.

Even if it is the case, perhaps other factors, such as the ease of understanding an idea, play a greater role in shaping the supply curve than the idea's truth-value.

Moving beyond geometry to a model able to incorporate time, we might wonder how a supply curve changes in response to the rate of expenditure. Perhaps a slow enough trickle of expenditures will result in a relatively inelastic supply curve, with spending having little effect on the quantity of belief, while a fast enough rate of expenditures will lead to a more elastic supply curve, as newly persuaded believers discuss the idea among themselves and compound the persuasive effect of any spending.

Going further afield, one could imagine applying the tools of contemporary psychology to the analysis of questions regarding the marketplace of ideas. Controlled, randomized experiments could be performed regarding what incentives are necessary to alter subjects' self-reported beliefs in a laboratory setting. How closely is the difficulty of dislodging a belief correlated with self-reported attitudes about the belief, such as expressions of conviction or doubt? Does persuasion require greater incentives in some subject areas than in others? What are more and less effective methods for increasing or decreasing belief in a given idea?[122]

It might be possible to develop predictively useful macroeconomic models as well. What generalizations can be drawn regarding the large-scale flow of ideas through the public sphere? Are there useful measures of aggregate behavior in idea-markets? What factors contribute to long-term shifts in the beliefs of a society?[123]

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122. The cognitive scientists George Lakoff has summarized recent research into the mechanisms of belief-formation in books such as GEORGE LAKOFF, THE POLITICAL MIND: A COGNITIVE SCIENTIST'S GUIDE TO YOUR BRAIN AND ITS POLITICS (2009).

123. For an intriguing attempt to chart the flow of ideas through the online media, see Media Cloud (Jan. 3, 2012), http://www.mediacloud.org/ (offering automated collection and analysis of online news sources). *See also* Google Insights for Search (Jan. 3, 2012), http://www.google.com/insights/search/ (offering measures of interest in various terms based on search data). Though this Article has concentrated on the conceptual foundations for the study of the marketplace of ideas as an economic phenomenon, the most valuable future contributions to the understanding of the marketplace of ideas may come from testing theoretical models of idea-markets against the public opinion data collected by, among others, social scientists, political consultants, marketing researchers, businesses, and government agencies. Today we have unprecedented quantities of statistical data on the public's beliefs, and contemporary sociologists already do a great deal of work in tracing out possible causal relations between public opinion and statistical data regarding economic and cultural phenomena. *See, e.g.*, RONALD INGLEHART & PIPPA NORRIS, RISING TIDE (2003) (analyzing relationship between modernization and cultural attitudes toward gender, relying

Finally, to conclude with an illustration, the marketplace of ideas model might also be used to make sense of some puzzling developments in the recent history of economic thought. It is widely, though not universally, accepted that most mainstream economists failed to see the financial crisis of 2008 coming as it developed, failed to understand the nature of the crisis as it took place, and in many cases actively promoted and employed the theoretical models that helped make the crisis possible.[124] In Judge Posner's words: "We have learned since September [2008] that the present generation of economists has not figured out how the economy works."[125]

Many of the explanations that have been offered for the failure of the economics profession locate the source of the failure, at least in part, in the current methodological dominance of esoteric mathematical modeling. To take an example from an economist whose writings have held up remarkably well in the wake of the crisis, Paul Krugman's primary answer to the question of how economists got it so wrong rests on the appeal of mathematical elegance.[126] Krugman's prescription follows straightforwardly from his diagnosis: "economists will have to learn to live with messiness."[127]

Intellectual historians have struggled to explain the continual encroachment of mathematical and formal logical models into fields of

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heavily on the World Values Survey). Like economists attempting to predict trends in the housing market based on consumer surveys, however, sociologists tend to be concerned with the public's beliefs primarily as something given, a cause or an effect, not as a phenomenon with its own internal laws.

124. For a typical summary view of the systemic failures in the profession, see Alan Freeman, *The Economists of Tomorrow* 2–3 (MPRA Paper No. 15691, 2009), *available at* http://mpra.ub.uni-muenchen.de/15691. Freeman also lists some of the economists who spoke out and were correct. *Id.* at 4.

