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SOME SKEPTICISM ABOUT INCREASING SHAREHOLDER POWER†

Iman Anabtawi*

This Article challenges the claim of shareholder primacists that reapportioning corporate governance power away from boards of directors and toward shareholders will benefit shareholders as a class. This claim is premised upon the assumptions that shareholders have harmonious interests and that they will pursue those interests by disciplining managers and increasing shareholder value. I argue that the pursuit of common shareholder interests is unlikely to dominate the actions of shareholders. The largest modern shareholders—those most likely to exercise shareholder power—have private interests that are both substantial and in conflict with maximizing overall shareholder value. As a result, it is misleading to assume that increasing shareholder power will benefit shareholders generally. Instead, it is more plausible that shareholders will use any incremental power conferred upon them to benefit their private interests at the expense of the firm and other shareholders. I contend that this concern poses a sufficient threat to shareholder wealth to warrant caution before implementing corporate governance reforms that would increase shareholder power.

In the shareholder-power debate over how best to apportion corporate decision making between officers and directors, on the one hand, and shareholders, on the other hand, shareholder primacists are gaining ground. According to shareholder-primacy theory, shareholders of the modern publicly held corporation are principals, and managers are their agents in running the firm. Shareholder primacists contend that shareholders would like managers to maximize the long-term value of their shares, but that managers are unlikely to do so because their interests are insufficiently aligned with those of shareholders. According to shareholder primacists, increasing shareholder power would go a long way toward solving the agency problem between managers and shareholders.

On the other side of the debate are director primacists—those who argue in favor of vesting primary decision making authority in a firm’s board of directors. In Stephen Bainbridge’s director-primacy theory, for example, the board of directors is a mechanism for solving the organizational design problem that arises when one views the firm as a
nexus of contracts among various factors of production, each with differing interests and information. The board of directors serves as an efficient, central decision maker within this scheme. Centralizing corporate decision making in a board of directors necessitates conferring upon it considerable discretion, which, in turn, implies limiting shareholder power.

Margaret Blair and Lynn Stout take a different approach in justifying director primacy. Their “team production” model of corporate governance argues that corporate law must address the economic problem of encouraging non-shareholder corporate constituencies, such as executives, rank-and-file employees, creditors and sometimes the local community, to make firm-specific investments in corporations. According to Blair and Stout, one way to do so is to place control of the corporation in the hands of a board of directors that is insulated from shareholder control and enjoys the freedom to take actions that improve the joint welfare of all the firm’s team members. Thus, the proper focus of corporate governance should, in their view, be on designing and implementing incentives for board behavior that do not involve enhancing shareholder disciplining. Instead, team production theory treats directors as “mediating hierarchs” whose job is to balance the interests of all the corporation’s constituencies, thereby serving the interests of the entire firm.

In this Article, I advance a third rationale for vesting primary decision making authority in the board of directors—the need for mediating the various and often conflicting interests of shareholders themselves. I claim that shareholder primacists either ignore or underplay deep rifts among the interests of large blockholders, those shareholders most likely to exercise shareholder power. Instead, they continue to regard shareholders as a monolith with a single, overriding objective—maximizing shareholder value.

This Article disputes the characterization of shareholders as having interests that are fundamentally in harmony with one another. While that conception of shareholders may once have been an accurate generalization, it does not reflect the existing pattern of share ownership in U.S. public companies. Pitted against shareholders’ common interest in enhancing shareholder value are significant private interests. Take, for example, a hedge fund that is a shareholder in a company and that is about to raise capital for a new fund. As part of its marketing effort, it wants to show impressive returns on its prior fund. To generate such returns, the hedge fund is likely to favor policies by the firms in which its investments produce short-term gains, even if a more patient investment orientation would generate higher returns over the long term. In contrast, a pension fund or life insurance company shareholder is more likely to be
concerned about the long-term value of its investments, which will allow it to meet its future obligations. Shareholders have numerous other private interests, some of which have emerged relatively recently, and these are described in detail in Part B. of this Article. On close analysis, shareholder interests look highly fragmented.

