SHOPPING BADLY: COGNITIVE BIASES, COMMUNICATIONS, AND THE FALLACY OF THE MARKETPLACE OF IDEAS

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The model of the "marketplace of ideas" governs critical decisions in American jurisprudence on regulating communications. This theory holds that, over time, we collectively process ideas and information to separate truth from falsehood. State intervention is therefore unnecessary and undesirable, for it may prevent us from discovering inelegant but useful ideas. However, research in cognitive psychology and behavioral economics shows that we operate with significant, persistent perceptual biases that undercut this model's assumptions. The marketplace model errs in describing how we interact with information; accordingly, it cannot reliably assess when regulation is desirable. We should discard the marketplace of ideas as our framework for evaluating communications regulation. Doing so helps us evaluate state intervention in the context of our informational biases and pushes us to analyze our real justifications for protecting communication.

INTRODUCTION: SEARCHING FOR WEAPONS, SEEKING TRUTH

In February 2003, U.S. Secretary of State Colin Powell appeared before the United Nations Security Council to charge that Saddam Hussein possessed chemical and biological weapons and sought to produce fissile nuclear material.[1] Powell stated that Iraq's military was concealing warheads containing biological weapons under palm trees in western

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1. *See, e.g.*, Glenn Kessler & Colum Lynch, *Powell Lays Out Case Against Iraq*, WASH. POST, Feb. 6, 2003, at A1; Peter Slevin, *Data on Efforts to Hide Arms Called 'Strong Suit' of Speech*, WASH. POST, Feb. 6, 2003, at A28.

Iraq.[2] He displayed satellite photographs that appeared to show that Iraq had removed chemical weapons from a facility just before U.N. inspectors arrived in December 2002.[3] There was no doubt that, as Powell stated: "Saddam Hussein has chemical weapons."[4] A month later, President George W. Bush said, "Iraqi operatives continue to hide biological and chemical agents . . . [Hussein] has weapons of mass destruction and he has used weapons of mass destruction."[5] When Hussein refused to disarm, the United States invaded Iraq on March 19, 2003.

Iraq, though, did not have weapons of mass destruction (WMD). A report by the Iraq Survey Group under Charles Duelfer found the country had eliminated such armaments in the 1990s.[6] Indeed, a Senate Intelligence Committee report castigated pre-war information provided by intelligence agencies that supported the conclusion that Iraq had such weapons.[7] David Kay, who led the U.S. effort to locate these arms, resigned after also concluding Iraq destroyed its arms in the 1990s.[8] The United States abandoned searching for Iraq's biological, chemical, and nuclear arms in December 2004, having found none.[9] The facts seem clear: the United States alleged that Iraq possessed weapons of mass destruction, and invaded based, in large measure, on that belief. These reversals received widespread press attention and were a key issue in the 2004 U.S. presidential election.[10]

Nonetheless, in October 2004, half of Americans surveyed believed Iraq had either weapons of mass destruction, or a major program for such weapons.[11] 72 percent of respondents supporting President Bush in the election felt this way, as did 26 percent of Senator John Kerry's support-

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2. Slevin, *supra* note 1.

3. Joby Warrick, *Case Aided by Satellite Images and Intercepted Conversations*, WASH. POST, Feb. 6, 2003, at A28.

4. *Id.*

5. *Excerpts from Bush's News Conference on Iraq and Likelihood of War*, N.Y. TIMES, Mar. 7, 2003, at A12.

6. Douglas Jehl, *U.S. Report Finds Iraqis Eliminated Illicit Arms in 90's*, N.Y. TIMES, Oct. 7, 2004, at A1.

7. Douglas Jehl, *Senators Assail C.I.A. Judgments on Iraq's Arms as Deeply Flawed*, N.Y. TIMES, July 10, 2004, at A1.

8. Walter Pincus & Dana Milbank, *Kay Cites Evidence of Iraq Disarming*, WASH. POST, Jan. 28, 2004, at A1.

9. Dafna Linzer, *Search for Banned Arms in Iraq Ended Last Month*, WASH. POST, Jan. 12, 2005, at A1.

10. *See, e.g.*, Dan Balz & Jim VandeHei, *Candidates Debut Closing Themes*, WASH. POST, Oct. 15, 2004, at A1.

11. STEVEN KULL, PROGRAM ON INT'L POLICY ATTITUDES, AMERICANS AND IRAQ ON THE EVE OF THE PRESIDENTIAL ELECTION 6 (2004), http://www.pipa.org/OnlineReports/Iraq/IraqPresElect_Oct04/ IraqPresElect_Oct04_rpt.pdf.

ers.[12] Furthermore, 39 percent believed the Duelfer report found Iraq had either actual weapons or a major weapons program—precisely the opposite of the report's actual conclusion.[13]

The issue here is not whether the Iraq conflict was correct or justified. Instead, it is the tenacious persistence of the WMD theory in the face of overwhelming disconfirming evidence. This is the opposite of what the theory of the marketplace of ideas, the dominant paradigm for U.S. communications regulation, predicts will occur. This Enlightenment model of the "marketplace" claims that as ideas compete for allegiance, we evaluate and analyze data to arrive, in time, at the truth. Since this process will naturally filter out falsity, governmental intervention is unnecessary. In fact, regulation may prevent accurate ideas from reaching us. However, research in cognitive psychology and behavioral economics shows that humans operate with significant, persistent perceptual biases that skew our interactions with information. These biases undercut the assumption that people reliably sift data to find truth. This article argues that the United States should discard the marketplace of ideas as our framework for evaluating communications regulation. Doing so would help us weigh our real justifications for protecting communication and improve our ability to shape our information environment when needed. As the Iraqi weapons example demonstrates, the faith that truth will always prevail is unfounded, and the marketplace of ideas must be discarded as a regulatory model.

This Article has three goals. First, it shows that the marketplace of ideas model underlies key decisions in communications regulation. Second, it reviews scientific research on how humans display important biases in selecting, processing, and using information. Third, it shows the incompatibility between this research and the marketplace model and argues that the model should be rejected as a way to evaluate regulation. Finally, it suggests some initial steps towards more realistic analysis of communications regulation.

I. THE MARKETPLACE OF IDEAS: ITS HISTORY, DEFINITION, CHARACTERISTICS, AND ASSUMPTIONS

The marketplace of ideas grew from an Enlightenment belief in progress: in time, people would sort truth from falsehood, making government regulation of the information environment unnecessary and even pernicious. Beginning with John Milton and John Stuart Mill, the

12. *Id.*
13. *Id.* at 7.

model's belief in the power of truth rests on critical assumptions and embodies core beliefs that influence how we regulate communication today.

The marketplace of ideas model emerged from writings of Europe's Enlightenment thinkers such as John Milton and John Stuart Mill. Milton outlined the concept in *Areopagitica*, a protest against the English Parliament's order requiring material to be licensed before printing.[14] Milton quoted Dionysius Alexandrinus, who, when accused of reading heretical works, received a divine vision saying, "Read any books whatever come to thy hands, for thou art sufficient both to judge aright and to examine each matter."[15] Milton also adopted the argument that "all opinions, yea errors, known, read, and collated, are of main service and assistance toward the speedy attainment of what is truest."[16] For Milton, banning injurious ideas only inhibited people from discovering their falsity. "[T]hough 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 misdoubt her strength."[17]

Mill followed Milton's approach in *On Liberty*, when he asserted that governmental limits on information were unacceptable: "I deny the right of the people to exercise . . . coercion, either by themselves or by their government. The power itself is illegitimate."[18] Moreover, people could not know definitely which ideas were true, given the record of allegiance to concepts that later proved false.[19] To form judgments, people must assess all competing or adverse claims.[20] For Mill, truth did not always triumph immediately, but inevitably succeeded in the long run.[21] To Mill, unfettered discussion of and conflict between ideas discovered truth, developed each individual's mental abilities, helped people understand and defend their beliefs, and filled gaps in correct ideas.[22]

Thus, the marketplace of ideas model began as an analogy, illustrating why governments should not enact laws limiting public discourse. Ideas and information, this model posits, operate like goods in a vibrant bazaar—consumers examine, compare, and ultimately choose among them, seeking the best value for the currency of their allegiance. Over

14. JOHN MILTON, AREOPAGITICA (1929).

15. *Id.* at 19.

16. *Id.* at 20.

17. *Id.* at 59.

18. JOHN STUART MILL, ON LIBERTY 87 (2003).

19. *Id.* at 88 ("Those who desire to suppress it, of course deny its truth; but they are not infallible . . . . To refuse a hearing to an opinion, because they are sure that it is false, is to assume that their certainty is the same thing as absolute certainty.").

20. *Id.* at 90–91.

21. *Id.* at 97–98.

22. *See* Stanley Ingber, *The Marketplace of Ideas: A Legitimizing Myth*, 1984 DUKE L.J. 1, 6.

time, evolution occurs as less useful or accurate ideas are discarded and better ones more widely adopted. Thus, "better ideas have some natural advantage in the deliberative process," making regulatory intervention largely unnecessary.[23] The marketplace of ideas acts as a testing ground. In the end, false or less effective ideas may remain, but we know their true character.

This theory claims to describe how people analyze information. It also advocates a laissez-faire approach to regulating information. Descriptively, data enters our discourse, individuals weigh it, and a collective judgment emerges. People vote with their minds: better ideas are adopted, while less accurate ideas languish. The market treats ideas like products, where the invisible hand of individual decisions causes truthful information to succeed.

This theory inherently advocates against communication regulation. Limiting communication—even of seemingly false or harmful data—hurts us by preventing us from evaluating potentially useful information. The marketplace model believes "if government can be kept away from 'ideas,' the self-operating and self-correcting force of 'full and free discussion' will go about its eternal task of keeping us from 'embracing what is cheap and false' to the end that victory will go to the doctrine which is 'true to our genius.'"[24] Since market competition defines and eliminates unfit materials over time, regulation is unnecessary, and undesirable.

Thus, the marketplace of ideas model has four core beliefs. First, people evaluate information such that, over time, we distinguish truth from falsehood. Second, having more information is better, since it increases our choices and reduces the risk that useful data will not be available. Third, governmental limits on communication are inherently suspect because they restrict the flow of competitive products into the marketplace and undercut valuable self-expression. Finally, state regulation to excise "bad" information is unnecessary.

In addition, the model rests on three key assumptions. First, ideas and information actually compete, producing winners and losers. Consumers in intellectual markets, as in traditional ones, discover which offerings are of greater and lesser verity. Second, data is winnowed—over time, the pool of competitors for truth on an issue is reduced, as we discard less fit candidates. Third, consumers—all of us—make the model

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23. Frederick Schauer, *The Political Incidence of the Free Speech Principle*, 64 U. COLO. L. REV. 935, 952 (1993).

24. Jerome A. Barron, *Access to the Press—A New First Amendment Right*, 80 HARV. L. REV. 1641, 1642–43 (1967) (quoting Dennis v. United States, 341 U.S. 494, 584 (1951) (Douglas, J., dissenting)).

work. We behave in the intellectual shopping center as we do in physical ones. However, if consumers don't seek information best fitting their needs—or if obstacles such as cognitive biases prevent them from doing so—the model breaks down.

II. EFFECT ON AMERICAN LEGAL REGULATION OF COMMUNICATION

The marketplace of ideas emerged in American legal reasoning in Justice Oliver Wendell Holmes's dissent in *Abrams v. United States*.[25] It rapidly expanded from an analogy to the guiding principle in questions of regulating communication. The marketplace's tenets dictated what controls government and industry could impose on the flow of information, and the justifications required to do so. Holmes's argument convinced subsequent courts that "constitutional status should be given to a free market theory in the realm of ideas."[26] The model's faith in human reasoning and suspicion of regulation permeate key communications cases. The marketplace of ideas checks communication regulations when those regulations impact five critical areas by: (1) dictating who can speak, (2) influencing what they cannot say, (3) controlling what they can say in a commercial context, (4) restricting what they say in political discourse, or (5) governing different media with different standards.

A. Dictating Who Can Speak

Information contends with scarcity. The channels through which we receive communications are limited. These constraints may be physical (e.g., limited spectrum bandwidth for broadcast[27]), economic (e.g., costs of publishing a newspaper[28]), or legal (e.g., the U.S. Postal Service's monopoly over routing letters[29]). Information consumers themselves create a second type of scarcity because we possess a limited amount of intellectual attention and interest.[30] The marketplace model at times encourages increased government regulation to ensure access, while limiting governmental controls over content.

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25. Abrams v. United States, 250 U.S. 616, 624 (1919).
26. Barron, *supra* note 24, at 1643.
27. *See* FCC v. League of Women Voters, 468 U.S. 364, 377 (1984).
28. *See, e.g.*, Miami Herald Publ'g Co. v. Tornillo, 418 U.S. 241 (1974).
29. *See* 39 C.F.R. § 310.2(a) (2005) (defining unlawful carriage of letters).
30. *See* J.M. Balkin, *Some Realism About Pluralism: Legal Realist Approaches to the First Amendment*, 1990 DUKE L.J. 375, 408 (noting that "[c]ommunication is scarce also in the sense that there is only so much available audience time to go around").

1. Regulating Access

A key facet of communications regulation is deciding how to allocate access to limited information channels. Government regulation plays a role in each allocation. Markets distribute scarce resources such as printing presses and Internet routers through money, as only those who can afford them gain access, and with the assistance of state enforcement of contractual obligations and property rights.[31] Quasi-markets use methods such as cellular phone spectrum auctions to combine monetary allocation, express government action by the auctioning agency, and less visible controls that prevent others from using the auctioned resource.[32] Explicit licensing, such as for broadcast television, uses the government and not the market to supervise licensees' conduct and to decide on renewal. Allocation always involves some degree of state action.

There are two primary approaches critics take to government intervention dealing with scarcity. The first views regulation as detrimental; for example, when government dictates who can communicate, it risks creating officially mandated orthodoxy and suppressing vigorous discussion through favoritism. This position tends to reject governmental controls over communication.[33] The second theory views regulation as necessary at times, since private domination of the information marketplace is potentially harmful to consumers—powerful commercial interests may distort or bias the data they receive. This perspective accords with antitrust regulation of markets generally. While these perspectives are in tension, the marketplace of ideas is compatible with, and is invoked to support, each of them in access questions.

For example, in radio and broadcast television the government may intervene to require access for certain ideas, if not for certain suppliers. The Supreme Court upheld the Federal Communications Commission's broadcast "fairness doctrine" as constitutional mainly because of the marketplace of ideas. The "fairness doctrine" required that broadcasters

31. *See, e.g.*, CASS R. SUNSTEIN, DEMOCRACY AND THE PROBLEM OF FREE SPEECH (1993).

32. *See, e.g.*, EVAN KWEREL & WALT STRACK, FED. COMMC'N COMM'N, AUCTIONING SPECTRUM RIGHTS (2001), http://wireless.fcc.gov/auctions/data/papersAndStudies/aucspec.pdf (arguing the FCC's auction-based approach for assigning spectrum is economically efficient).

33. Of course, like any market, the marketplace of ideas rests on the establishment and enforcement of laws such as contracts, trespass, criminal prohibitions against theft, and so forth. *See generally* Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 815–17 (1935); Robert L. Hale, *Coercion and Distribution in a Supposedly Noncoercive State*, 38 POL. SCI. Q. 470 (1923).

(1) present and discuss issues of public interest, and (2) provide fair coverage to each side.[34] The Court found the FCC's administrative doctrine was authorized by Congress[35] and did not abridge the constitutional guarantees of freedom of speech and the press. The Court stated that that the government could regulate broadcasters with the fairness doctrine to ensure important views were presented in the marketplace.[36] The decision declared that "the purpose of the First Amendment [is] to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail, rather than to countenance monopolization of that market, whether it be by the Government itself or a private licensee."[37] In a footnote, the Court cited Mill's *On Liberty* to emphasize the need to have ideas presented by advocates who believe them and advance them vigorously.[38]

The government also regulates communication by public allocation of scarce spectrum rights without which broadcast would be lost in a cacophony. Transmitters would drown each other out through signal interference. Thus, since the state effectively creates the broadcast marketplace, it can intervene with regulation to mitigate perceived defects in the products supplied, provided it acts in the public interest. Since the government already sets access rules for this marketplace, it made sense to the Court to permit the FCC to counterbalance the limited number of suppliers by ensuring that each source contributed reasonably diverse content. The right to use valuable bandwidth creates a concomitant duty to air perspectives that might otherwise not receive coverage; accordingly, "the absolute freedom to advocate one's own positions without also presenting opposing viewpoints—a freedom enjoyed, for example, by newspaper publishers and soapbox orators—is denied to broadcasters." [39] For broadcasting, the marketplace model condones more active government regulation.

2. Regulating Content

By contrast, in print media the marketplace model greatly limits government's ability to regulate access. Florida, for example, once required that any candidate for elected office attacked in a newspaper arti-

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34. Red Lion Broad. Co. v. FCC, 395 U.S. 367, 369 (1969); *see also id.* at 382.

35. *Id.* at 379–86.

36. *Id.* at 390.

37. *Id.*

38. *Id.* at 392 n.18 (citing JOHN STUART MILL, ON LIBERTY 32 (R. McCallum ed., 1947)).