125. Richard A. Posner, *How I Became a Keynesian*, NEW REPUBLIC (Sept. 23, 2009, 12:00 AM), http://www.tnr.com/article/how-i-became-keynesian. Judge Posner has also used a market metaphor to explain the reluctance of some economists to revise their views in the wake of the financial crisis. "Market correctives work very slowly in dealing with academic markets. Professors have tenure. They have a lot of graduate students in the pipeline who need to get their Ph.Ds. They have techniques that they know and are comfortable with." John Cassidy, *After the Blowup*, NEW YORKER, Jan. 11, 2010, at 29.

126. "As I see it, the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth." Paul Krugman, *How Did Economists Get It So Wrong?*, NY TIMES MAG., Sept. 2, 2009, at 36, *available at* http://www.nytimes.com/2009/09/06/magazine/06economic-t.html?pagewanted=all. Invocations of the siren-like attractions of theoretical elegance are frequent in recent narratives of the economic profession's crisis. *See, e.g.*, Barry Eichengreen, *The Last Temptation of Risk*, NAT'L INT., May–June 2009, at 8, *available at* http://www-personal.umich.edu/~rudib/lasttemptationofrisk_eichengreen.pdf (discussing "the seductive appeal of elegant theory").

127. Krugman, *supra* note 126.

inquiry in which they seem to decrease, rather than increase, predictive power, especially social sciences such as economics.[128] Why are the "corner stones of many models in finance and macroeconomics . . . maintained *despite* all the contradictory evidence discovered in empirical research"?[129] The methodological dominance of mathematical modeling in mainstream economics is a relatively new phenomenon. As recently as the later nineteenth century, Alfred Marshall—one of the core figures of mainstream neoclassical economics[130]—famously downplayed the need for mathematics in writing on economics, concluding that "a good mathematical theorem dealing with economic hypotheses was very unlikely to be good economics."[131] Many of the most prominent economists of the early and middle twentieth century, such as John Maynard Keynes, Joseph Schumpeter, Milton Friedman, Ronald Coase, Gary Becker, and Friedrich Hayek, also chose largely to forego advanced mathematical modeling in their writings.[132] But as noted above, the dominance of such modeling in the contemporary economics profession is now well-settled.

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128. *See, e.g.*, STEPHEN TOULMIN, RETURN TO REASON (2001). Toulmin was trained as both a scientist and philosopher. He dedicated the majority of his career to arguing against the conquest of human inquiry by the imperial claims of "rationalism," especially its insistence that deductive logic should provide the standard for what a good reason looks like in every field. Toulmin's critique of the mathematical turn in economics appears in a chapter entitled "Economics, or the Physics That Never Was." Roberto Mangabeira Unger's related critiques appear in *Beyond Incompleteness: The Sham Similarity Between Postmarginalist Economics and Physics*, in ROBERTO MANGABEIRA UNGER, FREE TRADE REIMAGINED 51–65 (2007). See also PHILIP MIROWSKI, MORE HEAT THAN LIGHT: ECONOMICS AS SOCIAL PHYSICS: PHYSICS AS NATURE'S ECONOMICS (1989), for critiques that echo Toulmin's.

129. David Colander et al., *The Financial Crisis and the Systemic Failure of Academic Economics* 7–8 (Univ. of Copenhagen Dept. of Econ. Discussion Paper No. 09-03, 2009), *available at* http://ssrn.com/abstract=1355882.

130. LANDRETH & COLANDER, *supra* note 49, at 272.

131. *Id.* at 278. In the same letter, Marshall also laid out a six-step method for economic work, the fifth step being: "Burn the mathematics." *Id.*

132. *See id.* at 400–01, 421, 479, 495–96 (discussing Friedman, Coase, Becker, Keynes, Schumpeter, and Hayek). Keynes himself may offer the best general diagnosis of the failures of the economics profession in the run-up to the recent crisis. His diagnosis of the success of the pristine deductive theories of David Ricardo, despite their relative lack of predictive value, applies just as well to the success in recent decades of various mathematically elaborated myths concerning the rationality of markets:

> The completeness of the Ricardian victory is something of a curiosity and a mystery. It must have been due to a complex of suitabilities in the doctrine to the environment into which it was projected. That it reached conclusions quite different from what the ordinary uninstructed person would expect, added, I suppose, to its intellectual prestige. That its teaching, translated into practice, was austere and often unpalatable, lent it virtue. That it was adapted to carry a vast and consistent logical superstructure, gave it beauty. That it could explain much social injustice and apparent cruelty as an