Once we recognize that shareholders have significant private interests, it becomes apparent that they may use any incremental power conferred upon them to pursue those interests to the detriment of shareholders as a class. As a result, transferring power from boards to shareholders will not necessarily benefit all shareholders. Indeed, it could reduce overall shareholder welfare. This outcome, of course, is the opposite of that predicted by proponents of increasing shareholder power.

Recent corporate fiascos—Enron, WorldCom, and Adelphia, to name a few—convinced many students of corporate governance that incentive pay and the corporate control market were inadequate devices for disciplining corporate managers. In response, attention has shifted to revisiting the structure of corporate governance to address the agency problem between managers and shareholders. Current reform efforts, often referred to as proposals for “corporate democracy,” would reapportion power away from boards and toward shareholders, to some extent “reunifying” ownership and control in the modern public corporation.

Indeed, the U.S. system of corporate governance leaves ample room for increasing shareholder power. Shareholders have only limited involvement in corporate decision making. The management of a firm is vested formally in its board of directors, subject only to specific shareholder voting rights.

Corporate statutes typically grant shareholders the right to: (1) nominate and elect directors; (2) adopt, amend and repeal bylaws; (3) approve fundamental corporate changes, such as mergers, sales of all or substantially all of the firm’s assets, dissolutions and amendments to the firm’s certificate of incorporation and (4) request board action through shareholder resolutions included in a company’s proxy statement.

In practice, however, the foregoing rights give shareholders little power over corporate decision making. To begin with, the right of shareholders to nominate and elect directors is restricted by their inability to call special shareholder meetings. Shareholders must wait until the next regular annual meeting to present and vote on a proposal to

Shareholders as a Potential Constraint on Agency Costs
replace the company’s existing board of directors, by which time it may be too late to implement any policy supported by the shareholders. Moreover, if a board of directors is staggered, it could take shareholders more than one annual election cycle to replace a majority of the board.\textsuperscript{22} Dissident shareholders contemplating putting forward their own director slate must also incur significant costs to do so.\textsuperscript{23} Waging an expensive proxy contest for control of the board is, therefore, unlikely except with respect to the most significant business decisions.

Similarly, shareholders’ power over bylaws is weaker than it appears. While corporate statutes that grant shareholders the right to amend bylaws permit those bylaws to address business decisions—so long as such bylaws are consistent with state law and a corporation’s charter\textsuperscript{24}—those statutes also vest authority to manage the corporation in the board.\textsuperscript{25} In attempting to accommodate the foregoing provisions, courts have resisted attempts by shareholders to use bylaws to mandate directors’ business decisions.\textsuperscript{26}

With respect to the right of shareholders to approve fundamental board decisions, it is important to note that this is merely a veto power—shareholders cannot initiate such decisions.\textsuperscript{27} Thus, shareholders can block extraordinary board actions, but they cannot initiate any. In addition, very few business decisions fall into this category.\textsuperscript{28}

Finally, because shareholder resolutions are merely precatory if they do not relate to a proper subject for action by shareholders under applicable state law, boards are entitled to disregard them.\textsuperscript{29} To be sure, resolutions that garner substantial shareholder support are likely to get management’s attention. Still, boards commonly decline to implement precatory resolutions that obtain support from even a majority of shares.\textsuperscript{30}

These limitations on the effectiveness of shareholder participation in corporate decision making suggest that shareholders presently have the potential to operate as only a weak constraint on managers. Proponents of increasing shareholder power claim that doing so would reduce agency costs and enhance shareholder value.\textsuperscript{31} They recommend implementing dramatic measures that would fundamentally reapportion the current balance of corporate decision making power between managers and shareholders. These reforms include allowing shareholders to vote (1) to amend a corporation’s charter and change the state in which it is incorporated and (2) to grant themselves through charter provisions the power to initiate and adopt binding resolutions with respect to specific business decisions.\textsuperscript{32} A corporate governance regime that incorporated the foregoing features would recast dramatically the role of
shareholders in corporate governance. It is far from certain, however, that increasing shareholder power would, as its proponents claim, reduce agency costs and increase shareholder value.