39. FCC v. League of Women Voters, 468 U.S. 364, 377, 380 (1984) (stating that "given spectrum scarcity, those who are granted a license to broadcast must serve in a sense as fiduciaries for the public").

cle receive an opportunity to respond in the same paper, with equal prominence and length.[40] The *Miami Herald* printed an editorial criticizing Pat Tornillo, a candidate for the state's House of Representatives. When Tornillo demanded space to respond, the paper refused, arguing the "right-to-reply" statute violated its First Amendment rights.[41] The Supreme Court agreed, rejecting the Florida Supreme Court's conclusion that the statute enhanced free speech by increasing information available to the public.[42] The opinion struck down the "right-of-reply" statute as "governmental coercion" forbidden by the First Amendment.[43] The Court concluded that the statute would actually decrease speech on vital public issues, such as politics, by causing editors to avoid topics that risked invoking these requirements.[44] Thus, regulation would impede the marketplace of ideas.

As in its "fairness doctrine" decision, the Court considered the effects of governmental requirements of access to scarce channels of communication, but arrived at the opposite conclusion. While the tension between the "fairness doctrine" decision and the "right-to-reply" decision is well-known,[45] the Court saw both decisions as aligned with the basic tenets of the marketplace of ideas. Critically, the visibility of regulation differed in the cases. In broadcast, intervention seemed unavoidable for the medium's survival. Regulation was obvious and apparently natural. For print media, though, regulation seemed intrusive: the media market functioned unaltered. Thus, difference in medium became difference in kind for regulatory purposes.

In contrast to the hard line against regulation in print media, the courts have applied anti-trust laws to mitigate private controls over information market access. For example, in *Associated Press v. United States*, the federal government sought to enjoin two practices of the Associated Press (AP) as a confederation of newspapers. First, the government wanted the AP to stop prohibiting members from sharing news with non-members. Second, the government wanted the AP to prevent members from blocking admissions of their competitors to the organization.[46] The Supreme Court upheld summary judgment for the govern-

40. *See* Miami Herald Publ'g Co. v. Tornillo, 418 U.S. 241, 244 n.2 (1974) (quoting the Florida statute).

41. *Id.* at 243–44.

42. *Id.* at 245 (citing the Florida Supreme Court decision, Tornillo v. Miami Herald Publ'g Co., 287 So. 2d 78 (Fla. 1973)).

43. *Id.* at 254.

44. *Id.* at 257.

45. *See, e.g.*, SUNSTEIN, *supra* note 31, at 108.

46. Associated Press v. United States, 326 U.S. 1, 4–5 (1945).

ment on the grounds that the AP was acting anti-competitively.[47] The AP argued that applying "the Sherman Act to this association of publishers constitutes an abridgment of the freedom of the press guaranteed by the First Amendment."[48] In response, the Court stated that the "Amendment rests on the assumption that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public."[49] Anti-trust action was necessary here to protect the "free flow of ideas" from efforts by private entities to impede that stream of information.[50] In *Associated Press*, the Court used the marketplace of ideas conception not as a shield preventing government action, but as a sword enabling it.

The government has also attempted to prevent completely unfettered access to the marketplace of ideas. The Federal Communications Commission sends armed U.S. marshals to enforce its controls over unlicensed broadcasters on FM radio.[51] Beyond broadcast, though, these attempts have generally met with judicial suspicion. For example, the Supreme Court rejected attempts by the federal government to prevent certain speakers whom it funds from entering the marketplace, including public radio editorialists[52] and government employees[53].

Efforts to limit access to communication via the postal mail have also been rejected. For example, the Supreme Court overturned a federal statute blocking delivery of Communist political propaganda unless the recipient specifically requested it, stating that the law was "at war with the 'uninhibited, robust, and wide-open' debate and discussion that are contemplated by the First Amendment."[54] A ban on mailing unsolicited contraceptive ads met the same fate.[55]

The Supreme Court also rebuffed a state college's attempt to deny access to physical media, such as the campus newspaper and bulletin boards, to a left-wing student group whose "aims and philosophy . . . are

47. *Id.* at 17–18.

48. *Id.* at 19.

49. *Id.* at 19–20.

50. *Id.* at 20.

51. *See* James Sullivan, *The Bay Area Is the Capital of Pirate Radio Stations—Low-Power, Unlicensed Stops on the FM Dial—and Now They're Leading the Rebellion Against Corporate Giants of the Airwaves, Lawyers and Raids by the FCC*, S.F. CHRON., Oct. 21, 2003, at D1 (describing a raid on San Francisco's unlicensed Liberation Radio).

52. FCC v. League of Women Voters, 468 U.S. 364, 398–99 (1984).

53. United States v. Nat'l Treasury Employees Union, 513 U.S. 454, 457 (1995).

54. Lamont v. Postmaster Gen., 381 U.S. 301, 307 (1965) (quoting N.Y. Times Co. v. Sullivan, 376 U.S. 254, 270 (1964)).

55. Bolger v. Youngs Drug Prod. Corp., 463 U.S. 60, 61 (1983).

contrary to the approved policy" of the school.[56] The Court considered the effect of this decision on the students, stating that if:

> an organization is to remain a viable entity in a campus community in which new students enter on a regular basis, it must possess the means of communicating with these students . . . . [Its] ability to participate in the intellectual give and take of campus debate . . . is limited by denial of access to the customary media for communicating. . . .[57]

The Court reset the standard in favor of open communication and against regulations limiting access. The Court held that in considering the group's application for official recognition, the burden rested upon the college to justify any rejection, not upon the students to buttress their case.[58] Thus, the default rule favored access to ensure the "widest latitude for free expression and debate" on campus.[59]

In sum, the marketplace of ideas model favors restraint on government efforts to limit access but may also require government intervention to ensure access. Intervention is permitted only when it seems necessarily structural in nature, such as in anti-trust situations, or where perceived as necessary to allow a medium to exist, as with broadcast.

B. Excluding Information: Content Control

At times, government seeks to eliminate information from the marketplace, not bolster its provision through enhanced access. Here, the state blocks or filters content. Sending spam e-mail messages in violation of state laws can result in nine years in prison.[60] Showing digitally-obscured nudity on broadcast television can incur millions of dollars in fines.[61] These efforts are in tension with a basic principle of the marketplace of ideas that more information is better, since consumers have more options and less risk of being denied valuable choices.

As with regulation that denies access to information channels, U.S. courts view content exclusion with skepticism. Moreover, even when allowing government to filter, decisions frame their reasoning to elide

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56. Healy v. James, 408 U.S. 169, 174 n.4 (1972).
57. *Id.* at 181.
58. *Id.* at 184.
59. *Id.* at 171.
60. Linda Rosencrance, *Spammer Sentenced to Nine Years in Jail: Case Results in the Nation's First-Ever Felony Spam Conviction*, PC WORLD, Nov. 5, 2004, http://www.pcworld.com/news/article/0,aid,118493,00.asp.
61. Frank Ahrens & Lisa de Moraes, *FCC Proposes Indecency Fine Against Fox TV: Agency Continues Its Crackdown on Airwaves*, WASH. POST, Oct. 13, 2004, at A1.

the tension between such limits and the marketplace model's framework. This section explores how government's regulation of our intellectual diet is squared with the marketplace of ideas. The marketplace model has been used to allow regulation of communication of low-value ideas and, similarly, of information viewed as dangerously useful. In most other cases, however, the marketplace model has been used to strike down regulation of content.

1. Low-Value Information

The government may ban completely certain types of information from the market's discourse. Decisions justifying this filtering invoke, defensively, the market model. Content can be excluded because it is not an "essential part of any exposition of ideas," and is "of such slight social value as a step to truth that any benefit that may be derived from [it] is clearly outweighed by the social interest in order and morality."[62] The logic is tautological—information has little value because courts state this is so. Thus, obscenity,[63] defamation,[64] "fighting words,"[65] threats,[66] provocation of hostile audiences,[67] and immediate incitements to unlawful behavior[68] may be blocked from the market. In excluding this information, judges often ignore persuasive evidence of actual market demand. Obscenity, for example, has such low value that the government may block it entirely.[69] Contrast this finding with consumer market demand for pornography, which generates revenue of several billion dollars annually.[70] Despite obvious demand, what consumers value may not be considered valuable legally.[71]

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62. Chaplinsky v. New Hampshire, 315 U.S. 568, 572 (1942).

63. Roth v. United States, 354 U.S. 476, 484–85 (1973) (describing "obscenity as utterly without redeeming social importance").

64. *See* N.Y. Times Co. v. Sullivan, 376 U.S. 254, 279–80 (1964) (explaining that a public official may recover damages for a defamatory falsehood, but only if the statement including the falsehood was made with actual malice).

65. *Chaplinsky*, 315 U.S. at 573.

66. Watts v. United States, 394 U.S. 705, 707–08 (1969).

67. Feiner v. New York, 340 U.S. 315, 320–21 (1951).

68. Brandenburg v. Ohio, 395 U.S. 444, 449 n.4 (1969).

69. Roth v. United States, 354 U.S. 476, 485 (1957); *see also* Miller v. California, 413 U.S. 15, 18 n.2 (1973) (defining "obscene material" and "pornography").

70. *See, e.g.*, Dan Ackman, *How Big Is Porn?*, FORBES.COM, May 25, 2001, http://www.forbes.com/2001/05/25/0524porn.html (estimating the pornography industry's revenues at between $2.9 and 3.9 billion dollars per year).

71. This example holds only if one accepts the link between intellectual and product markets. For alternative approaches, see generally CASS R. SUNSTEIN, *supra* note 31; NEIL POSTMAN, AMUSING OURSELVES TO DEATH (1985).

The Supreme Court's analysis of these unprotected zones hews in two ways to the marketplace of ideas model. First, the content's value is described as inherently low. Lies (defamation) or obscenity contribute little to discourse, particularly high-minded discussion on public policy. However, the marketplace model's assumptions still exert force. For example, in defamation suits, the Supreme Court stated that the "[f]irst remedy of any victim of defamation is self-help—using available opportunities to contradict the lie or correct the error and thereby to minimize its adverse impact on reputation."[72] While the opinion noted that "the truth rarely catches up with a lie," the Court made clear that laws governing libel and defamation are partly cabined by the opportunity to counteract these harms through competition in the marketplace of ideas.[73] This partly explains why public figures face a higher standard: they are presumed to have greater marketplace access and thus need less state protection.[74]

Second, low-value content is treated as only quasi-information. Fighting words and threats are only slightly removed from action, and tend to produce physical rather than psychological results. Similarly, obscenity is defined as causing a reaction "in the loins," not in the mind.[75] This material therefore is not truly part of the idea marketplace. Thus, even decisions allowing the state to exclude content demonstrate instinctive adherence to the marketplace metaphor, and define these low-value zones in response to its dictates.

2. High-Value Information

The marketplace of ideas theory is also used to protect information viewed as valuable in discourse on issues such as politics or health. The government may not, for example, prohibit unsolicited mailings of contraceptive advertisements, since these offer "truthful information relevant to important social issues such as family planning and the prevention of venereal disease."[76] High-value information is generally protected against state attempts to filter it, even when courts weigh other important interests. For example, the Supreme Court protected disclosure of truthful, lawfully-acquired information about the identity of rape victims, even given countervailing concerns about privacy and victims' willing-

72. Gertz v. Robert Welch, Inc., 418 U.S. 323, 344 (1974).

73. *Id.* at 344 n.9.

74. *See id.* at 344–46.

75. *See* Miller v. California, 413 U.S. 15, 18 n.2 (1973) (noting that obscene material, which may constitutionally be proscribed, must treat sex in a repugnant or offensive manner).

76. Bolger v. Youngs Drug Prod. Corp., 463 U.S. 60, 69 (1983).

ness to report crimes.[77] The Court also permitted a radio station to broadcast a recorded cellular phone conversation between union officials during a labor dispute, even though the recording (by a third party) violated wiretap laws.[78]

Even though government is empowered to deny a broadcasting license, the market model checks most attempts to use licensing to block high-value information from being broadcast. Thus, the Supreme Court struck down federal legislation that prevented any non-commercial educational broadcaster from issuing its own editorials if the broadcaster received a grant from the Corporation for Public Broadcasting.[79] While reiterating the government's ability to exclude non-licensed entities from broadcasting at all, the Court rejected exclusion of political content provided by these broadcasters.[80] The Court noted that the ban targeted particularly important speech, editorial opinion, which enjoys the strongest First Amendment protection.[81] The marketplace of ideas theory underlies the Court's reasoning. "Freedom of discussion, if it would fulfill its historic function in this nation, must embrace all issues about which information is needed or appropriate to enable the members of society to cope with the exigencies of their period."[82] Since the law sought "to limit discussion of controversial topics and thus to shape the agenda for public debate," the Court held this was an "impermissible attempt 'to allow a government [to] control . . . the search for political truth.'"[83]

Courts have also recognized that high-value information can be dangerous. Consider a journal that wants to publish detailed technical information about techniques to grow smallpox rapidly in a lab. The information has obvious relevance to debates about proliferation of weapons of mass destruction, bio-terrorism, and the role of biological toxins in military policy. However, it could also aid states, and militant groups, seeking shortcuts to develop these weapons. In *United States v. Progressive*, a court faced a similar dilemma. *The Progressive* magazine

77. *See* Fla. Star v. B.J.F., 491 U.S. 524, 536–41 (1989); Cox Broad. Corp. v. Cohn, 420 U.S. 469, 495 (1975) (noting that "freedom of the press to publish that information appears to us to be of critical importance to our type of government in which the citizenry is the final judge of the proper conduct of public business" and stating that "publication of truthful information available on the public record contains none of the indicia of those limited categories of expression, such as 'fighting' words, which 'are no essential part of any exposition of ideas'") (quoting Chaplinsky v. New Hampshire, 315 U.S. 568, 572 (1942)).

78. *See* Bartnicki v. Vopper, 532 U.S. 514, 535 (2001).

79. FCC v. League of Women Voters, 468 U.S. 364, 366, 372–73 (1984).

80. *Id.* at 376, 395.

81. *Id.* at 381.

82. *Id.* at 382 (quoting Thornhill v. Alabama, 310 U.S. 88, 102 (1940)).

83. *Id.* at 384 (quoting Consol. Edison Co. of N.Y. v. Pub. Serv. Comm'n, 447 U.S. 530, 538 (1980)).

planned to publish a detailed article on how the United States produced hydrogen bombs.[84] The magazine employed the data as part of its argument against developing such weapons.[85] The federal government sought to prevent publication, arguing that the article's data was not otherwise publicly available, and that its compilation and analysis threatened national security.[86] Though the information's value was high, the court found the article's value in the marketplace of ideas to be low. In issuing a preliminary injunction preventing publication, the court stated it saw "no plausible reason why the public needs to know the technical details about hydrogen bomb construction to carry on an informed debate on this issue."[87]

The court found that the "piece could accelerate the membership of a candidate nation in the thermonuclear club,"[88] and issued a preliminary injunction preventing publication. Before the magazine could complete its appeal, most of the information became public.[89] *The Progressive* eventually published the article in its November 1979 issue, with little visible effect on the non-proliferation debate or hydrogen weapon production in other countries.[90] *Progressive* delineates where the government can block content from the marketplace to protect U.S. national security.[91] This zone is defined, though, not based on the low value of information, but on potent value—a necessary move, perhaps, but one in tension with the market model.

The marketplace theory's demands pushed the court to define, awkwardly, the information as low value in the marketplace of ideas, but high value in the market for weapons, and caused the decision to contra-

84. United States v. Progressive, Inc., 467 F. Supp. 990, 993–95 (W.D. Wis. 1979), *mandamus denied sub nom.*, Morland v. Sprecher, 443 U.S. 709, 711 (1979), *dismissed*, 610 F.2d 819 (7th Cir. 1979) (unpublished table decision).

85. *Id.* at 995–96.

86. *Id.* at 993.

87. *Id.* at 994.

88. *Id.*

89. *See* Richard L. Williamson, Jr., *Law and the H-Bomb: Strengthening the Nonproliferation Regime To Impede Advanced Proliferation*, 28 CORNELL INT'L L.J. 71, 135 n.243 (1995) (describing the appeals process, which resulted in the case being dismissed by the Seventh Circuit Court of Appeals after most of the article's information became public through other means).

90. *Id.*

91. *Compare* Near v. Minnesota, 283 U.S. 697, 716 (1931) (citing ZECHARIAH CHAFEE, JR., FREEDOM OF SPEECH 10 (1920)) (stating that in a time of war, government could "prevent actual obstruction to its recruiting service or the publication of the sailing dates of transports or the number and location of troops"), *and Progressive, Inc.*, 467 F. Supp. at 995–96, *with* N.Y. Times Co. v. United States, 403 U.S. 713, 714 (1971) (per curiam) (dismissing the government's claim, which sought to enjoin the New York Times and the Washington Post from publishing contents of a classified study entitled "History of U.S. Decision-Making Process on Viet Nam Policy").

vene a model it sought to preserve. The marketplace of ideas framework, which favors unfettered communication, means that bans on information must sidestep the model's dictates by defining data as worthless, as not truly information, or as too valuable in other markets to distribute.