Why is it that economists find mathematical elegance so seductive? We could simply posit the appeal of mathematical beauty as a given. But the positing of ad hoc preferences should be avoided where possible, if only to reduce the number of assumptions in an explanatory model to a minimum.[133] The marketplace of ideas model can be used to explain economists' choice of predictively weak but theoretically elegant mathematical models based simply on economists' economically rational behavior.[134]

Consider how a self-interested economic idea-producer might approach work in the field of economics. He would like to spend as little effort and as few resources as possible, while receiving as great a benefit as possible in return. As an ideal, he might envision producing, say, one idea with a small investment of effort, and in return receiving publication, tenure, and various reputational benefits. But there is a problem. Insofar as the marketplace of ideas is open to competition from all producers, our idea-producer might invest his effort into the production of an idea only to find it discredited prior to publication, or, perhaps worse, discredited after publication but prior to tenure. Even after tenure, an idea-producer in a competitive market might find the reputational benefits upon which he has justified his life's work stripped from him as the result of a competitor's idea displacing his own in the marketplace of economic ideas.

One way to avoid these dismal fates would be for our idea-producer to protect his intellectual products from competition—in other words, to

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> inevitable incident in the scheme of progress, and the attempt to change such things as likely on the whole to do more harm than good, commended it to authority. That it afforded a measure of justification to the free activities of the individual capitalist, attracted to it the support of the dominant social force behind authority.

JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY 32–33 (1936).

133. "The assumption of stable preferences . . . prevents the analyst from succumbing to the temptation of simply postulating the required shift in preferences to 'explain' all apparent contradictions to his predictions." BECKER, *supra* note 50, at 5.

134. There is arguably a certain perversity in using an economic model or metaphor—such as a market in ideas—in order to explain the failure of economic models. The exercise can be defended, however, on at least two grounds. First, the approach to the marketplace of ideas used here does not depend for its validity on the kind of elegant mathematical economic modeling whose dominance is being questioned. Instead, this section relies on general, non-technical assumptions about self-interested human behavior in order to think through the likely consequences of various institutional structures in the economics profession. To the extent that this section uses one kind of thinking that might be called "economic" to critique another kind, it avoids performative self-contradiction. Second, the application of the marketplace of ideas model to the economics profession can be defended on the ground that internal critiques are often more useful than external ones.

pursue a "strategy of invulnerability."[135] This strategy could involve several elements. The idea-producer would want to use a method of inquiry whose products would be, as much as possible, immune from refutation and thus invulnerable to displacement. No method of inquiry will be perfectly invulnerable, but mathematical methods come as close as possible to the ideal. Once a mathematical theorem is proven, it can never be disproven, and at least some of the most celebrated theoretical models in economics are "too abstract to be confronted with data."[136]

Given the choice between producing ideas with the quality of mathematical certainty or with the quality of contingent empirical support, the self-interested idea-producer has a strong incentive to pursue the former mode, guaranteeing his ideas a relatively greater immunity from obsolescence. He may thus pursue the mathematical mode of production even if the result will bring lesser predictive benefits than a more empirically driven idea would have done—indeed, even if the result might bring positive harm, such as through the creation of a "control illusion" whereby mathematical rigor obscures the limited applicability of risk management tools.[137]

Self-interested idea-producers have additional anti-competitive incentives to mathematicize their work. Mastering even the basic mathematical tools of contemporary economics requires an enormous investment of time and effort that most individuals would find intimidating, tedious, and perhaps beyond their intellectual and material resources. The mathematicization of economics thus creates high barriers to entry for prospective idea-producers.[138] The point here is not to bemoan the relative difficulty of criticizing economic ideas today or to lament the problems for any democracy of ordinary citizens' lives being determined by ideas produced in a discourse they cannot understand. The point is simply to note that the high barriers to entry created by mathematicization give

135. I borrow the phrase from a lecture by Professor Roberto Mangabeira Unger at Harvard Law School in Spring 2010.

136. David Colander et al., *supra* note 129.

137. *See id.* at 6.