Three basic assumptions underlie the case for increasing shareholder power. The first is that the proper role of the corporation is to serve shareholders rather than stakeholders generally.\(^{33}\) Second, the case for increasing shareholder power assumes that shareholders would overcome collective action problems to make use of the power being transferred to them.\(^{34}\) Third, it assumes that shareholders would use their incremental power to discipline managers, thereby benefiting shareholders as a class, as opposed to furthering their private interests.\(^{35}\) If any of these assumptions is not satisfied, then shifting corporate governance power from boards to shareholders may be undesirable.\(^{36}\)

Shareholders can influence management not only to enhance common shareholder value but also to obtain private benefits. This possibility arises whenever shareholders have private interests that diverge from the interests of shareholders generally. In these circumstances, shareholders have an incentive to act in the common interests of all shareholders only when two conditions are satisfied. A shareholder will undertake the costs of disciplining management if its proportionate share of the expected collective benefits from its actions exceeds its expected costs. In addition, the shareholder’s stake in the firm must align that shareholder’s interests with the interests of other shareholders more than its private interests conflict with the interests of those shareholders. In the absence of either condition, (1) there will be no single maximand with respect to which shareholders as a class desire managers to run the firm and (2) it might be rational for any given shareholder to deploy its power to promote its private interests at the expense of common shareholder interests.

Rent Seeking

When shareholders do not agree on a common objective in managing the firm, it may be privately rational for them to engage in rent-seeking activities. “Rent-seeking” is the socially costly attempt to obtain wealth transfers.\(^{37}\) Such behavior can reduce shareholder value.

Transferring power to shareholders likely will exacerbate rent-seeking behavior. The reason for this is that any meaningful expansion of shareholder power would increase the expected benefits to shareholders with private interests of undertaking a given
level of activism. As shareholders step up the pursuit of their private interests, interest costs would rise as corporate managers—weakened by shareholder-empowerment measures—increasingly satisfy those interests. In addition, increased efforts to obtain private benefits (or to counteract the efforts of other shareholders to capture them) would raise total squabbling costs.\footnote{38}

Thus, increasing shareholder power when shareholders have private interests could both reduce the size of the shareholder pie and increase the resources spent competing over how to share it. Part B. shows that there are, indeed, deep rifts among the interests of modern shareholders. These divisions, in turn, imply that increasing shareholder power carries with it the real risk of reducing shareholder value.

\section*{B. Divergent Interests Among Shareholders}

Shareholders, to paraphrase William Chandler III, come in different flavors.\footnote{39} Most observers of corporate governance law, nevertheless, regard divergences in the interests of shareholders as either insignificant\footnote{40} or checked by the corporate law voting principle of majority rule.\footnote{41} This part catalogues five schisms among modern shareholders,\footnote{42} which then turns to the likelihood that these divisions will cause shareholders to promote their private interests at the expense of their common shareholder interests.

\subsection*{Short-term Versus Long-term Shareholders}

One axis of division among shareholders is the time horizon over which they expect to hold their shares. Heterogeneity among shareholders with respect to their expected holding periods can lead to differences in shareholder preferences over corporate decision making. This conflict focuses on whether managers should make decisions for long-term or immediate profits.\footnote{43} A short-term shareholder is viewed as one who seeks to buy and sell stocks with high frequency in an endeavor to profit from market movements.\footnote{44} By contrast, a long-term investor is seen as buying and holding stocks, usually without regard to short-term developments.\footnote{45} Short-term shareholders prefer managers to maximize short-run share price, while long-term shareholders prefer to forego immediate gains in favor of maximizing long-run shareholder value. Thus, the distinction between a short-term and a long-term shareholder turns mainly on whether the shareholder seeks to profit from fluctuations in stock price, without regard to whether those fluctuations will become permanent.

The contention that differences in the time horizons of shareholders can lead to divergent preferences for how a corporation is managed calls for elaboration. According to the
efficient capital markets hypothesis (ECMH), the price of a firm's stock at any given
time accurately reflects all available information about the company. If the ECMH
accurately described stock prices, then short-term stock prices would reflect investors'
fully-informed mean estimates of the fundamental, or long-term, value of securities.
The maximization of short-term value would then be consistent with long-term value
maximization. Thus, in an efficient stock market, the time horizon of a shareholder
should not affect how that shareholder would like to see the firm managed.