C. Engaging in Commerce

Courts have struggled in determining how to apply the assumptions and dictates of the marketplace of ideas to commercial information. This difficulty occurs because there are two ways to approach the regulation of commercially useful data. First, one could emphasize the *ideas* in the marketplace of ideas. Advertising, product claims, and sales pitches seem only tangentially related to high-minded discourse. This perspective pushes commercial information to the periphery of the protection of the marketplace of ideas theory since these communications are less relevant to intellectual discourse or public policy decisions. Thus, this approach emphasizes content, and is less protective of commercial information and more tolerant of state intervention.

Second, one might focus on the *market*. This approach treats commercial speech like political, religious, and other important communications. Consumers have strong incentives to evaluate data before making purchases, particularly since they internalize most benefits or costs from these decisions. A consumer who makes a wrong decision, or detects bad information, can choose different products or services in the future and can share feedback with other consumers. This penalizes entities making inaccurate claims. This approach reinforces the market model's skepticism towards regulation. Consumers can detect bad information, and regulation risks blocking useful data from the market.

The choice between these two theories dictates outcomes in lawsuits. If a court focuses on the ideas in commercial speech, it is less likely to prevent regulation based on the marketplace of ideas theory. In contrast, if a court focuses on the market principle in the theory, it will strike down the regulation. Consider ads for athletic shoes. Individuals choose sneakers based on seemingly neutral information: price, size, brand, and purpose. But other factors may also influence a purchase, such as whether the shoes were made in America, or whether the soles use recycled rubber. Commercial facts are thus intimately connected to theoretical debates about globalization and global warming. In *Kasky v. Nike*, the California Supreme Court struggled with the idea-information interrelation in commercial speech.[92] Nike's image as the leading pur-

92. Kasky v. Nike, Inc., 45 P.3d 243 (Ca. 2002).

veyor of athletic shoes had been tarnished by accusations that it produced footwear in factories with abusive labor practices.[93] Stung, the company defended its behavior through its web site,[94] press releases, and newspaper advertisements.[95] Critics took umbrage, contending Nike's statements were not truthful, and labor activist Mark Kasky sued Nike under California's unfair competition and false advertising laws.[96] In response, Nike argued that its statements were protected by the First Amendment.[97] California's Supreme Court held that "when a corporation, to maintain and increase its sales and profits, makes public statements defending labor practices and working conditions at factories where its products are made, those public statements are commercial speech that may be regulated to prevent consumer deception."[98] Rather than litigate, Nike settled, making a $1.5 million payment to the Fair Labor Association, which monitors corporate labor practices.[99]

Commercial speech presents thorny issues for regulators, since oft-dry corporate data can be vital to fervently contested policy questions. Theoretical discussions about unions, child labor, and outsourcing have little relevance or effect when disconnected from real situations, where hard choices require trade-offs.[100] What Nike says not only affects shoe sales, but also produces real consequences in public debates over proper labor protections, imperialism versus universal values, and free versus fair trade. At the same time, Nike is a private commercial actor—information about corporate decisions influences whether runners buy its sneakers and shareholders buy its stock. The marketplace model struggles to evaluate the proper approach to commercial speech because this information is both high-minded and mundane; it helps to sell products and to influence policy at the same time.

Virginia State Board of Pharmacy v. Virginia Citizens' Council provides another example. In that case, drug consumers challenged a

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93. *See, e.g.*, Clean Clothes Campaign, http://www.cleanclothes.org/companies/nike.htm (last visited Feb. 21, 2006); *see also* Steven Greenhouse, *Banishing the Dickensian Factor*, N.Y. TIMES, July 9, 2000, § 4, at 5.

94. *See, e.g.*, Nikebiz.com, Responsibility: Workers & Factories: Code of Conduct, http://www.nike.com/nikebiz/nikebiz.jhtml?page=25&cat=code (last visited Feb. 21, 2006).

95. *See Kasky*, 45 P.3d at 248 (describing Nike's response).

96. *Id.* at 248–50.

97. *Id.* at 248–49.

98. *Id.* at 262.

99. Adam Liptak, *Nike Move Ends Case Over Firms' Free Speech*, N.Y. TIMES, Sept. 13, 2003, at A8.

100. *Cf.* Nicholas D. Kristof & Sheryl WuDunn, *Two Cheers for Sweatshops*, N.Y. TIMES MAG., Sept. 24, 2000, at 70 (explaining their belief that "the campaign against sweatshops risks harming the very people it is intended to help" because "sweatshops are a clear sign of the industrial revolution that is beginning to reshape Asia").

Virginia statute preventing pharmacists from advertising prescription drug prices.[101] The Supreme Court struck down the statute and employed both models in its analysis. First, it attacked the law by emphasizing the "ideas" within commercial speech. "[T]he free flow of commercial information is indispensable . . . to the proper allocation of resources in a free enterprise system [and] it is also indispensable to the formation of intelligent opinions as to how that system ought to be regulated or altered."[102] Then (as shown in the second half of the quote), the Court emphasized markets, treating commercial information as equally valuable as political speech because transactions are linked to policy judgments about structuring the economy.

The Court also suggested the possibility of regulating even truthful, accurate commercial information by requiring "additional information, warnings, and disclaimers."[103] The opinion limited these controls to those "necessary to prevent [the information from] being deceptive."[104] However, the opinion contemplated regulating truthful information based on how consumers process it, suggesting that courts should tolerate measures addressing perceptual and processing biases.

The Court wavered between the two models in a challenge to Rhode Island's prohibition on advertising of alcoholic beverage prices.[105] In *44 Liquormart v. Rhode Island*, four justices held states could regulate speech "linked inextricably" to transactions,[106] but argued government enjoys less regulatory power where laws govern "'the substance of the information communicated' rather than the 'commercial aspect of [it]'"[107] or where they ban truthful, lawful commercial information entirely.[108] The decision straddles the two modes of analyzing the market for commercial data, recognizing its value to consumers but also preserving the ability to intervene to protect them. The Court's ambivalence, driven by the uncertainty of how the marketplace model would treat commercial speech, produces muddled decisions. Commercial communication bridges abstract policy issues and concrete, mundane choices. The marketplace of ideas appears to offer two approaches to this data—

101. Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, 425 U.S. 748 (1976).
102. *Id.* at 765.
103. *Id.* at 771 n.24.
104. *Id.*
105. 44 Liquormart, Inc. v. Rhode Island, 517 U.S. 484 (1996).
106. *Id.* at 499 (quoting Friedman v. Rogers, 440 U.S. 1, 10 n.9 (1979)).
107. *Id.* (quoting Linmark Associates, Inc. v. Township of Willingboro, 431 U.S. 85, 96 (1977)).
108. *Id.* at 499–500 (citing Central Hudson Gas & Elec. Corp. v. Public Serv. Comm'n of N.Y., 447 U.S. 557 (1980)).

one emphasizing markets, the other ideas—and each points in different directions regarding permissible regulation.

D. Talking Politics

In America, the marketplace of ideas was first advanced to protect political expression by dissenters.[109] Nonetheless, the theory quickly took root, eventually preventing political orthodoxy even for revered symbols such as the flag, and protecting unpopular political beliefs such as communism and opposition to the Vietnam War.[110] The market model offers the strongest protection in the zone where it was first established: political communication.

Justice Oliver Wendell Holmes's dissent in *Abrams v. United States* outlined the marketplace metaphor, critiquing the Supreme Court's decision to uphold the conviction of five men who had criticized the deployment of troops to Russia.[111] Holmes made clear his belief that the defendants were "made to suffer not for what the indictment alleges but for the creed that they avow—a creed that I believe to be the creed of ignorance and immaturity when honestly held . . . [but which] no one has a right even to consider in dealing with the charges before the Court."[112] Holmes attacked persecution of political opinion as founded on an overconfident faith in the correctness of one's ideas:

> But when 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.[113]

Holmes noted that he spoke "only of expressions of opinion and exhortations," but argued that "we should be eternally vigilant against attempts to check the expression of opinions that we loathe and believe to be fraught with death."[114] His attack on unfounded certainty in beliefs

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109. *See, e.g.*, Abrams v. United States, 250 U.S. 616, 624–31 (1919) (Holmes, J., dissenting).

110. *See* Cohen v. California, 403 U.S. 15 (1971); Keyishian v. Bd. of Regents, 385 U.S. 589 (1967).

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

112. *Id.* at 629–30.

113. *Id.* at 630.

114. *Id.* at 630–31.

recalls Mill[115] and Milton.[116] Thus, Holmes placed his faith in competition and discourse, not governmental control, to separate true ideas from false ones and to mitigate the harm the latter could cause. This belief in a market of information "is closely connected with Holmes' marketplace theories of politics," and his faith in markets generally.[117]

Eight years later, Justice Louis Brandeis wrote to uphold a Communist Party member's conviction for violating a California law against criminal syndicalism. Nevertheless, he endorsed the marketplace model.[118] His concurring opinion in *Whitney v. California* stated that the country's founders "believed that freedom to think as you will and to speak as you think are means indispensable to the discovery and spread of political truth."[119] "Discussion affords ordinarily adequate protection against the dissemination of noxious doctrine," he asserted, and "the fitting remedy for evil counsels is good ones."[120] Brandeis argued the state could proscribe political communication only in situations with an immediate threat of serious violence; thus, if there was "time to expose through discussion the falsehood and fallacies, to avert the evil by the processes of education, the remedy to be applied is more speech, not enforced silence."[121]

The marketplace model similarly has protected unpopular expression towards one of America's most revered symbols, its flag, believing that citizens can evaluate and reject falsehood even in charged political discourse. The courts have resisted attempts to require, or prohibit, particular views of the flag. For example, when West Virginia mandated that public school students salute the flag and recite the Pledge of Allegiance, the Supreme Court struck down the relevant law and regulations.[122] Its decision noted that "Symbols of State often convey political

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115. *See* MILL, *supra* note 18, at 88 ("Those who desire to suppress it, of course deny its truth; but they are not infallible . . . . To refuse a hearing to an opinion, because they are sure that it is false, is to assume that *their* certainty is the same thing as *absolute* certainty.").

116. *See* MILTON, *supra* note 14, at 62.

117. CASS R. SUNSTEIN, *supra* note 31, at 25.

118. The California statute provided that:

> The term 'criminal syndicalism' as used in this act is hereby defined as any doctrine or precept advocating, teaching or aiding and abetting the commission of crime, sabotage (which word is hereby defined as meaning wilful and malicious physical damage or injury to physical property), or unlawful acts of force and violence or unlawful methods of terrorism as a means of accomplishing a change in industrial ownership or control, or effecting any political change.

Whitney v. California, 274 U.S. 357, 359–360 (1927) (quoting 1919 Cal. Stat., c.188, p.281).

119. *Id.* at 375 (Brandeis, J., concurring).

120. *Id.*

121. *Id.* at 377.

122. W. Va. State Bd. of Educ. v. Barnette, 319 U.S. 624 (1943).

ideas . . . [West Virginia] requires the individual to communicate by word and sign his acceptance of the political ideas it thus bespeaks."[123] The Court placed its faith in the "appeal of [American] institutions to free minds" and stated that "no official . . . can prescribe what shall be orthodox in politics, nationalism, religion, or other matters of opinion."[124]

Similarly, the Court has held that neither a state[125] nor Congress[126] may prohibit burning the flag, despite this act's distastefulness. Its decision overturning Texas's flag desecration statute noted that the state permitted burning a flag for disposal, but not for dissent—thus, it was a governmental move to ensure a "symbol be used to express only one view of that symbol or its referents."[127] The Court noted that the "First Amendment does not guarantee that other concepts virtually sacred to our Nation as a whole . . . will go unquestioned in the market-place of ideas."[128] "The way to preserve the flag's special role is not to punish those who feel differently about these matters . . . [but] to persuade them that they are wrong."[129]

At times, to further the search for political truth, courts even deliberately protect falsehood. For example, in defamation jurisprudence, the Supreme Court noted that "erroneous statement is inevitable in free debate,"[130] and that a "rule compelling the critic of official conduct to guarantee the truth of all his factual assertions . . . dampens the vigor and limits the variety of public debate."[131] The Court cited Mill to argue that "a false statement may be deemed to make a valuable contribution to public debate" by offering sharp contrast to truth.[132] This faith in the value of uninhibited political communication led the Court to require that public officials recover for defamation only by showing "actual malice" by the alleged author or speaker.[133]

As the marketplace theory dictates, courts have carefully protected against state attempts to punish unorthodox or unpopular political beliefs. For example, the Supreme Court struck down a New York requirement that state university faculty members avoid teaching doctrines of or

123. *Id.* at 632–33.
124. *Id.* at 641–42.
125. Texas v. Johnson, 491 U.S. 397 (1989).
126. United States v. Eichman, 496 U.S. 310 (1990).
127. *Johnson*, 491 U.S. at 417.
128. *Id.* at 418.
129. *Id.* at 419.
130. N.Y. Times Co. v. Sullivan, 376 U.S. 254, 271 (1964).
131. *Id.* at 279.
132. *Id.* at 279 n.19.
133. *Id.* at 279–80.

maintaining membership in groups espousing seditious viewpoints, particularly Communist ones.[134] The Court lectured that the Constitution "does not tolerate laws that cast a pall of orthodoxy over the classroom" since the "classroom is peculiarly the 'marketplace of ideas.'"[135] Arkansas' requirement that teachers disclose to the state every organization to which they belonged or contributed money met the same fate.[136] The Court saw the measure as targeted at identifying NAACP members.[137]

Similarly, the Supreme Court blocked a policy by Iowa schools forbidding students from wearing armbands.[138] The decision pointed out that Des Moines schools were not deluged by teenagers wearing armbands; rather, officials adopted the policy as a preemptive strike against a few students' plans to wear black bands to protest the Vietnam War.[139] Students, the Court wrote, "may not be regarded as closed-circuit recipients of only that which the State chooses to communicate."[140] The Court believed it was extremely important that America's future leaders be "trained through wide exposure to that robust exchange of ideas which discovers truth 'out of a multitude of tongues, [rather] than through any kind of authoritative selection.'"[141] These cases show that the marketplace of ideas first took hold in analysis of government attempts to control political communication, and it displays its greatest strength there.

E. Different Mediums, Different Regulation

Different media permit different levels of state intervention. The seven words that George Carlin (and Howard Stern)[142] cannot say on the radio are readily available for listening on the Internet.[143] Carlin could

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134. Keyishian v. Bd. of Regents of the Univ. of the State of N.Y., 385 U.S. 589, 592 (1967) (noting that an appellant faculty member had refused to sign a required certificate stating "that he was not a Communist, and that if he had ever been a Communist, he had communicated that fact to the President of the State University of New York").

135. *Id.* at 603.

136. *See* Shelton v. Tucker, 364 U.S. 479 (1960).

137. *Id.* at 484 n.2 (noting that an Arkansas statute in force at the time of the initial challenge to the disclosure requirement forbade the state from employing NAACP members). The court noted the risk that the statute would create "public pressures upon school boards to discharge teachers who belong to unpopular or minority organizations" such as the American Civil Liberties Union. *Id.* at 486–87, 486 n.7.

138. Tinker v. Des Moines Indep. Cmty. Sch. Dist., 393 U.S. 503 (1969).

139. *Id.* at 508–09.

140. *Id.* at 511.

141. *Id.* at 512 (quoting Keyishian v. Bd. of Regents of the Univ. of the State of N.Y., 385 U.S. 589, 603 (1967) (internal citation omitted)).

142. *See* Frank Ahrens, *Viacom Settles Outstanding FCC Fines: $3.5 Million Agreement Erases Proposed Radio Indecency Penalties*, WASH. POST, Nov. 24, 2004, at E1.

143. *See, e.g.*, Webjay, *The Seven Dirty Words*, http://webjay.org/by/webjaybs/

have delivered his monologue over the telephone as a paid recording,[144] or used one of his words, emblazoned on a jacket, to protest the draft in a courthouse.[145] Janet Jackson may show her breasts on cable television, but not free broadcast television.[146] While the marketplace of ideas model influences decisions for each communications method, its strength varies by medium.

Broadcast media, such as radio and free television, permit relatively broad regulation. In 1973, a radio station aired comedian George Carlin's program, which contained, repeatedly, the "words you couldn't say on the public . . . airwaves."[147] The FCC, ignoring the inherent irony, found the station could be sanctioned. In upholding the Commission's power to penalize indecent language on the radio, the Court stated that action would chill transmission only of "patently offensive references to excretory and sexual organs and activities . . . [which] lie at the periphery of First Amendment concern."[148] The regulation would not impinge on the exchange of important political ideas, but only on their formulation, as "few, if any, thoughts . . . cannot be expressed by the use of less offensive language."[149] The FCC overcame the constraints of the marketplace model for broadcast by emphasizing the limited effects of the regulation on ideas, the low value of Carlin's communications, the audience's inability to avoid offensive content,[150] and concerns about inadvertently exposing children to indecency.[151]

In contrast, the Court struck down a federal statute banning indecent messages available in a prerecorded telephone medium.[152] The Court emphasized that consumers actively sought out this material.[153] While the government could act narrowly to protect children from indecency, it

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thesevendirtywords (last visited Feb. 14, 2006) (providing one MP3 recording for each of Carlin's banned terms).