138. By contrast, these barriers did not exist to anything near the same degree when the classical economic treatises were written. When Karl Marx set about studying the English economists in 1844, it took him less than a year to produce a first sketch of his critical, competing ideas, the so-called *Economic and Philosophic Manuscripts of 1844*. *See* PETER SINGER, MARX: A VERY SHORT INTRODUCTION 32 (1980). Marx was not required to spend several preparatory years attempting to master multivariable calculus, real analysis, topology, and econometrics.

economists another incentive to pursue the mathematical mode of idea-production.

Would the same high barriers not also shrink the pool of potential idea-consumers, however, and thus reduce an idea-producer's reputational benefits? Upon closer inspection, this may not be true. Economists are often able to offer their conclusions to the public in more or less everyday language, even as the mathematical reasoning behind the conclusion remains publicly inaccessible. The sophisticated mathematical economist thus enjoys the best of both worlds: he is largely protected against competition from other idea-producers who might debunk his ideas, but he is also able to market his ideas to a wide public that is largely incapable of intelligent criticism. The public's inability to understand the priestly conjurings that lie behind the economist's conclusions only enhances his prestige.[139] Considering the significance of the economist's role in contemporary society—as Keynes famously claimed, "the world is ruled by little else" than "[t]he ideas of economists and political philosophers"[140]—one might fairly wonder when, at least since the demise of the medieval Catholic church, a group of intellectuals has established such an effectively self-protecting intellectual structure at the commanding heights of society.

A final anticompetitive benefit of the mathematicization of the economics profession relates to teaching. The reproduction of the profession is a necessary condition for many of the idea-producer's reputational and occupational benefits. This requires, however, that at least some people surmount the high barriers to entry into the profession. What would be the best way to ensure that the new entrants would not spoil the monopoly by introducing ideas that compete with the established professors' products that are already on the market? A straightforward ideological test for applicants might backfire by inviting unwelcome outside scrutiny, and in any case would not work if new entrants lied or changed their minds. The surest approach that self-interested idea-

139. Even as numerically adept a thinker as Nassim Taleb obliquely admits to being made to feel stupid in conversations with economists: "I have nothing against economists: you should let them entertain each others with their theories and elegant mathematics. . . . But beware: they can be plain wrong, yet frame things in a way to make you feel stupid arguing with them." Nassim Nicholas Taleb, *The Fourth Quadrant: A Map of the Limits of Statistics*, EDGE (Sept. 15, 2008), http://www.edge.org/3rd_culture/taleb08_index.html. Or consider the admission that Robert Skidelsky, a former member of the economics department at the University of Warwick and author of the standard biography of Keynes, feels compelled to make in the preface to a work criticizing the contemporary state of economics: "I find mathematics and statistics 'challenging', as they say, and it is too late to improve." SKIDELSKY, *supra* note 92, at x.

140. SKIDELSKY, *supra* note 92, at 28.

producers could take to preserve their monopoly might be to shape new entrants' assumptions without even leaving them aware of the influence. According to at least one account, this is precisely what some economics graduate schools currently do:

> Students in freshwater graduate programs have to learn a huge amount of math very fast. It is not possible to do so if one doesn't set aside all doubts as to the validity of the approach. Once the huge investment has been made it is psychologically difficult to decide that it was wasted. Hence the school gets new disciples by forcing students to follow extremely difficult courses . . . .[141]

Anyone who has attempted to understand a work from a highly unfamiliar discipline will recognize the first step. So many questionable, largely unstated assumptions seem to be made in such quick succession that it soon becomes unfeasible to keep track of all the reservations and confusions one might have had. One must simply accept on faith many of the foundational methodological aspects of the work in order to arrive at the work's intended claims, especially if one operates under severe time constraints—as economics graduate students so often do, from "math camp" onward. If one tries to reflect later about one's initial doubts, they will often seem to have been nothing more than confusions. One has somehow, largely unaware, passed to the inside.

Ludwig Wittgenstein offers what might seem, at first glance, a perplexing aphorism: "This is how philosophers should salute each other: 'Take your time!'"[142] The aphorism becomes clearer when we consider Wittgenstein's thoroughgoing skepticism.[143] To question the foundations of a subject requires taking one's time as one approaches it. The sheer quantity of math that new graduate students in economics are required to learn makes it practically impossible to have a well-developed skepticism toward the way that math is used in the discipline. Once again, the institutional structures of the economics profession minimize challenges to the ideas of producers already on the inside.