The ECMH, however, is no longer regarded as an accurate description of the real
world. Although there is still believed to be some relationship between short-term
stock prices and fundamental value, that relationship is now understood to be extremely
loose. In other words, short-term stock prices may deviate from fundamental values
for extended periods of time.

This recognition presents the possibility of conflicts of interest among shareholders with
divergent time horizons. For example, shareholders with a short timeframe will favor the
inflation of current share prices at the expense of long-run value. On the other hand,
long-term investors will be willing to sacrifice immediate profits for future appreciation.
One example of why short-term stock prices might deviate from their long-term values
involves the valuation of a company's earnings. Numerous studies have shown that the
stock market places a disproportionately high value on a company's near-term earnings
by placing an excessively high discount rate on its future expected earnings. Short-
term investors will, therefore, have a bias for increasing current earnings at the expense
of future earnings. This result can be achieved by, for example, moving expenses from
the current year to the future or by moving revenues from future years to the current
year. Such actions can enhance (or avoid depressing) a company's current share
price but reduce long-run shareholder value.

**Diversified Versus Undiversified Shareholders**

Another fault line separating shareholders is the extent to which their portfolios are
diversified. James Hawley and Andrew Williams have advanced the argument that
the institutionalization of U.S. shareholdings created a new category of shareholders,
“universal owners,” who are characterized by their holdings across a wide spectrum of
the stock market. Because their investment portfolios are so diversified, universal
owners are thought of as “owning the economy.” As Hawley and Williams point out,
“the quintessential universal owners are the largest of the public and private pension
funds,” which have investment portfolios that consist of a broad cross-section of the
economy. Universal owners can be contrasted with undiversified shareholders, such
as inside shareholders\textsuperscript{56} and founding-family shareholders,\textsuperscript{57} who have their wealth disproportionately invested in a given company.

The interests of diversified and undiversified shareholders are likely to conflict in two arenas—risk preferences and concern over externalities. First, the investment opportunities that a firm has available to it vary with respect to risk characteristics. For example, a pharmaceutical company may be faced with the choice of making a significant investment in one of two competing projects: Project A and Project B. Suppose that Project A will yield a steady return of 5 percent a year. Project B, on the other hand, has a 50 percent chance of generating a 40 percent annual return and a 50 percent chance of generating no return. Which project a shareholder may prefer the firm to choose depends on that shareholder’s risk profile.

**Inside Versus Outside Shareholders**

One of the most frequently noted conflicts of interest over the management of a firm arises between inside and outside shareholders.\textsuperscript{58} Inside shareholders are shareholders who are firm employees—either senior executives or rank-and-file workers. Insiders possess firm-specific human capital and therefore have heavy exposure to firm-specific risk. As a result, in making project-selection decisions, for example, insiders seek to minimize firm-specific risk, which they (unlike outside shareholders) cannot diversify away, by under-investing in projects that increase firm risk and over-investing in risk-reducing activities.\textsuperscript{59} In contrast, outside shareholders invest in the firm only externally.

Conventional wisdom holds that insider equity ownership can mitigate the agency problem of insiders pursuing their own interests at the expense of outside shareholders.\textsuperscript{60} Even when an insider’s interests are tied to those of outside shareholders through equity holdings, the insider may still find it beneficial to pursue his private interests at the expense of shareholder value. Such incentives exist whenever the benefit (or cost) to the insider, as a shareholder, of pursuing the superior (or inferior) project is outweighed by the cost (or benefit) to the insider, as an employee, of pursuing the project.

Insiders also have conflicts of interest with outside shareholders in the acquisition context. Specifically, insiders may frustrate or reject attractive acquisition offers that would increase shareholder value but possibly cost them their jobs. In addition, they might be motivated to entrench themselves by adopting (or resisting the repeal of) anti-takeover provisions, such as poison pills. Conversely, top executive insiders may
have golden parachutes in place. If these benefits are sufficiently large, they may encourage managers to support an acquisition that is not in the best interests of outside shareholders.

Public and Union Pension Funds Versus Economic Shareholders

Sometimes, shareholders have targeted, non-economic, interests. The most influential shareholders in this category are public pension funds and labor-union pension funds. These groups have incentives to consider objectives apart from shareholder value in exercising their influence as shareholders.