144. Sable Commc'ns. v. FCC, 492 U.S. 115, 128 (1989).

145. Cohen v. California, 403 U.S. 15, 24–26 (1971).

146. *See, e.g.*, Frank Ahrens & Lisa de Moraes, *FCC Throws Flag at CBS's Halftime Play: Commissioners Propose $550,000 Indecency Fine*, WASH. POST, Sept. 23, 2004, at C1 (describing a fine proposed by the FCC for twenty CBS stations that aired footage of the National Football League's halftime show that included a brief shot of Janet Jackson's breast); *see also* U.S. v. Playboy Entm't Group, Inc., 529 U.S. 803 (2000) (invalidating a federal statute requiring cable television operators to "scramble" signals for sexually explicit programs or to show this content only late at night).

147. FCC v. Pacifica Found., 438 U.S. 726, 729 (1978) (quoting George Carlin).

148. *Id.* at 743.

149. *Id.* at 743 n.18.

150. *Id.* at 748–49.

151. *Id.* at 749–50.

152. Sable Commc'ns v. FCC, 492 U.S. 115 (1989).

153. *Id.* at 127–28.

could not ban it completely, since this would limit communication in the telephonic marketplace to information suitable for minors.[154]

For cable television regulation, the "marketplace of ideas" model generally triumphs. The Court struck down a section of the Cable Television Consumer Protection and Competition Act of 1992 that required blocking indecent material on "leased access" cable channels, except to subscribers requesting access. [155] It also struck down a section that allowed the FCC to ban indecency on "public access" channels.[156] Similarly, the Court held that the government could not mandate that cable operators scramble, or limit temporally, sexually explicit programming.[157] In rejecting this law, the Court invoked the marketplace model: "It is through speech that our convictions and beliefs are influenced, expressed, and tested. . . . The citizen is entitled to seek out or reject certain ideas or influences without Government interference or control."[158]

The Internet has been lauded as the archetypal marketplace of ideas, where diverse content, low access costs, wide and growing usage, and a lack of scarcity allow "any person with a phone line [to] become a town crier with a voice that resonates farther than it could from any soapbox."[159] It is thus unsurprising that Congressional attempts to exclude undesirable content from the Internet were blocked when the Supreme Court struck down sections of the Communications Decency Act (CDA).[160] The government, understanding the market model, defended the CDA in part as necessary for the growth of this new marketplace. It argued that the "interest in fostering the growth of the Internet provides an independent basis for upholding the constitutionality of the CDA," warning that "the unregulated availability of 'indecent' and 'patently offensive' material on the Internet is driving countless citizens away from the medium."[161] However, the Court quickly disposed of this argument, noting that the "dramatic expansion of this new marketplace of ideas contradicts the factual basis of this contention."[162] "[W]e presume that governmental regulation of the content of speech is more likely to interfere with the free exchange of ideas than to encourage it," the Court stated.[163]

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154. *Id.* at 126–27.
155. Denver Area Educ. Telecomm. Consortium v. FCC, 518 U.S. 727, 733 (1996).
156. *Id.*
157. United States v. Playboy Entm't Group, Inc., 529 U.S. 803, 807 (2000).
158. *Id.* at 817.
159. Reno v. ACLU, 521 U.S. 844, 870 (1997).
160. *Id.* at 849.
161. *Id.* at 885.
162. *Id.*
163. *Id.*

In sum, the range of permissible governmental intervention varies with the communications medium; courts are cautious (at least rhetorically) about "import[ing] law developed in very different contexts into a new and changing environment."[164] Yet, despite the purported view that it is "unwise and unnecessary definitively to pick one analogy" to govern communications regulation,[165] the model of the marketplace of ideas clearly dominates judicial thinking across all media.

The American legal system has utilized the marketplace of ideas model in evaluating communication regulation in a way that is hopeful about the outcome of unfettered communication and pessimistic about the benefits of controlling information exchange. The power of this framework in American case law constrains state intervention across a spectrum of issues, contexts, and problems. With this backdrop, we next examine research that calls the marketplace model, and the cases relying upon it, gravely into question.

III. HUMAN PERCEPTUAL BIASES IN ACQUIRING AND PROCESSING INFORMATION

Research in cognitive psychology and behavioral economics demonstrates that humans acquire and process information using filters, biases, and heuristics. These built-in distortions lead us to arrive at conclusions, and ultimately to make decisions, that can be empirically inaccurate and incorrect in important ways. This section elucidates some of these predispositions and how they affect us through examples from research studies.

The examples of cognitive bias in this paper share a key characteristic—they describe situations either where one answer is empirically correct (for example, calculating the odds of winning a bet based on rolling dice), or where shifts in context or presentation lead people to alter their evaluations even though the underlying information is held constant (for example, altering the choice between various cancer treatments by changing how their survival statistics are described). Some choices we make convincingly demonstrate quirks or errors in how we process information. If I prefer strawberry ice cream to chocolate, offering me vanilla also should not change that preference; if it does, we must examine why this additional, irrelevant information has this effect.

If humans process information inconsistently, cognitive filters will affect how we use data linked to more abstract ideas. This section's goal

164. Denver Area Educ. Telecomm. Consortium v. FCC, 518 U.S. 727, 740 (1996).
165. *Id.* at 742.

is to evaluate the hard evidence of perceptual biases: cases where our decisions can be measured against an objective referent, even if that referent is our previously expressed preferences. It first evaluates information selection biases, then information processing ones, and finally decision-making distortions.

A. Information Selection Biases

We move through an environment saturated with information. Each moment, we prioritize and choose among data from an ever-expanding list of sources such as conversations, newspapers, radio, food labels, cell phone messages, and more. Our cognition predisposes us to cull certain communication from the stream washing over us. When we choose where to place our attention—how to spend our scarce processing capacity—we alter how we are likely to think and act. Notably, people bring four prejudices to the task of selecting information: we are unduly optimistic, we are self-serving, we choose confirming facts, and we prefer data consistent with past events.

1. Optimism

Humans are natural optimists. People believe that they are more likely to succeed in their careers and finances than others, and that they are at lower risk of contracting disease or suffering environmental harms. Like the residents of the fictional town of Lake Wobegon, somehow we each believe that we are strong, good-looking, and above-average.[166] Statistically, though, a large number of us are quite wrong, and this persistent error means we fail to select information that could improve our lives.

Medical researcher Neil Weinstein shows we evince a "consistent, optimistic bias [regarding] personal risks"; "people claim that they are less likely to be affected than their peers" by problems such as asthma, drug addiction, and lung cancer.[167] People believe that they are less likely to face harm from pollution than co-workers or neighbors.[168] This unfounded optimism, Weinstein states, "is greatest for hazards with

166. This quote is from Garrison Keillor's radio program *Prairie Home Companion*. *See, e.g.*, *Quotation of the Day*, N.Y. TIMES, June 14, 1987, at 2 (quoting Keillor).

167. Neil D. Weinstein, *Optimistic Biases About Personal Risks*, 246 SCIENCE 1232, 1232 (1989).

168. *Id.*; *see also* Paul Slovic et al., *Facts Versus Fears: Understanding Perceived Risk*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 463, 468–70 (Daniel Kahneman et al. eds., 1982).

which subjects have had little personal experience, for hazards rated low in probability, and for hazards judged to be controllable by personal action."[169] People also discount their risk for problems where "signs of vulnerability appear early," such as diabetes.[170]

Even in situations where risk occurs naturally and is not caused by a specific behavior, people perceive themselves as safer than they are. For example, in a survey assessing attitudes towards radon gas, a natural carcinogen that pollutes homes, 50 percent of respondents characterized their risk as below average and 43 percent saw their risk as roughly average.[171] Only 6 percent perceived their risk as greater than average, even though the area where the study subjects lived was believed by state officials to pose a "particularly high" radon risk.[172] When asked to explain their beliefs, surveyed homeowners indicated that their residence's geographic location or physical characteristics (such as ventilation), or their own actions, justified the optimistic assessment.[173] Radon risk does not reflect our actions, behaviors, or social status; thus, overly optimistic perceptions cannot be explained as defensive measures to protect self-esteem or avoid criticism, as can happen with other risks such as alcoholism.[174] Of all the information available about risk, we prioritize those bits that comport with an optimistic outlook. People simply overestimate the probability of positive outcomes.

More troubling, even people at high risk for serious problems such as contracting HIV rate themselves as relatively safe, focusing on irrelevant data such as ineffective preventive behaviors.[175] For example, gay men in New York who engaged in sexual practices creating a high risk of HIV transmission rarely rated their risk as high, pointing to their low number of sex partners or precautions such as showering after sex.[176] (These factors, of course, do not alter the risk level of the sex itself.) Worse, the men's misperception of risk increased with risk itself. Men who "engaged in safe-sex practices only were quite accurate in their assessment of the riskiness of their practices."[177] Of study participants

169. Weinstein, *supra* note 167, at 1232.

170. *Id.*

171. Neil D. Weinstein et al., *Optimistic Biases in Public Perceptions of the Risk from Radon*, 78 AM. J. PUB. HEALTH 796, 797 (1988).

172. *Id.* at 796.

173. *Id.* at 797.

174. *Id.* at 796.

175. Laurie J. Bauman & Karolynn Siegel, *Misperception Among Gay Men of the Risk for AIDS Associated with Their Sexual Behavior*, 17 J. APPL. SOC. PSYCHOL. 329, 342–43 (1987).

176. *Id.*

177. *Id.* at 339.

"who engaged in at least one high-risk behavior in a typical month, 83 percent appraised their behavior to be relatively safe."[178]

Unfounded optimism has potentially serious consequences. We may underconsume, or ignore, information on salient topics because we think we are safer than we actually are. We must consider a plethora of risks—from cholesterol to terrorist attack to automobile accidents—then prioritize among them and decide how much to learn about each. If we think we are at lower risk than we actually are, though, we will select less information about a risk—or about risks generally—than we would with a more accurate perception. This "failure to admit that our smoking, driving while intoxicated, or unprotected sex puts us at risk may keep us from making changes, and this could prove disastrous."[179] Inherent optimism can be dangerous.

2. Self-Serving

How good a leader are you? When the College Board asked one million high school students this question, 70 percent rated themselves as above-average; only 2 percent judged themselves as below-average.[180] Our egos also affect how we select information and how we define criteria such as "leadership." Unsurprisingly, we give priority to types of data we view as personally meaningful or significant. If we see ourselves as intelligent, and perceive intelligence as critical to our success, we will look for evidence of this trait in others when we evaluate them.[181] When seeking information about a "fair" settlement to a dispute, people skew their assessment toward what benefits them personally.[182]

For example, organizational behavior researchers have examined overharvesting of fisheries. This issue—familiar to law students as an example of the "tragedy of the commons"—occurs when multiple private parties can withdraw resources, such as fish, from a common supply for less than the resources' social cost.[183] In one behavioral study simulating the fishing situation in the northeastern Atlantic Ocean, where overharvesting threatens a number of fish species, the researchers found

178. *Id.* at 343.

179. Weinstein, *supra* note 167, at 1232.

180. David Dunning et al., *Ambiguity and Self-Evaluation: The Role of Idiosyncratic Trait Definitions in Self-Serving Assessments of Ability*, *in* HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 324, 324 (Thomas Gilovich et al. eds., 2002).

181. Weinstein, *supra* note 167, at 1232.

182. Linda Babcock & George Loewenstein, *Explaining Bargaining Impasse: The Role of Self-Serving Biases*, 11 J. ECON. PERSP. 109, 110 (1997).

183. *See, e.g.*, Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

"evidence of egocentric biases in the interpretation of fairness at both the group and individual levels."[184] Participants took more fish than disinterested observers viewed as fair because they saw themselves as entitled to that amount. The information the takers selected, and the way they interpreted it, led them to determine a "fair" distribution of resources that benefited them. The study demonstrated the harmful cumulative effects of self-serving bias—in this case, overfishing. In addition, self-serving perceptual filters may help people to act in ways that contradict their stated beliefs. For example, participants in the fishing study espoused the need to preserve fisheries but justified their individual actions as empirically fair or correct.[185] To paraphrase the popular environmental slogan, the self-serving cognitive bias causes individuals to act selfishly while thinking collectively.

Similarly, in an experiment testing perceptions of a "fair" settlement in a mock tort case, researchers found that participants (who were randomly assigned to be plaintiff or defendant) skewed assessments towards their position, despite rewards for arriving at evaluations similar to those of a non-biased third party.[186] The participants reviewed the same materials, with the same information, but clearly chose among the data differently: "plaintiffs tended to weight arguments favoring the plaintiff as much more compelling than those favoring the defendant, and vice-versa."[187] Thus, self-serving bias can cause people to select information differently even when they start with the same data.

To test how this perceptual filter operates in situations with real consequences, the same researchers examined salary negotiations between Pennsylvania teachers' unions and school districts.[188] Both unions and school boards used outcomes in "comparable communities" in their state as reference points. However, selecting a "comparable" community is a task vulnerable to self-interested assessment, even when relevant empirical data (such as population) is readily available. The study showed that while each side listed roughly the same number of districts as comparable to their own, the choice of which districts to include reflected a significant (qualitatively and statistically) difference in salary levels.[189] Teachers chose reference communities with greater average

184. Kimberly A. Wade-Benzoni et al., *Egocentric Interpretations of Fairness in Asymmetric Environmental Social Dilemmas: Explaining Harvesting Behavior and the Role of Communications*, 67 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 111, 123 (1996).

185. *Id.* at 125.

186. Babcock & Loewenstein, *supra* note 182, at 112.

187. *Id.* at 115.

188. *Id.* at 116–17.

189. *Id.* at 117.

salaries than school boards did.[190] Choosing different data created different outcomes. For example, districts where the two sides' average salary of "comparable" communities were more than $1000 apart were 49 percent more likely to endure a teachers' strike.[191] Thus, "when there are numerous potential comparison groups to assess fairness, the parties focus on those that favor themselves."[192]

These examples show that we are not neutral in the data we select and emphasize. People persistently choose information bolstering their position. In addition, we perceive our evaluations as impartial and disinterested, but suspect others of succumbing to self-interest.[193] Thus, we are prone to pick information that reinforces our views of what is fair or correct—views that, unsurprisingly, tend to favor outcomes benefiting us.

3. Confirmation

We also prefer information that confirms our hypotheses. For example, if we believe that infertile couples who adopt are subsequently more likely to conceive a child, we tend to choose data buttressing this opinion.[194] This predisposition makes us dependent upon how questions are framed.[195] One study found that people have a tendency to elicit information in ways that nearly guarantee confirmation. When trying to determine whether a person was an extrovert, subjects asked questions such as, "What would you do if you wanted to liven things up at a party?"[196] Phrasing the probing question in these terms makes it more likely that the person will answer in a way that portrays her as an extrovert. This pattern persisted even when researchers offered the questioner a monetary reward for arriving at an accurate answer.[197]

Researchers have also found this tendency when people recall facts from memory. Participants in one study read information about a woman

190. *Id.* (noting that the difference was statistically significant and that it reflected roughly 2.4 percent of an average teacher's salary in a period where mean salary increases were less than 5 percent per year).

191. *Id.*

192. *Id.* at 119.

193. *See, e.g.*, Wade-Benzoni et al., *supra* note 184, at 125.

194. THOMAS GILOVICH, HOW WE KNOW WHAT ISN'T SO: THE FALLIBILITY OF HUMAN REASON IN EVERYDAY LIFE 30–31 (1991).

195. *See id.* at 34 (noting that re-framing questions in a relevant social context can mitigate the confirmation bias).

196. Mark Snyder & William B. Swann, *Hypothesis-Testing Processes in Social Interaction*, 36 J. PERSONALITY & SOC. PSYCHOL. 1202, 1203–05 (1978).

197. *Id.* at 1210.

displaying both extroverted and introverted behavior.[198] They were then asked to evaluate either whether she would do well as a salesperson (a stereotypically extroverted job) or as a librarian (a position commonly viewed as introverted).[199] Subjects asked about the sales job remembered more instances of the woman's extroversion; those queried about the librarian slot recalled more introverted behaviors.[200]

We prefer to seek, elicit, and recall data that confirms the position we are checking. This has three important effects. First, how a question is posed dramatically affects how we answer it. Second, even when presented with an array of data (some confirming and some disconfirming), we are likely to choose and emphasize information supporting our perspective. Thus, improving the accessibility, quality, or range of facts available will not necessarily cause us to shift our conclusions. Third, we have the greatest difficulty with this bias when processing nonconfirming information that is posed negatively, or asymmetrically.[201] Overall, when faced with a question, people try to confirm it, and this bias affects strongly how we select information.

4. Hindsight

History matters in how we select information. Our choice, and interpretation, of data depends strongly on the information we already possess. People choose information that comports with their views of prior events and that makes them appear natural, even inevitable. This effect, known as "hindsight bias," causes people to "integrate an outcome and the events that preceded it into a coherent story."[202] Thus, "creeping determinism" means we "tend to highlight data that were consistent with the final outcome and de-emphasize data that were contradictory or ambiguous."[203]

For example, a team of anesthesiologists gave reviewing physicians a set of cases where patients had adverse outcomes from having anesthe-

198. Mark Snyder & Nancy Cantor, *Testing Hypotheses About Other People: The Use of Historical Knowledge*, 15 J. EXPERIMENTAL SOC. PSYCHOL. 330, 332–33 (1979).

199. *Id.* at 336–39.

200. *Id.*

201. GILOVICH, *supra* note 194, at 32.

202. Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, *in* BEHAVIORAL LAW & ECONOMICS 95, 97 (Cass R. Sunstein ed., 2000) (quoting Baruch Fischhoff, *Hindsight ≠ Foresight: The Effect of Outcome Knowledge on Judgment Under Uncertainty*, 1 J. EXPERIMENTAL PSYCHOL. 288 (1975)).