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141. *Id.* at 31 (internal citation omitted). On the difficulty of breaking with a method of work after investing a great deal of human capital in it, see also LANDRETH & COLANDER, *supra* note 49, at 10.

142. LUDWIG WITTGENSTEIN, CULTURE AND VALUE 80e (G.H. Von Wright ed., Peter Winch trans., Univ. Of Chi. Press 1980) (1977).

143. Toulmin, a student of Wittgenstein, and Robert Fogelin, one of Wittgenstein's leading interpreters, both note the similarities between Wittgenstein's later philosophy and Pyrrhonian (not Cartesian) skepticism. *See, e.g.*, TOULMIN, *supra* note 128, at 195; ROBERT J. FOGELIN, WITTGENSTEIN 226–34 (2d ed. 1987).

In any case, after the aspiring economic professionals have surmounted the costly barriers to entry and found a spot for themselves within the profession, they will presumably have the same incentives as their predecessors to preserve and strengthen the quasi-monopolistic structure of the marketplace of economic ideas. If we conceive of the profession on the model of a cartel, then defection from the cartel can be strongly disincentivized by blocking the publication of dissenters' papers, thwarting their attempts to secure tenure, and ostracizing them in other, more subtle ways.[144] Adherence to orthodox assumptions can be rewarded by offering publication even to trivial ideas, as long as those ideas are expressed within the terms of the favored research paradigm.

Indeed, another widely recognized advantage of the mathematicization of economics for those on the inside of the profession is the ability of the research paradigm to generate a practically unlimited amount of scholarship without the requirement of much original thought.[145] Not only does this make professional advancement easier for the individual economist, as well as more easily justified in the eyes of outsiders, but also it will tend to drive down the supply of skeptical critiques of existing economic ideas. Young academics must produce some scholarship, and if the mathematicization of banality did not exist as an easier alternative, marginally more scholars would presumably produce more original ideas. Because originality and skepticism so often go hand in hand, as both tend to involve the questioning of basic assumptions, this increased originality would pose heightened risks for the intellectual status quo. Mathematicization, once again, shows itself to be a potential means for achieving anticompetitive ends.

In sum, the marketplace of ideas model can provide, with a minimum of assumptions, a basis for making sense of the otherwise puzzling preference of many economists for elegant models phrased in the language

144. On the importance of publishing to an economist's professional success and the resulting influence of the editors of economics journals over the direction of economic thinking, see LANDRETH & COLANDER, *supra* note 49, at 16. Landreth and Colander suggest, for example, that the "Keynesian" multiplier model—which does not appear in Keynes's writings, but was developed "in excruciating detail" in the 1940s and 1950s—owed some of its popularity to the relative ease with which journal articles could be produced based on it. *See id.* at 421–22.

145. *See, e.g.*, PAUL KRUGMAN, PEDDLING PROSPERITY: ECONOMIC SENSE AND NONSENSE IN THE AGE OF DIMINISHED EXPECTATIONS, at xi (1994) ("[W]ithout doubt there is too much mathematics in the economics journals, because mathematical elaboration is a time-honored way of dressing up a banal idea.").

of high mathematical theory, even if those models appear to represent "the celestial mechanics of a nonexistent world."[146]

Of course, mathematics can expose unclear thinking and has led to insights that are difficult to perceive or even express in natural language models. Mathematics is also indispensable in forming quantitative predictions and policies. The many successful applications of mathematics in economics, however, do not imply that a model that cannot be mathematically formalized in an elegant way should therefore be rejected, or that a model of startling mathematical elegance necessarily has any utility as a predictive tool. Just as monopolies can sometimes serve an economically useful role, but should generally be viewed with great suspicion, so we should at least be wary whenever a single method of investigation—whether sophisticated mathematical modeling, or its rejection—obtains a monopoly position in any field of inquiry.

146. Economist Kenneth Boulding used the phrase to describe neoclassical economics. LANDRETH & COLANDER, *supra* note 49, at 477.