203. Donald A. Redelmeier et al., *Understanding Patients' Decisions: Cognitive and Emotional Perspectives*, 270 JAMA 72, 73 (1993).

sia administered. [204] The researchers secretly altered half the cases to change the results, either from temporary harm (such as a lip laceration that healed) to permanent harm (such as laceration leaving a disfiguring scar), or vice-versa.[205] When asked to determine whether the patients received medically adequate care, the results where the patient suffered a worse outcome led expert physicians to reduce findings of appropriate care by 31 percent, with the remaining information unchanged.[206] The worse the outcome, the worse the care, at least in the reviewers' eyes. The researchers concluded that even among board-certified, experienced, expert physicians, "knowledge of outcome can exert a significant effect on the opinion rendered by the reviewer."[207]

The legal system is also vulnerable to hindsight bias. Both juries and judges tend to interpret facts in light of later events—for example, in negligence cases, juries are likely to find that harms were foreseeable and precautions required even where observers without knowledge of later injuries would not draw such conclusions.[208] Harm is treated as evidence of negligence. Evidentiary rules try to mitigate this bias by preventing plaintiffs from introducing proof of precautions taken by defendants after harm has occurred since, based on hindsight, juries would likely interpret these measures as an admission of a failure to take due care.[209] Similarly, patent law incorporates substantive and procedural techniques to mitigate hindsight bias that could otherwise lead courts to find patented inventions obvious in light of prior art in the field.[210]

One challenge of hindsight bias is that it is difficult to correct—even people who are aware of this potential problem are likely to be affected by it. Thus, de-biasing techniques, such as making juries aware of the perception-altering role of hindsight, are not likely to work.[211] Psychological researchers have tried numerous methods to mitigate hindsight bias; nearly all failed. Ineffective techniques include describing the bias and asking participants to avoid it; separating subjects in time from the event's reporting; assessing the probability of an event's recurrence

204. Robert A. Caplan et al., *Effect of Outcome on Physician Judgments of Appropriateness of Care*, 265 JAMA 1957, 1957–58 (1991).

205. *Id.* at 1958.

206. *Id.* at 1959.

207. *Id.* at 1960.

208. Christine Jolls et al., *A Behavioral Approach to Law and Economics*, *in* BEHAVIORAL LAW & ECONOMICS, *supra* note 202, at 13, 38–39.

209. Rachlinski, *supra* note 202, at 106–07 (citing Flamino v. Honda Motor Co., 733 F.2d 463, 471 (7th Cir. 1984)).

210. *Id.* (noting the Supreme Court's adoption of "secondary considerations" in evaluating non-obviousness in Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966)).

211. Baruch Fischhoff, *Debiasing*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 168, at 422, 427–31.

rather than occurrence; focusing only on subject experts; testing subjects on remembering their own predictions about future events; and asking about foresight of other participants.[212] The only studied technique reducing but not eliminating hindsight bias forced subjects to "indicate how they could have explained the occurrence of the outcome that did *not* happen."[213] Researchers investigating this technique hypothesized it led subjects to evaluate and appreciate contradictory evidence that was not cognitively available until the problem or question itself was restructured.[214] Thus, we tend to select information that comports with optimistic and self-serving views, that confirms our positions, and that makes past events appear natural and inevitable.

B. Information Processing Biases

Cognitive biases not only affect how information is selected, but how we process it. The ways in which we transform data plucked from our environment into useful knowledge involve built-in filters that are susceptible to external manipulation. Our decisions are affected by how choices are framed, are anchored to our initial impressions, and are shaped by stereotypes. In addition, humans face inherent difficulties in information processing. For example, we fail to understand the law of averages, we have difficulty assessing the likelihood of low-risk events, and we favor information that is easily or vividly recalled. These analytical distortions shape how we use sensory input.

1. Framing

We react differently to information based on how it is presented. For most people, dried plums are more enticing than prunes, though the two fruits are the same thing.[215] The context in which information is presented—even the words used—affect greatly how we react to that data. Long-odds bets seem more attractive after a losing day at the track, because they appear to provide a chance to make up lost wagers at

212. *Id.* at 428–31.

213. *Id.* at 430 (citing P. Slovic & B. Fischhoff, *On the Psychology of Experimental Surprises*, 3 J. EXPERIMENTAL PSYCHOL.: HUMAN PERCEPTION & PERFORMANCE 544 (1977)) (emphasis in original).

214. *Id.*

215. *See* Lisa Zwirn, *The Fruit Formerly Known As Prune Gets A Name Change and A Makeover*, BOSTON GLOBE, Oct. 10, 2001, at E3 (quoting Peggy Castaldi of the California Dried Plum Board as saying, "For people who had never eaten prunes, the name was a turnoff . . . [and for] those who knew prunes, the product had a negative image.").

once.[216] We may come to different decisions when the same information is presented to us in different ways, and this susceptibility to changes in frame of reference can have important implications for our choices.

Consider public health decisions. Recent fears about possible outbreaks of diseases such as avian flu,[217] or use of biological weapons such as anthrax by terrorists,[218] have forced policymakers to assess how we would respond to an epidemic. The way that government officials, and the public, evaluate options for such a challenge will vary based on how the choices are framed. Researchers Amos Tversky and Daniel Kahneman provide an example. Their study subjects, university students, responded to one of two questionnaires asking them to choose between two policies to combat an outbreak of epidemic disease.[219] The first questionnaire offered Program A, which would save 200 people, or Program B, which had a 1/3 chance of saving 600 people and a 2/3 chance of saving none. (Note that the expected number of lives saved, 200, and lost, 400, is equal for both programs.) 72 percent of students selected the risk-averse option of Program A, preferring to save 200 students for certain rather than face a two-thirds chance of saving none.[220] The second questionnaire proposed Program C, under which 400 people would die, or Program D, with a 1/3 probability that no one would die and a 2/3 probability everyone would die. (Again, the expected number of lives lost, 400, and saved, 200, is equal for both scenarios, and also is the same as options A and B.) 78 percent chose the risk-preferring option, Program D, apparently because the certain death of 400 people was more ominous than the 2/3 likelihood that all 600 would die.[221]

The paradox is that the students shifted from risk-averse to risk-preferring depending on how the problem was presented: if framed as a choice of how many people to save, they chose the certain safety of 200 over the 1/3 chance to save all 600, but if posed as a choice of how many to let die, the students risked all 600 for the 1/3 chance of saving them

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216. *See* Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453, 458 (1981) [hereinafter *Psychology of Choice*]; Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263, 287 (1979) [hereinafter *Prospect Theory*].

217. *See* Robert Pear, *U.S. Health Chief, Stepping Down, Issues Warning*, N.Y. TIMES, Dec. 3, 2004, at A1 (noting that departing U.S. Secretary of Health and Human Services Tommy Thompson identified "the threat of a human flu pandemic caused by mutations in a strain of avian influenza virus, known popularly as bird flu" as "what worried him most," and quoting Thompson that avian flu is a threat that could kill 30 to 70 million people worldwide).

218. *See* Mirta Ojito, *Doctors Are Told to Watch for Symptoms Linked to Biological Attacks*, N.Y. TIMES, Oct. 10, 2001, at B1.

219. *Psychology of Choice*, *supra* note 216, at 453.

220. *Id.*

221. *Id.*

rather than condemn 400 to certain death. The way that information is presented, and how problems and outcomes are structured, can cause us to arrive at contradictory conclusions even for the same decision.[222]

Furthermore, framing isn't reduced by greater knowledge—it alters the decision-making even of experienced professionals. For example, one study asked family practitioners to choose how to treat a patient with hip pain from arthritis.[223] The doctors were divided into two groups, and presented with different options. The first group considered two choices: start the patient on ibuprofen and refer to a specialist, or simply make the referral (and not try ibuprofen). The second group had three options: start the patient on ibuprofen and refer, start the patient on piroxicam and refer, or just refer. The latter group—with more treatment options available—was significantly more likely (72 percent versus 53 percent) just to refer than to try any medication. Having more options did not help, as "the uncertainty in deciding between two similar medications led some physicians to avoid this decision altogether and recommend not starting any new medication."[224] The proliferation of information and treatment options means that doctors' choices may depend on the number of alternatives framing their decisions.[225]

Worse, framing leaves even experts such as doctors vulnerable to manipulation. Physicians' "views of drug therapies are affected by the common use of relative risk reductions in both trial reports and advertisements."[226] Altering how clinical trial results are reported—for example, shifting among relative, absolute, or inverse of absolute risk difference to measure effectiveness—changes how clinicians perceive the therapy's efficacy.[227] Thus, advertisers can influence physician behavior by using relative measures in both journal articles and advertisements.[228]

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222. *Id.* at 455 ("We suspect that many concurrent decisions in the real world are framed independently, and that the preference order would often be reversed if the decisions were combined.").

223. Donald A. Redelmeier & Eldar Shafir, *Medical Decision Making in Situations That Offer Multiple Alternatives*, 273 JAMA 302, 303 (1993).

224. *Id.* at 304.

225. *Id.* at 305.

226. C. David Naylor et al., *Measured Enthusiasm: Does the Method of Reporting Trial Results Alter Perceptions of Therapeutic Effectiveness?*, 117 ANNALS OF INTERNAL MEDICINE 916, 916 (1992).

227. *Id.* at 919. The inverse of absolute risk difference is "the number of persons who need to be treated to prevent one adverse outcome or event." *Id.* at 916.

228. *Id.* at 920; *see generally* JERRY AVORN, POWERFUL MEDICINES: THE BENEFITS, RISKS, AND COSTS OF PRESCRIPTION DRUGS 292–93 (2004).

2. Anchoring

Where we start determines where we end up. In evaluating problems and deriving answers, people frequently begin with an estimate or baseline, then refine it. However, research demonstrates this initial value has a powerful "anchoring" effect. Our final analysis reflects strongly our initial value, and our adjustments often fail to reflect available data.[229]

Even completely arbitrary starting values affect our analysis.[230] For example, researchers spun a "wheel of fortune" to generate a number between 0 and 100, then asked study participants (who witnessed the spin) to estimate the number of African countries in the United Nations.[231] The spin results had a "marked effect on" subjects' estimates.[232] Anchoring is not reduced even by providing rewards for accuracy in the final answer,[233] and it can cause overconfidence in our assessments.[234] Even sophisticated individuals aware of this bias are, nonetheless, susceptible to it.[235]

By altering the frame of reference, interested actors can shift perception and, consequently, behavior. For example, when considering the relative costs of two forms of payment, consumers readily accept a "discount for cash" but are offended by a "surcharge for credit card use."[236] The critical difference is selecting either the higher or lower price as the anchor for evaluation, particularly since consumers value avoiding losses more than potential gains.[237] Thus, commercial entities can influence our behavior as consumers by framing how we perceive their actions.

Reference points affect how we evaluate options consisting of multiple events over time. Gamblers, who risk money based on their ability to appraise competing probabilities, demonstrate this bias. Imagine I offer you a game of chance, with three betting options:

1. Wager you get a one or a five when rolling a six-sided die once;[238]

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229. *See* Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124, 1128 (1974).

230. *Id.*

231. *Id.*

232. *Id.*

233. *Id.*; *see* Slovic et al., *supra* note 168, at 465–66.

234. Tversky & Kahneman, *supra* note 229, at 1129 (describing experiments where people sought to estimate the value of the Dow Jones stock index with confidence of 90 percent).

235. *Id.* at 1130.

236. *Psychology of Choice*, *supra* note 216, at 456.

237. *See infra* Part III.D.

238. There are six possibilities, with two generating a win, so you have 33 percent odds of winning.

2. Wager you correctly pick one ordered result from two coin flips (for example, heads followed by tails);[239] or

3. Wager you pick twelve people, at random, and none has a birthday in March.[240]

Your best choice is #3, followed by #1. Few people would choose #3. This is because the first option is an "elementary event" (where a single action occurs), the second is a conjunctive event (where a given combination of independent events occurs), and the third is a disjunctive event (where an outcome occurs in any order of independent events). When the odds are close—though still distinct—people prefer conjunctive events to elementary ones, and both to disjunctive events.[241] This is caused by anchoring. In conjunctive events, people estimate success on the outcome of earlier events in the sequence and fail to adjust sufficiently. In our example, most bettors would choose option two—even though it has the worst odds.

This bias has a practical effect on planning. When a goal depends on successfully completing multiple tasks, people often overestimate how likely they are to attain completion.[242] Worse, the bias may lead people to underestimate the likelihood of failure if any of a series of independent causes can lead to a problem; "[e]ven when the likelihood of failure in each component is slight, the probability of an overall failure can be high if many components are involved."[243]

3. Representativeness and Stereotypes

One mental shortcut we employ draws conclusions about individuals based on their group's characteristics, and about groups based on individuals comprising them. We categorize instinctively. Show us images of a Chinese woman using chopsticks, and we identify her based on "Chinese traits;" show her applying makeup, and we call forth "woman traits."[244] This processing bias, commonly called "stereotyping," can lead to inaccurate conclusions and incorrect choices. More insidiously, it can bias what we recall about groups or individuals, reinforcing our erro-

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239. There are four possibilities (heads/heads, heads/tails, tails/heads, tails/tails), so you have 25 percent odds of winning.

240. Each person has 11/12 odds of not being born in any given month; thus, the aggregate odds are $(11/12)^{12}$, or 35.2 percent. *See* JOHN ALLEN PAULOS, INNUMERACY: MATHEMATICAL ILLITERACY AND ITS CONSEQUENCES 27 (2001).

241. Tversky & Kahneman, *supra* note 229, at 1129.

242. *Id.*

243. *Id.*

244. C. Neil Macrae et al., *The Dissection of Selection in Person Perception: Inhibitory Processes in Social Stereotyping*, 69 J. PERSONALITY & SOC. PSYCHOL. 397, 403 (1995).

neous position. Stereotypes can lead us to evaluate the relationship between a population and a subset of it incorrectly.

When asked to analyze a question, people often use stereotypes, even when better data is readily available. For example, one study gave subjects data on the proportion of two occupations (lawyers and engineers) in a group, along with a description of one group member.[245] Researchers then asked participants to estimate the probability that the individual belonged to one profession. Rather than considering the relative occupational proportions of the population (for example, 70 lawyers and 30 engineers in a group of 100), subjects instead based their estimates on how closely the description of the individual's traits matched each profession's stereotype. [246] Thus, study participants neglected actual, relevant information in favor of a mental shortcut—and drew the wrong conclusion.[247]

Representativeness bias works similarly. Having encountered one Boston Red Sox fan, we may impute their qualities (happiness, fatalism, dislike of New York) to all people in that group. "A vivid single case is likely to evoke affective reactions toward the entire class of objects it represents, despite countervailing but pallid assurances about typicality."[248] For example, "[n]o amount of assurances about the atypicality of the Parisian taxi driver who insulted us is likely to return us to our previous unwary attitude toward the class of Parisian taxi drivers."[249] Therefore, this vivid single case prompts us to recruit similar information from memory.[250]

Thus, we tend to believe that subsets or samples have properties of their larger population or category. If a coin has been flipped ten times and come up heads each time, most people will forecast the next flip as tails, because over time coin flips should distribute randomly among heads (50 percent) and tails (50 percent). However, this prediction doesn't hold for short sequences or small sample sizes, which can diverge from the mean. This effect also causes people to see patterns. If the same coin has been flipped nine times, with the result: Tails Heads Tails Heads Tails Heads Tails Heads Tails, we will likely predict the next flip will produce Heads, keeping the results evenly divided. This is

245. *See* Tversky & Kahneman, *supra* note 229, at 1124–25.

246. *See id.*

247. *Id.*

248. Richard E. Nisbett et al., *Improving Inductive Inference*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 168, at 445, 454.

249. *Id.*

250. *Id.*

commonly known as the "law of small numbers;" we assume small samples are representative of much larger ones.[251]

Stereotyping's negative consequences are well-known. If we extrapolate information about a population based on interacting with a single individual, we risk skewing our evaluation, particularly towards memorable or vivid characteristics of that interaction.[252] It can be equally harmful to treat a person as possessing characteristics we perceive as typifying a group to which they belong—especially if those qualities are not, in fact, traits of the group. Moreover, we are more likely to remember, and to select, information that bolsters our stereotypes, particularly if we have an experience that seems to confirm them. Simple heuristics, such as stereotypes, make analysis easier, but not better.

4. Averages and Regression to the Mean

As noted, people misunderstand the law of averages. We intuitively believe that if ten coin flips in a row produce heads, the next flip is more likely to be tails. Generations of baseball fans have rested their hopes for victory in the belief that a particular player is "due" for a hit after a string of unsuccessful at-bats. Gamblers, after witnessing a long run of red at the roulette table, are more likely to bet on black.[253] We view averages as independent forces generating events, not just descriptions of probability.

Similarly, we tend to overestimate cause and effect relationships by failing to account for the statistical concept of "regression to the mean." Put simply, regression to the mean holds that "when two variables are related, but imperfectly so, extreme values on one of the variables tend to be matched by less extreme variables on the other."[254] In short, extremes are exceptions—over time, results return to the norm. For example, a baseball player with a .100 lifetime batting average who bats .300 for one month is likely to lapse back into weak-hitting ways afterwards. This straightforward rule has important effects: "very tall parents tend to have tall children, but not as tall (on average) as they are themselves . . . a company's disastrous years tend to be followed by more profitable

251. *See* Amos Tversky & Daniel Kahneman, *Belief in the Law of Small Numbers*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 168, at 23, 24 (noting that people "act as if *every* segment of the random sequence must reflect the true proportion").

252. *See* Nisbett et al., *supra* note 248, at 451–54.

253. Tversky & Kahneman, *supra* note 229, at 1125.

254. GILOVICH, *supra* note 194, at 23.

ones, and its banner years by those that are less profitable."[255] It explains how we can misperceive the strength of the relationship between variables. A familiar example illustrates this effect.

Consider the "*Sports Illustrated* cover jinx." This popular myth claims that athletes or teams appearing on the *Sports Illustrated* magazine's cover are doomed to perform poorly after being featured.[256] When Boston Red Sox star Nomar Garciaparra was featured, he then suffered an injury limiting him to only twenty-one games in the 2001 Major League Baseball season;[257] the undefeated Miami Dolphins (1984) and Alabama Crimson Tide (1973) football teams each lost their next game after cover photos;[258] skier Jill Kinmont was paralyzed in an accident the same week her cover story reaches newsstands.[259] Competitors fear the cover.[260] Olympic athlete "Shirley Babashoff, for example, reportedly balked at getting her picture taken for *Sports Illustrated* before the 1976 Olympics because of her fear of the jinx."[261]

For those not involved in high-profile competitive sports, the jinx may be just entertainment. Yet persistent belief in its effects ignores the underlying explanation: regression to the mean. Since athletic "performances at different times are imperfectly correlated," it is "due to regression alone [that] we can expect an extraordinarily good performance to be followed, on the average, by a somewhat less extraordinary performance."[262] In the extremely competitive realm of elite athletes, an extraordinary performance leads to a cover story, while subsequent less extraordinary ones can mean defeat, and a "jinx."

This example demonstrates that people tend to ignore relevance, and regression, when making predictions. When provided with data irrelevant to the question asked, people should make predictions near the sta-

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255. *Id.*

256. *See, e.g.*, Ed Bouchette, *Jinxed? Steelers on SI Cover For First Time In 3 Years*, PITTSBURGH POST-GAZETTE, Nov. 10, 2004, at C8; Richard Sandomir, *Smarty Jones Is Also Winning Popularity Contest*, N.Y. TIMES, May 18, 2004, at D1 (noting that the horse was "the first cover equine on *Sports Illustrated* in 21 years, an appearance that did not jinx him as it had other athletes"); *Jinx: Statisticians and Fatalists Know that Everybody Has to Lose Some Time—But Why Does it Happen So Often for a Team the Week After It's Touted on the Cover of SI?*, SPORTS ILLUSTRATED, Nov. 10, 2003, at 105 (reviewing "jinxed" teams).

257. Andrew Lawrence, *One of Baseball's Most Storied Franchises, The Red Sox Have Graced SI's Covers Nearly Three Dozen Times*, SPORTS ILLUSTRATED, Nov. 10, 2004, at 76.

258. *There's Some Truth to That SI Cover Jinx*, SAN DIEGO UNION-TRIBUNE, Nov. 6, 2003, at D2.

259. *Id.*

260. *See, e.g.*, Adam Schefter, *Plummer Exposed to "Cover Jinx,"* DENVER POST, Oct. 2, 2003, at D9 (quoting Denver Broncos player Shannon Sharpe as stating "Good Lord, have mercy," on seeing quarterback Jake Plummer on the cover).

261. GILOVICH, *supra* note 194, at 26.

262. *Id.*

tistical average for that question.[263] If asked about a company's likely 2005 revenues after learning, say, its 2004 dividend, we should predict based on the average revenues of a company in that industry, because we don't know anything important about this particular firm.[264] If we lack relevant data, regression to the mean implies that our estimates should be conservative. However, we're more likely to estimate revenues based on how we perceive the datum about our hypothetical firm's 2004 dividend, even though this information is marginally helpful at most in predicting future earnings.

Our consistent difficulties in comprehending regression can have important consequences. For example, consider a student learning a new task. Initially, a large part of the student's success (or failure) is luck. So, regression to the mean predicts that a student with unusually good performance on one test is likely to do worse on the next one.[265] (Similarly, a student who does particularly badly is likely to improve.) However, teachers who don't understand regression may adopt ineffective pedagogical strategies. For example, assume a teacher rebukes students who do poorly and praises those who excel. Chastised students are likely—simply as a matter of stochastic chance—to do better on their next test, and lauded students to do worse. The teacher, though, incorrectly attributes a causal relationship between his feedback and pupils' subsequent performance, to students' detriment overall.[266] We underestimate the role of chance in predicting events, and overestimate our own influence.

Imputing causation to irrelevant events is common—witness poker players who turn their hats around for luck, or sports fans who believe their team will win if they avoid hearing about the game while it's in progress.[267] Fans, coaches, and television announcers who see a basketball player with a 50 percent field goal percentage on a long streak of made baskets will opine about the player's "hot hand," when in fact this streakiness is predictable just from chance.[268] Fantasy games such as

263. *Id.* at 25.

264. *See* Tversky & Kahneman, *supra* note 229, at 1126.

265. *See, e.g.*, PAULOS, *supra* note 240, at 58.

266. *See* Tversky & Kahneman, *supra* note 229, at 1126–27. Tversky and Kahneman note that using positive rewards has been proved the most successful teaching strategy—a finding at odds with the teacher's conclusion in the example above. *Id.*; *see also* GILOVICH, *supra* note 194, at 27–28.

267. *See, e.g.*, WILLIAM GOLDMAN & MIKE LUPICA, WAIT TILL NEXT YEAR 108–19 (1988) (describing Goldman's belief that he could ensure that the New York Mets would win a key game against the St. Louis Cardinals if only he could avoid seeing the game on television while it was being played).

268. *See* Thomas Gilovich, Robert Vallone & Amos Tversky, *The Hot Hand in Basketball: On the Misperception of Random Sequences*, 17 COGNITIVE PSYCHOL. 295 (1985); *see*

Dungeons & Dragons have been blamed, and banned, for causing teenage suicide, though its reported incidence is roughly that expected for teenagers generally.[269] These false beliefs about causation appeal to our penchant for reason, yet they can lead us to draw incorrect conclusions about an action's effects.

5. Low-Probability Events

People misjudge the true risk of low-probability events. Are you more afraid of shark attack or pig attack? Most people, having seen the movie "Jaws," fear sharks far more. However, pigs kill more people than sharks,[270] as do dogs.[271] We buy lottery tickets whose actuarial value is far less than the ticket's cost. [272] We also purchase insurance, incurring a small, certain loss to protect against the low probability of a larger loss (with a smaller expected value than the certain loss).[273] We fear the risk from vaccinations far more than the record of adverse effects warrants, complicating efforts to prevent diseases such as polio, measles,

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also GILOVICH, *supra* note 194, at 11–17 (reviewing statistical evidence disproving the "hot hand" theory and noting criticism of this conclusion from basketball coaches Red Auerbach and Bob Knight).

269. *See* PAULOS, *supra* note 240, at 168–69; James Brooke, *A Suicide Spurs Town To Debate Nature of a Game*, N.Y. TIMES, Aug. 22, 1985, at B1; Allison Lampert, *Back to the Dungeon*, THE GAZETTE (MONTREAL), Oct. 3, 2004, at A2; Leah Y. Latimer, *"Dungeons and Dragons" Banned by Arlington School Board*, WASH. POST, Aug. 19, 1983, at B5.

270. *See, e.g.*, American Museum of Natural History Shark & Ray Gallery, http://www.amnh.org/learn/pd/sharks_rays/gallery_week1/ (last visited Feb. 19, 2006) (noting that domestic pigs kill more people than sharks).

271. *See* DAVID ROPEIK & GEORGE GRAY, RISK: A PRACTICAL GUIDE FOR DECIDING WHAT'S REALLY SAFE AND WHAT'S DANGEROUS IN THE WORLD AROUND YOU 423 (2002) (finding fifteen deaths of U.S. citizens from dog attacks in 1998, but only one shark attack death in 2000, and estimating the one-year odds of dog bite as more than three times greater than those of shark bite); *see also* Ichthyology at the Florida Museum of Natural History: Shark Attacks, http://www.flmnh.ufl.edu/fish/sharks/attacks/realriskanimal.htm (last visited Feb. 19, 2006) (noting that dogs killed an average of 18 people per year in the United States during the 1990s, while sharks killed only .4 people per year). Security expert Bruce Schneier discusses the pig versus shark risk in an audio interview available at http://ipost.com/rd/9z1zeh2p9cgrhspgut1uog8b71a0nnku4qsah4bktn8; his analysis is based upon mortality data from 1999 through 2002 available at http://wonder.cdc.gov/ mortICD10.html. Pigs kill humans most frequently from assaults such as trampling or biting.

272. *Prospect Theory*, *supra* note 216, at 281.

273. *Id.*

and influenza.[274] We fear death by homicide and death by stroke equally, though stroke kills eleven times as many people each year.[275]

Our fears are driven by biases in perception, not by actual threat levels. We worry more about risks that are new, human-created, imposed on us, or threatening to our children than ones that are familiar, natural, chosen, or threatening to ourselves.[276] We fear harms that "can kill [us] in particularly awful ways, like being eaten by a shark, than [we] are of the risk of dying in less awful ways, like heart disease—the leading killer in America."[277] These perceptual predilections persist across cultures, age cohorts, and genders.[278]

A consequence of this bias is that we focus our attention, and preventive efforts, on relatively unimportant threats. This effect is reinforced by public discussion or media coverage of low-probability risks. After the terrorist attacks in New York City and Washington, D.C. on September 11, 2001, people traveled less by airplane and more by automobile.[279] The prominent, recent, and awful memory of commercial airliners used as missiles overwhelmed the mundane fact that 45,000 people are killed annually on American roads, which is approximately equal to the number of all American dead in the Vietnam War.[280] Air travel is far safer than car travel.[281] The threat of terrorism led people to purchase more handguns, even though the increased risk of accidental death from firearms far outweighed the increased safety from terrorist attack.[282]

Worse, our confidence in our judgments about these risks far outstrips their true accuracy, even when overconfidence results in monetary penalties.[283] Our perceptual problems with low-likelihood risks can cause us to make poor choices; thus, actions that feel safe might actually be dangerous, such as choosing to drive instead of fly.[284]

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274. Valerie F. Reyna, *How People Make Decisions That Involve Risk*, 13 CURRENT DIRECTIONS IN PSYCHOL. SCI. 60, 62–63 (2004); *see also* Donald G. McNeil Jr., *When Parents Say No to Child Vaccinations*, N.Y. TIMES, Nov. 30, 2002, at A1; Amy Waldman, *Distrust Reopens the Door for Polio in India*, N.Y. TIMES, Jan. 19, 2003, at A1.

275. Slovic et al., *supra* note 168, at 467.

276. ROPEIK & GRAY, *supra* note 271, at 16–17.

277. *Id.* at 17.

278. *Id.* at 18.

279. *See* Henry Petroski, *We've Got More Risk Than Our Brains Can Handle*, WASH. POST, June 30, 2002, at B2.

280. PAULOS, *supra* note 240, at 9.

281. Optimistic bias plays a role in this choice—we overestimate our ability to control car accident risk through safe driving.

282. Ropeik & Gray, *supra* note 271, at 15.

283. Slovic et al., *supra* note 168, at 472–75.

284. Ropeik & Gray, *supra* note 271, at 18.

6. Availability and Recall Bias

Cognitively, people are lazy. We prefer, and utilize first, information that is easy to recall. Based on our cognitive functioning, "the perceived likelihood of any given event is tied to the ease with which its occurrence can be brought to mind."[285] This "availability bias" skews the data we select and process. People assign extra weight to recent occurrences, to events with more graphic or salient presentation, and to events easier to recall.[286] We focus on coverage of horrific plane crashes, forgetting the countless (and unremarked-upon) flights that travel safely to their destinations.[287] Our intuitive assessment of information, particularly about risk, is biased towards vivid media depictions and towards threats that seem especially grisly or dreadful.[288] When asked to estimate the likelihood of automobile accidents, people frequently rely on their memory of car crashes they've witnessed or heard about, rather than on broader societal trends.[289]

Powerful images and descriptions exert more influence than mundane ones. After reading a list of more and less famous names, study subjects recalled almost 50 percent more famous names than less-famous ones.[290] We are attracted to, and recall more readily, vivid, recent, or widely covered information, regardless of whether it is accurate or representative. Casinos make considerable money by exploiting this bias. For example, slot machines that "pay off" do so with bells, blinking lights, and the loud noise of coins dropping into the tray, while the vastly greater share of pulls that lose are marked only by silence.[291]

Availability bias, and its effects on information selection and retrieval, can have important consequences for our choices. For example, when considering information about past medical procedures in deciding

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285. Timur Kuran & Cass R. Sunstein, *Controlling Availability Cascades*, *in* BEHAVIORAL LAW & ECONOMICS, *supra* note 202, at 374, 374.

286. Tversky & Kahneman, *supra* note 229, at 1127.

287. Slovic et al., *supra* note 168, at 467 ("[M]uch of the information to which people are exposed provides a distorted picture of the world of hazards.").

288. *Id.* at 485 (attributing the public's reaction to the risks from nuclear power plants in part to the fact that "nuclear power evokes greater feelings of dread than almost any other technological activity"); *see also* Gina Kolata, *Experts Strive to Put Diseases in Proper Perspective*, N.Y. TIMES, July 2, 2002, at F5 (noting the "dread factor" for risks such as airborne toxins and terrorist attack).

289. Tversky & Kahneman, *supra* note 229, at 1127.

290. Amos Tversky & Daniel Kahneman, *Availability: A Heuristic For Judging Frequency and Probability*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 168, at 163, 175 (finding subjects recalled, on average, 12.3 of the 19 famous names, such as Richard Nixon, and 8.4 of the 20 less famous names, such as William Fulbright).

291. *See* PAULOS, *supra* note 240, at 44.

on future treatment, patients may be influenced more by pain's peak intensity than its duration, preferring moderate longer-term pain to short but intense bouts, since sharp suffering is more easily recalled than lower, extended discomfort.[292] We also tend to bias evaluations based on the ease of imagining or envisioning certain outcomes—we may, for example, underestimate an endeavor's risks if those dangers are hard to conceive of.[293]

Recall bias can be equally problematic. Consider the position of someone who is a distinct minority in a group—Shannon Faulkner entering The Citadel,[294] a woman joining an all-male law firm, or the first African-American (male) to join Augusta National Golf Club.[295] People who stand out are more easily recalled. Researchers tested subjects' ability to recall information about individuals observed in a group. Participants could remember information about a minority member better when that person was the sole such person (for example, a single African-American in an otherwise white unit) than when they were in a more mixed grouping (for example, a single African-American in a unit divided equally between blacks and whites).[296] Moreover, settings with single minority members produced more extreme evaluations of that person—assessing them as more talkative, nicer, or more obnoxious—than in a mixed grouping.[297] We need to be aware of the ways in which our brains may be programmed for prejudice. People pay attention to, and recall, certain types of information more readily than others, which can skew how we analyze and how we act.

D. Decision-Making Biases

Biases also impact how we make decisions individually and collectively. Society is pragmatic: we care primarily about what people do, not what they think. Altering the flow of information changes how we behave: what we buy, for whom we vote, what medicines we take. Like our information selection and processing, our decision-making demonstrates consistent, important biases. We fear loss more than we value gain, we prefer the known status quo to change, and we like certainty.

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292. Redelmeier et al., *supra* note 203, at 72.

293. Tversky & Kahneman, *supra* note 229, at 1128.

294. *See* Michael Janofsky, *Citadel, Bowing to Court, Says It Will Admit Women*, N.Y. TIMES, June 29, 1996, at 6.

295. *See* Corey Kilgannon, *For Caddies, a View of the Racial Divide*, N.Y. TIMES, June 17, 2001, at 8WE.

296. Shelley E. Taylor, *The Availability Bias in Social Perception and Interaction*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 168, at 190, 193–94.

297. *Id.* at 194.

1. Loss Aversion

People are risk-averse. Imagine you are offered a bet in a casino. The dealer flips a coin, and while it is in the air, you call heads or tails. Guess correctly and the dealer pays you one dollar; guess wrong, and you pay the casino a dollar. With a fair coin, your expected return is zero—on average, you win 50 percent of the time, and break even. Thus, you should be indifferent in accepting the bet. Few people, though, will take the wager, even if the casino improves the stakes (perhaps offering to pay $1.25 if you win, with the losing penalty unchanged).[298] Facing even stakes, or even somewhat favorable ones, we fear the risk of loss more than we prize the chance to gain.[299] Moreover, gains and losses are measured in relative, not absolute, terms. Consumers are more willing to invest effort to save five dollars on a purchase when the total purchase price is fifteen dollars than when it is 125 dollars.[300]

We are less likely to seek or pay attention to information about losses than foregone gains. For example, one study found people would pay $1.04 on average to decrease risk from pesticides; however, when asked to accept an equal increase in pesticide risk in exchange for compensation, many respondents refused, and the average price of those who accepted was $2.86.[301] Loss aversion is thus vulnerable to framing and to shifts in anchoring.[302] Overall, though, we ignore Bing Crosby and accentuate the negative, fearing losses more than we prize gains.

2. Status Quo Preference

Our preferences also demonstrate inertia: we generally like the status quo best even if it is sub-optimal. For example, consider a wine collector who purchased a number of bottles of Chateau Pétrus at ten dollars each; her wines have appreciated over time and now cost 200 dollars apiece.[303] The collector, though, is neither willing to sell any of her bottles, nor to purchase additional ones, at the going price. Status quo bias leads her to prefer the current situation—neither adding to nor detracting

298. *See Prospect Theory*, *supra* note 216, at 269–70. *See also* Cass R. Sunstein, *Introduction*, *in* BEHAVIORAL LAW & ECONOMICS, *supra* note 202, at 1, 5–6.

299. Daniel Kahneman, et al., *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSPECTIVES 193, 199–203 (1991).

300. *Psychology of Choice*, *supra* note 216, at 457.

301. Kahneman, et al., *supra* note 299, at 194.

302. *See* Robin Gregory, et al., *The Role of Past States in Determining Reference Points for Policy Decisions*, 55 ORGANIZATIONAL BEHAV. & HUM. PROCESSES 195, 196–201 (1993).

303. Kahneman, et al., *supra* note 299, at 194.

from her collection—to any other options.[304] Loss aversion underpins the bias; "the disadvantages of leaving [the status quo] loom larger than advantages."[305]

A study examining electricity consumers' preferences found similar results.[306] The consumers were chosen from two groups with starkly different service reliability. They were asked to choose from six electricity plan options, with variable levels of service and price. Over 60 percent of high-reliability consumers preferred their current option, though it meant foregoing a 30 percent rate reduction, while over 58 percent in the low-reliability group kept their current plan rather than incur increased cost for better service.[307] We're reluctant to give up what we have, even when presented with attractive alternatives. Overall, status quo bias (and its underlying cause, loss aversion) means that we generally prefer our current situation to alternative states.

3. Certainty Preference

People value certainty. We're less impressed by a change that alters risk than we are by an equal-sized shift that eliminates it. This can lead us towards choices that feel safer but that actually make us less safe than the alternatives. Thus, research shows people react more to a reduction in an event's likelihood when it was initially certain, even if the reduction is the same. For example, in one study, subjects preferred to avoid a certain loss of 75 lives than to have an 80 percent chance of losing 100 lives (despite the greater expected loss of 80 lives in the second case), but preferred a 10 percent chance to lose 75 lives (expected loss: 7.5) over an 8 percent chance to lose 100 lives (expected loss: 8).[308] This result holds for practical decisions such as insurance purchases; consumers value "probabilistic insurance, which reduces the probability of loss by half . . . [as] worth less than half the price of regular insurance that eliminates the risk altogether."[309] Insurance companies exploit this cognitive bias, disguising "[t]he probabilistic nature of insurance . . . [with] formulations that emphasize the completeness of protection against identified harms, [though] the sense of security that such formulations provide is an illusion of conditional framing."[310] Certainty is comforting, but not nec-

304. *Id.*
305. *Id.* at 197–98.
306. *Id.* at 198 (citing forthcoming study of California consumers by Hartman, Doane, and Woo).
307. *Id.*
308. *Psychology of Choice*, *supra* note 216, at 455.
309. *Id.* at 456. *See also Prospect Theory*, *supra* note 216, at 269–71.
310. *Psychology of Choice*, *supra* note 216, at 456.

essarily wise. We must make trade-offs in decisions about risk and about protections against it. Cognitively, though, we prefer options that offer, or that appear to offer, absolutes, and this bias can lead us to fail to minimize our overall risk exposure.

We see our world through filters. In choosing data, we select information maintaining an optimistic, self-serving outlook; confirming our positions; and providing consistency with past events. In processing information, we are susceptible to changes in frame or reference point, to stereotypes, to imputing causation based on faulty math, to misperceiving risks, and to remembering vivid, recent data. Finally, once we decide to act, we are risk-averse, prefer the status quo, and prize certainty. These cognitive biases highlight the failings in the legal system's adoption of the marketplace of ideas model.

IV. FAILINGS OF THE MARKETPLACE OF IDEAS

The fact that cognitive biases interfere with our ability to make good decisions has serious consequences for the marketplace of ideas model for regulating communications. This section provides examples that undercut the marketplace theory's validity. The model's assumption that, with time, we will arrive at more truthful conclusions is not compatible with research regarding cognitive biases. Our perceptual filters undercut the conclusion that more information leads to better decisions—indeed, injecting irrelevant information into our thinking can change our conclusions. Human vulnerability to how questions are framed means that framing and history matter. We worry more about the death tax than the estate tax even though they are the same thing, and we cling stubbornly to facts thoroughly disproved.[311] Even in communications as vital and carefully evaluated as political information, our biases greatly affect our decisions, discrediting the marketplace model. The marketplace of ideas does not describe how humans behave, and should thus be discarded as a framework for decisions about regulating communications.

A. More ≠ Better

Adding information to our environment is not necessarily beneficial. First, humans are already saturated with available data. Inexpensive data storage, sorting, and transfer through networked systems such as the Internet means we can access extraordinary volumes of informa-

311. *See, e.g.*, Carl Hulse, *What's in a Name? In Politics, a Lot*, N.Y. TIMES, Feb. 13, 2005, at 2 (describing the political success of framing the estate tax as the "death tax").

tion. This deluge challenges our ability to select relevant data and to filter out noise. We are shifting between scarcities: from scarcity of communications media (such as newspapers or broadcast frequencies) to scarcity of attention. Therefore, policies promoting access to the marketplace of ideas are less relevant.[312] The problem is not a lack of adequate information—it is that we cannot process the data that is already out there. Injecting additional information makes this processing problem even worse.

Second, more information—even irrelevant information—can alter people's analysis and decisions in worrisome ways. For example, a jury simulation found that participants shifted their decisions about the appropriate verdict as more potential verdicts became available, *even if those additional options were irrelevant.*[313] The mock jurors tended to compromise, selecting an intermediate verdict that they did not choose when it was presented as one of only two possible outcomes.[314] This result creates obvious opportunities for strategic behavior by attorneys: it may be advantageous for the defense to offer jurors a range of options (for example, through instructions on lesser included offenses), or it may be harmful if the prosecution's case seems weak. Merely increasing available information can change our choices, even when new data is not related.

Prior proposals for reforming American communications focused on requiring access for all views in all information channels. For example, Jerome Barron argued that because there "is inequality in the power to communicate ideas just as there is inequality in economic bargaining power," we should recognize that "right of expression is somewhat thin if it can be exercised only at the sufferance of the managers of mass communications."[315] For Barron, then, "[c]onfrontation of ideas . . . demands some recognition of a right to be heard as a constitutional principle."[316] Barron's thesis encapsulates access reform proposals: excessive private control over communication channels prevents important, worthwhile information and ideas from reaching the public. Therefore, legal solutions are necessary to limit this control or mandate access to the marketplace of ideas. If not constitutionally required, such measures are at least constitutionally permissible. These access proposals implicitly

312. *See, e.g.*, Barron, *supra* note 24.

313. Mark Kelman, et al., *Context-Dependence in Legal Decision Making*, *in* BEHAVIORAL LAW & ECONOMICS, *supra* note 202, at 61, 62–66 (describing the "compromise effect" in two simulations of a criminal trial).

314. *Id.*

315. Barron, *supra* note 24, at 1647–48.

316. *Id.* at 1678.

follow an anti-trust model, where government intervenes to prevent concentrations of private power that impede important social objectives, such as ensuring robust discussion of policy matters.

The problem with reforms that depend on increasing access is that they accept the underlying mechanics of the marketplace of ideas, and focus on deficiencies in supplying information to that market. In economic terms, they are "supply-side" fixes. Cognitive psychology shows that these reforms are, at minimum, insufficient. If not accompanied by changes addressing how we select and process information, improved access might even be pernicious. Simply adding information to the environment—without regard to its relevance, quality, or presentation—increases demands on consumers' scarce attention and may lead them to shift their analysis and decisions in ways inconsistent with prior expressed preferences. More information can also make it less likely we will come to any decision.[317] Behavioral research thus contradicts the marketplace of ideas. More information is not necessarily better.

B. Framing Matters

The ways in which information is framed for us can decisively affect our choices. For example, framing powerfully alters financial decisions. Psychologist and researcher Robert Cialdini illustrates the power of contextual framing, or what he calls the "contrast principle," in sales situations. He notes that car dealers wait until a buyer has negotiated the new purchase's price before suggesting add-on options; relative to a twenty thousand dollar expenditure, buying a sunroof for several hundred dollars seems a paltry addition.[318] When advising a consumer who wants to buy several clothing items, wise sales personnel help him pick out the most expensive item first, for while a "man might balk at the idea of spending $95 for a sweater . . . if he has just bought a $495 suit, a $95 sweater does not seem excessive."[319] The point is not merely that we evaluate the same purchase, or its monetary equivalent, differently depending on context. It is also that we're vulnerable to strategic behavior by those with influence over our information environment.

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317. *See, e.g.*, Redelmeier & Shafir, *supra* note 223, at 304 (describing how added options caused legislators to refuse to make a decision on which hospital to close in a simulation on health care expenditures); Caplan et al., *supra* note 204, at 1959 (noting when reviewing physicians had information on the outcome of a patient's care, they were less likely to render judgments about the quality of care).

318. ROBERT B. CIALDINI, INFLUENCE: THE PSYCHOLOGY OF PERSUASION 14 (1993).

319. *Id.* at 13.

Framing also matters in political decisions. Our cognitive biases influence public policy discussions. For example, reductions in tax rates are described by proponents as tax relief, framing the change as the alleviation of a burden.[320] Most taxpayers are, unsurprisingly, amenable to this presentation, even if the tax relief does not benefit them personally.[321] Debates on other issues follow similar patterns. If Social Security is portrayed as being in immediate crisis, rather than a slow decline, voters are more likely to favor extensive changes to its "pay as you go" structure.[322] Our preferences flow in part from how issues are framed, and this makes us vulnerable to self-interested actors and policy entrepreneurs.[323] The marketplace of ideas model holds that people arrive at truth regardless of how it is framed or presented, but the radically different success of reforms of the "estate tax" and the "death tax," or our willingness to spend additional money after a purchase that we would have rejected before it, demonstrate the falsity of this conclusion.

C. History Matters

What is past is inevitable; at least, it seems so. People display strong hindsight bias, leading them to select and emphasize information portraying the actual outcome as the most likely one. History matters in our information environment. This conclusion has two important corollaries. First, it is difficult to eradicate hindsight bias, even in well-trained observers and analysts. Second, hindsight bias can lead us to decisions unsupported by the relevant data.

The intractability of the hindsight problem has important consequences. For example, jury instructions admonishing jurors not to overestimate inevitability in cases such as tort suits for negligence are doomed to failure.[324] Experimental tests of such instructions demonstrate their inefficacy; perhaps unsurprisingly, our legal system makes

320. *See, e.g.*, Dana Milbank, *Bush Campaigns for More Tax Relief*, WASH. POST, Oct. 25, 2001, at A3.

321. *See, e.g.*, Alan B. Krueger, *Connecting the Dots From Tax Cuts For the Wealthy to Loss of Benefits*, N.Y. TIMES, Oct. 16, 2003, at C2 (discussing widespread support for the repeal of the estate tax even among people worried about income inequality who would not benefit from the repeal).

322. *See, e.g.*, Mike Allen, *Semantics Shape Social Security Debate; Democrats Assail "Crisis" While GOP Gives "Privatization" a "Personal" Twist*, WASH. POST, Jan. 23, 2005, at A4; Edmund L. Andrews, *Tough Issues, Awaiting Their Turn*, N.Y. TIMES, Apr. 13, 2004, at G1.

323. *See generally* JOHN W. KINGDON, AGENDAS, ALTERNATIVES, AND PUBLIC POLICIES 122–42 (2d ed. 1995).

324. Rachlinski, *supra* note 202, at 103–04.

little effort to employ such remedial measures.[325] The bias leads stock market historians to view crashes, or surges, as obvious; in retrospect, investors seem like fools for investing in "dotcom" stocks such as Internet pet supply distributor pets.com.[326] This bias also has legal repercussions: Wall Street analysts who failed to see the crash coming, or who predicted continued growth, have faced lawsuits from angry investors and regulators.[327] We evaluate past choices in light of later events, and we assume that contemporaneous decision-makers should have had better foresight.

History affects our thinking in another important way. Information—even false information—sticks. We are likely to remain influenced by data even after it's shown to be false. That is why Americans—particularly those supporting the decision to invade—continue to believe that Iraq had weapons of mass destruction in 2003, even though expert investigations concluded that this was not so.[328]

Studies such as this one strike at the heart of one of the basic principles of the marketplace of ideas, showing that good information and ideas do not drive out bad. We are not as amenable to correction, and to re-thinking our positions, as the model describes. Perhaps we correct misimpressions in the long term, but this is limited comfort: as economist John Maynard Keynes noted, "[i]n the long run we are all dead."[329] Since a major purpose of the marketplace of ideas, and communication

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325. *Id.* (citing Kim A. Kamin & Jeffrey J. Rachlinski, *Ex Post ≠ Ex Ante: Determining Liability in Hindsight*, 19 LAW & HUM. BEHAV. 89 (1995)).

326. *See* Kenneth L. Fisher & Meir Statman, *Cognitive Biases in Market Forecasts*, J. PORTFOLIO MANAGEMENT 1, 6–7 (2000); *see generally* JOHN CASSIDY, DOT.CON: THE GREATEST STORY EVER SOLD 25–26 (2002) (describing past bubbles similar to the Internet stock boom).

327. *See, e.g.*, Michael Lewis, *In Defense of the Boom*, N.Y. TIMES, Oct. 27, 2002, at 44.

328. *See, e.g.*, Dana Milbank, *Yawning Reality, Education Gaps Between Two Camps*, WASH. POST, Oct. 24, 2004, at A4 (noting that "72 percent of Bush supporters [during the 2004 election] believed that Iraq had prohibited weapons or a major weapons of mass destruction program" and that a majority believed U.S. weapons inspector Charles A. Duelfer concluded that Iraq had prohibited arms or major programs," although Duelfer's report in fact concluded Iraq did not). For example, a study showed people in Australia, Germany, and the U.S. a list of events from the current conflict in Iraq. Unbeknownst to the participants, listed events fell into three categories: ones that actually occurred; ones reported to have happened but then retracted; and ones the researchers invented. Stephan Lewandowsky et al., *Memory for Fact, Fiction, and Misinformation: The Iraq War 2003*, 16 PSYCHOL. SCI. 190 (2005). While participants did well at spotting fictional events, American subjects generally did not factor retractions into their analysis—even "many of those who remembered a retraction still rated the original claim as true." Sharon Begley, *People Believe A Fact That Fits Their Views Even if It's Clearly False*, WALL ST. J., Feb. 4, 2005, at B1. The researchers explain that people construct mental models to make sense of the world; information undermining that model is discarded or ignored.

329. JOHN MAYNARD KEYNES, A TRACT ON MONETARY REFORM 80 (1923) (emphasis omitted).

generally, is to help us choose enlightened public policies, cognitive biases affecting shorter-term analysis and decisions matter greatly. In this regard, we must be wary not only of our built-in, stubborn predispositions, but also of the risk of deliberate manipulation. As the *Wall Street Journal* notes in its report on the Iraq events study, the "findings also offer Machiavellian possibilities for politicians . . . [who] can make a false claim that helps their cause, contritely retract it—and rest assured that some people will nevertheless keep thinking of it as true."[330]

D. Politics Matter

Americans treasure political communication; it is our nation's most carefully protected discourse. The truth-seeking function of the marketplace of ideas is frequently framed in political terms, through invocation of self-governance, restraint against tyranny, or remembering America's founders. Moreover, we are instinctively, and wisely, skeptical of claims of correctness or falsehood regarding political theories, heeding Justice Holmes's reminder that "time has upset many fighting faiths."[331] We take as a core principle of our political system that citizens consider policy choices carefully and seek consciously to make the best decisions possible. If the marketplace of ideas functions anywhere, it should work in politics. Thus, the powerful effect of cognitive biases in political communication shows the failure of the marketplace model.

The cognitive bias of framing affects political questions as powerfully as framing affected experimental situations. Loss aversion shapes how we approach policy: we are more likely to worry about environmental degradation than to be enthused for environmental improvement. The preference for the status quo bias would favor preservation while the self-serving bias would justify personal choices that harm the environment. We preach energy conservation, but drive gas-guzzling sport utility vehicles.[332]

If the marketplace of ideas functions anywhere, it should work for politics.[333] Political communication is an excellent test for the marketplace of ideas model for three reasons. First, we prize political informa-

330. Sharon Begley, *People Believe a 'Fact' That Fits Their Views Even if It's Clearly False*, WALL ST. J., Feb. 4, 2005, at B1 (quoting Stephan Lewandowsky, lead author of the study).

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

332. *See, e.g.*, Warren Brown, *Gas Prices Haven't Yet Bullied Our Muscle Cars*, WASH. POST, Apr. 11, 2004, at G2.

333. *See* CHIP HEATH & JONATHAN BENDOR, WHEN TRUTH DOESN'T WIN IN THE MARKETPLACE OF IDEAS: ENTRAPPING SCHEMAS, GORE, AND THE INTERNET 2–9 (2003), http://www.igs.berkeley.edu/research_programs/ppt/papers/Gore412.pdf.

tion because of its effect on our lives and society, role in self-expression and actualization, and power to check government abuses. Second, the political arena is a vibrant, highly competitive information environment: candidates, parties, and issue advocates seek assiduously to gain adherents. Finally, our political choices directly affect others—these decisions have stronger externalities than commercial or artistic ones.

Consider, then, Al Gore's invention of the Internet.[334] Chip Heath and Jonathan Bendor emphasize that presidential elections approach the marketplace's ideal: "there are competing ideas . . . stressed by motivated advocates . . . who have easy access to a forum . . . over a time period that allow[s] for ample discussion."[335] Under these conditions, if the marketplace of ideas functions as described, better information should emerge. Heath and Bendor argue that in the case of the Gore presidential campaign it did not.

During the 2000 presidential campaign, Gore was lampooned for his statements about the Internet. During a CNN interview, he stated, "[d]uring my service in the United States Congress, I took the initiative in creating the Internet."[336] This defensible, though quite self-aggrandizing, claim was immediately shortened by both Gore's political opponents and the press into a version where Gore stated he "invented" the Internet.[337] Gore certainly did not invent the technical protocols that underpin the Internet, but he did introduce legislation that had a key effect in popularizing the network by funding a new network backbone and allowing it to be used for commercial purposes.[338]

Heath and Bendor tested three statement versions (the actual one, a claim to have "created" the Internet, and a claim to have "invented" it) on students at non-American universities teaching primarily in English.[339] They presented a hypothetical fact pattern mirroring Gore's situation, including one of the statements, and asked whether the students thought the speaker was truthful, whether he exaggerated, and whether they would vote for him.[340] Gore's actual statement was seen as the

334. *See, e.g.*, Richard Wiggins, *Al Gore and the Creation of the Internet*, FIRST MONDAY, Oct. 2, 2000, http://www.firstmonday.org/issues/issue5_10/wiggins/.

335. HEATH & BENDOR, *supra* note 333, at 7.

336. *Id. See also Transcript: Vice President Gore on CNN's 'Late Edition,'* CNN.COM, MAR. 9, 1999, http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/ transcript.gore/.

337. HEATH & BENDOR, *supra* note 333, at 9–10 (reviewing evidence of Gore's leadership in Congress on initiatives to deploy and commercialize the Internet).

338. *Id.*

339. *Id.* at 11–12 (noting that the authors dropped from the study population any students who indicated they knew the fact pattern was from the U.S. election campaign).

340. *Id.*

most truthful and least exaggerated; the "invented" version received the most negative reactions.[341]

Unfortunately for Gore, his actual statement received the least press coverage. The top fifty U.S. papers contained about twice as many articles with the incorrectly-phrased statement ["invented"] as the correctly-phrased statement ["created"]."[342] Web sites displayed the same coverage pattern.[343] It seems clear Gore sought credit for the Internet's success. But policy and implementation are different. Gore's claim focused on policy, not computer engineering. Despite his campaign's vigorous attempts to manage the information environment, the most accurate version of his statement was the least reported—a pattern that did not change significantly for eighteen months.[344] Moreover, the lexical difference likely mattered politically: the formulation that received the most coverage was also the one that produced the most negative reaction. This had definite consequences in how Gore was perceived as a candidate and how voters decided to cast their ballots.

We prize political communication, and invoke the marketplace of ideas to protect it. Yet examples such as the Iraq events study and the Gore quote analysis suggest flaws in the self-correcting forces this model posits. Less accurate information persists, even when explicitly corrected. It seems Mill was wrong: flawed ideas do not function merely to place truth in sharp relief, but also continue to attract adherents.

V. WHERE NEXT?

There are powerful reasons to protect unfettered communication. However, cognitive biases show that the marketplace of ideas is not one of them. If the marketplace of ideas theory is a flawed model, how should we approach regulating communications? If government seeks to intervene in the flow of information, what criteria should we use to evaluate whether it may do so? I suggest two criteria for judging communication regulation: how we interact with information in the environment in question, and what rationale underlies protecting unconstrained communication in that space. Consider, for example, how voters re-

341. *Id.* at 35 (noting that the differences in whether respondents would vote for the hypothetical candidate based on the three statements were not statistically significant at the standard $P < .05$). The results held for non-partisan speakers, across types of articles, across time periods, and for non-political pieces. *Id.* at 13–14.

342. *Id.* at 13, 31.

343. *Id.* at 14.

344. Heath and Bendor argue that the Internet issue helped create an "entrapping" schema where voters perceived Gore as a liar. *See id.* at 14–21.

spond to the information on ballots, and the variety of reasons that support protecting free exchange of information in different contexts.

A. Interacting with Information: Biases at the Ballot Box

In judging regulation, we should first examine how people interact with information in the context at issue, including how psychological filters shape our behavior. Consider ballots. When we vote, we receive a piece of paper (or view a computer screen) with choices. The state decides what information may, and may not, be presented to us, including the order in which candidates appear, how their names read (consider the ease of recognizing Robert J. Dole versus Bob Dole, or William Jefferson Clinton versus Bill Clinton), and whether third-party endorsements are listed with their entries.[345] Government officials draft summaries of voter initiatives (in states permitting referenda) and approve their wording.[346] The state decides whether to include arguments for and against initiatives on ballots (or in voter guides).[347] In short, the state controls this vital information environment—even data as seemingly natural as party affiliation provide vital clues to voters who may be (rationally) ill-informed.[348] Thus, ballots present issues of framing, anchoring, and recall bias among others. Decisions on "neutral" data can affect outcomes by triggering our cognitive biases.

Ironically, the Supreme Court has worried that ballots could carry too much information. This is in direct contrast to the "more is better" principle inherent in the marketplace model. For example, allowing fusion candidates could sway voters through endorsements from the "Fiscal Responsibility" or "Healthy Planet" parties.[349] The Court has also rejected state attempts to include a notation that a Congressional candidate failed to support a constitutional amendment creating term limits,[350] or one indicating the candidate's race.[351] These concerns betray both a fear voters will be influenced at the last moment by vivid descrip-

345. *See* Elizabeth Garrett, *The Law and Economics of "Informed Voter" Ballot Notations*, 85 VA. L. REV. 1533, 1535–36 (1999); *see also* Timmons v. Twin Cities Area New Party, 520 U.S. 351, 369–70 (1997) (concluding that Minnesota's state ballot "fusion ban" preventing a second party from endorsing another party's candidate on the ballot was justified by "valid state interests in ballot integrity and political stability").

346. *See* DAVID S. BRODER, DEMOCRACY DERAILED 70–72 (2000) (describing California's process for state authorities to summarize an initiative).

347. *Id.* at 111–12.

348. Garrett, *supra* note 345, at 1543, 1548.

349. *Timmons*, 520 U.S. at 365.

350. Cook v. Gralike, 531 U.S. 510 (2001).

351. Anderson v. Martin, 375 U.S. 399 (1964).

tions[352]—a worry implicitly recognizing cognitive biases—and a belief that including a candidate's major party affiliation does not have similar effects on decisions.

Decisions regulating ballot information demonstrate tension between faith in the marketplace of ideas and fear that voters will be misinformed or unduly influenced.[353] This approach ignores both cognitive biases and existing, potent ballot cues. Major party designations serve as powerful proxies for candidates' views, and voters rely on them.[354] The labels "Republican" and "Democrat," for example, play to human tendencies to stereotype, and to assume that one member of a group is representative of its overall characteristics. Cognitive biases operate even with seemingly obvious or neutral information. Initiative descriptions and summaries try desperately to frame referenda. Yet courts fear endorsements from minor third parties, perhaps with cleverly constructed names, or notations focusing attention on a single, charged issue will unduly influence voters.

Despite this muddled analysis, ballot cases rightly recognize that voters operate with important cognitive filters, and that offering more information in the voting booth does not in itself aid decision-making.[355] In assessing regulation of ballot information, courts must recognize that every datum is in play. Candidates have even attempted to change their names to convey additional information.[356] Major party designations are not "natural" appendages to candidates' entries, but important information devices. Citizens must decide how much information candidates, parties, and initiative backers can convey on ballots. We must accept that any decision is vulnerable to strategic behavior. We should analyze ballot content regulation in light of our knowledge of human cognitive biases.

Consider two proposals in the ballot debate: minimalism and candidate statements. A minimalist approach moves information off ballots. It reduces ballot information to the bare minimum to minimize its interaction with our cognitive biases. This option addresses fears about effects of political party stereotypes (Democrats = liberals, Republicans = conservatives) and availability bias (favoring incumbents because we remember them more easily). It includes only candidates' names on ballots, without party affiliation, ballot notations, incumbent designation, or other labels. The order in which candidates are listed would be random-

352. *Cook*, 531 U.S. at 525.
353. *Cf.* Garrett, *supra* note 345, at 1566.
354. *Id.* at 1534 n.3.
355. *See, e.g.*, *Cook*, 531 U.S. at 524–25; *Anderson*, 375 U.S. at 402.
356. Garrett, *supra* note 345, at 1535.

ized among ballots, eliminating framing or anchoring bias. This proposal expressly limits information available to voters at the point of decision because of concerns that unlimited information creates more error through cognitive biases than it saves through targeted information opportunities.

The idea of candidate statements on ballots seeks to replicate the electoral campaign in miniature by allowing candidates to include short statements on ballots.[357] This provides voters with information each candidate considers important at the critical moment. There are clear concerns here—candidates might launch attacks on opponents or lie about their qualifications, and voters might be overwhelmed with data in elections with an exceptionally full ballot.[358] Campaign experts knowledgeable about our psychological filters might structure statements to manipulate voters by playing on biases like risk-aversion or stereotyping.[359] On the other hand, allowing such statements might prove valuable by letting candidates choose what information to present, giving citizens condensed data when deciding, and replacing less rich context clues such as party labels. The candidate statement proposal thus shows the challenges and limits of the marketplace model.

B. Accuracy and Autonomy Instead of the Marketplace of Ideas

There are multiple valid rationales for limiting or checking state intervention in communications. Reviewing courts should try to elucidate the precise rationale for protecting communication in the context at issue. Accuracy, autonomy, maximizing social welfare—each of these rationales is implicated in communications regulation. Medical informed consent regulations show these rationales in competition. For example, if society values accuracy, the law may require doctors to disclose only information about a medical procedure that prods a patient to choose the option that best comports with evidence-based medicine. On the other hand, if society values autonomy, then the law could require doctors to discuss all possible options even if this may lead the patient to choose a treatment that is sub-optimal statistically. In selecting a standard to evaluate communications regulation, we should face the decision between excessive paternalism and harmful autonomy while ensuring constitutionality.

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357. *Id.* at 1584–86.
358. *Id.*
359. *See* BRODER, *supra* note 346, at 69–72.

The U.S. Constitution sets the background rule for communications: laws restricting information are disfavored. This rule, embodied in the First Amendment's guarantee of free speech, protects opinion, argument, and the free flow of information because we view each person as equally capable in making decisions about our collective future.[360] Safeguarding our ability to communicate with minimal restraints demonstrates respect for each person's autonomy and value in contributing to these choices.[361] Allowing discussion and dissent may be a precondition for establishing legitimate procedures, and substantive rules, by which we govern ourselves.[362] Rigorously restraining regulation can check governmental abuses and any efforts the state makes to prevent criticism through restricting communication.[363] Government may be self-interested in regulating communication by seeking to protect a particular political organization or ideology, or to suppress information that could cause disapproval of policy or leaders.[364]

Artistically, we limit regulation of creative communication because we value self-expression.[365] The unfettered exchange of information may offer opportunities to create cultural content as part of semiotic democracy.[366] Expression and discourse contribute to self-determination and self-actualization.[367] Economically, robust communication may advance development.[368] Pragmatically, we may limit regulation, and tolerate inaccurate or low-quality information, because we cannot filter such material without harming the production of more accurate or useful data.[369] We may prevent state intervention where we fear government is no better than the governed at assessing and producing information—

360. *See* C. EDWIN BAKER, HUMAN LIBERTY AND FREEDOM OF SPEECH 48–51 (1989).

361. *See* Owen M. Fiss, *Free Speech and Social Structure*, 71 IOWA L. REV. 1405, 1409–13 (1986).

362. *See, e.g.*, A. Michael Froomkin, *Habermas@Discourse.Net: Toward A Critical Theory of Cyberspace*, 116 HARV. L. REV. 749, 764–77 (2003) (discussing Jürgen Habermas's discourse theory for legitimacy of social and governmental institutions); *but see* SUNSTEIN, *supra* note 31, at 137–39 (noting the complexity of the autonomy concept).

363. *See* Mills v. Alabama, 384 U.S. 214, 218–20 (1966).

364. *See, e.g.*, N.Y. Times Co. v. United States, 403 U.S. 713, 723–24 (1971) (Douglas, J., concurring) (noting that the "dominant purpose of the First Amendment was to prohibit the widespread practice of governmental suppression of embarrassing information" and rejecting the government's attempt to prevent publication of a study on decision making in Vietnam).

365. *See* Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. REV. 1, 2–6 (2004).

366. *See* WILLIAM W. FISHER III, PROMISES TO KEEP 28–31 (2004).

367. *See* SUNSTEIN, *supra* note 31, at 129–30.

368. *See generally* F.A. HAYEK, THE FATAL CONCEIT: THE ERRORS OF SOCIALISM (W. W. Bartley III ed., 1988).

369. This argument is the underpinning for the heightened standard of intent required for defamation for public officials. *See* N.Y. Times Co. v. Sullivan, 376 U.S. 254, 277–83 (1964).

where regulators suffer the same biases, to the same extent, as citizens do.

The marketplace of ideas incorporates all of these rationales for preventing state controls on information. Unfortunately, it also plays on a cognitive bias by creating a mental shortcut with a vivid association. One benefit of smashing the market model is to separate and make explicit each of the different rationales for striking down attempts to regulate communication. Each rationale is valid, at least in certain settings. However, each rationale produces different levels of regulation. Individual autonomy may argue for less control over communication than a Madisonian model of public-minded discourse.[370] Thus, in setting the scope of communication regulation, we must consider why we protect information exchange in a given context, and evaluate what scope that rationale dictates for intervention.

CONCLUSION

The marketplace of ideas is an attractive but false god. It represents an Enlightenment ideal of how people should deliberate and decide. The marketplace model places its faith in reason and affirms that, over time, progress occurs, falsehood is discarded, and people learn from their mistakes. This vision incorporates a Darwinian approach to data: information and ideas that are useful and accurate have a natural advantage. Truth outcompetes lies.

Unfortunately, this appealing depiction is wrong. Human beings have cognitive biases and filters that distort our thinking. We prefer information that reinforces our ego, upholds our existing views, and makes events seem inevitable through hindsight bias. People often become locked into their initial mental framework, and tend to adopt simple beliefs such as stereotypes rather than using more accurate information. We compound this problem by being bad with math—a shortcoming that can be exploited. In short, we are anything but careful, calculating, rational consumers and users of information.

Thus, it is considerably problematic that our legal system has adopted the marketplace of ideas as an organizing model for decisions on communications regulation. In a sense, the legal system itself suffers from a cognitive bias: it reflexively invokes the concept of the marketplace of ideas when ruling on communications regulation, rather than undertaking a more thorough and thoughtful analysis of the issues at hand.

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370. *See generally* SUNSTEIN, *supra* note 31.

The proper response to this failed paradigm is to discard it as a tool. Courts, policymakers, and people should examine communications regulation with a realistic assessment of how humans process information. When judging intervention, we should examine how people interact with information in the environment at issue, and to analyze why we protect communication in that context. If we fear self-interested action by government officials, that is a proper rationale for protecting political discussion, news reporting, or media criticism. If we believe certain types of content are demonstrably harmful—for example, racial epithets or violent pornography—that is a more honest, effective, and defensible rationale for limits than simply declaring this content of "slight social value as a step to truth."[371] Eliminating the marketplace of ideas as our conceptual model does not justify unfettered regulation of communication. Instead, it removes one rationale for a completely *laissez-faire* approach. Skepticism about state intervention in communications is often entirely proper. The marketplace model, though, is no longer a viable rationale for restraint, because its assumptions have been disproved.

The weakness of the marketplace of ideas is the consumers who shop within it. Our perceptual filters, cognitive biases, and heuristics mean that we do not consistently discover truth and discard false information. Therefore, we should discard the theory as an approach to communications regulation and adopt a more realistic approach that expressly considers why we value free discourse.

> We could not possibly be conscious of these things and remember all of them because our mind would be so full of useless details we would be unable to think. From all this awareness we must select, and what we select and call consciousness is never the same as the awareness because the process of selection mutates it. We take a handful of sand from the endless landscape of awareness around us and call that handful of sand the world.
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> Robert M. Pirsig, *Zen and the Art of Motorcycle Maintenance*[372]

371. Chaplinsky v. New Hampshire, 315 U.S. 568, 572 (1942).

372. ROBERT M. PIRSIG, ZEN AND THE ART OF MOTORCYCLE MAINTENANCE 79 (1999).