Like public pension funds, labor-union pension funds have become increasingly significant shareholders. These funds are private pension plans that pool the pension fund money of union members for investment. Union pension funds are subject to the Taft-Hartley Act, which mandates the joint management of union pension funds by trustees appointed by both corporate managers and unions. While the Taft-Hartley Act imposes a fiduciary duty on plan trustees, mandating that all payments be held in trust for the “sole and exclusive benefit of the employees . . . and their families and dependents,” it does not directly regulate the investment activities of pension funds.

Union pension fund trustees are also subject to the fiduciary duties of the Employee Retirement Income Security Act of 1974 (ERISA), which requires “diligence . . . that [would be used] in the conduct of an enterprise of a like character and with like aims,” and requires trustees to diversify, unless it is clearly prudent not to do so. The Department of Labor has given union pension funds leeway in pursuing socially or economically targeted investments. Thus, as Stewart Schwab and Randall Thomas have stated, “within bounds, ERISA—and certainly Taft-Hartley—allows union pension funds to invest in projects that benefit workers, so long as the risk and return is similar to other projects.”

As with other investors with private interests, the preferences of union pension funds parallel those of investors generally in many circumstances. Schwab and Thomas, for example, have emphasized those goals of union shareholder activity that benefit all shareholders, such as attacks on poison pills and excessive executive compensation. Union pension funds, however, often also have an interest in furthering the special labor interests of union members, even at the expense of shareholder wealth. For example, a union pension fund might be seeking union recognition or desire concessions in collective-bargaining negotiations. The latter scenario unfolded last year in connection with a strike by the United Food and Commercial Workers (UFCW),
one of California’s most powerful private-sector unions, against Safeway, Inc. The strike began when the UFCW and Safeway could not agree on terms for a new contract. At the time, the California Public Employees’ Retirement System (CalPERS) owned over $75 million in Safeway stock. CalPERS is a public pension fund overseen by a board of trustees, the former president of which was also the UFCW’s regional executive director. CalPERS exerted pressure on Safeway to accede to union demands while the strike was in progress. After the strike was over, CalPERS announced that it would withhold support for the board reelection of Safeway CEO Steven Burd. Although CalPERS justified its opposition to Burd by a desire to enhance overall shareholder value, many observers concluded that it was designed to respond to Burd’s hardline stance in his negotiations with the UFCW.

**Hedged Versus Unhedged Shareholders**

Continuing innovation in the financial products market is giving rise to yet another tension among shareholders. There are now numerous techniques, including the use of equity derivatives and other financial contracts, that allow shareholders to alter the economic characteristics of their ownership interest in a firm’s shares relative to pure shareholders (shareholders that have not engaged in any derivative transactions with respect to their shares). The result is that shareholders can effectively decouple their voting rights in a firm from their economic exposure to the firm’s performance.

Consider a shareholder that purchases one share of a firm’s stock at the market price of $10 per share and simultaneously purchases an at-the-money put option on the stock. The put option entitles the shareholder to sell, or “put,” the stock to the option counterparty at $10 per share for a designated period of time. As a result, during the term of the option contract, the shareholder is insulated from the risk that the firm’s share price will decline. If the share price falls to $9, the value of the share that the shareholder owns goes down by $1, but the shareholder has the right to sell one share to the put-contract counterparty at $10. Because this latter right is worth $1, the shareholder has insulated itself, or hedged, against the economic consequences of a decline in the firm’s stock price.

As a result of entering into the put contract, the shareholder in the foregoing example does not have the same economic interests as a pure shareholder. Specifically, until the option agreement expires, the shareholder will be indifferent to a decline in the value of the firm’s shares. Indeed, if the shareholder purchased additional put options, its profits would increase directly with decreases in the firm’s stock price. The economic impact of share price movements on the hedged shareholder would be in direct conflict with that on a pure shareholder, whose interest is to maximize share price.
Despite the fact that the hedged shareholder in the above example has altered the economic incentives associated with pure share ownership, that shareholder retains the right to vote its shares.\textsuperscript{79} The default rule of shareholder voting allocates one vote to each common share.\textsuperscript{80} The “one-share/one-vote” rule is not affected by hedging transactions in which a shareholder engages.\textsuperscript{81} Thus, shareholders can exercise voting rights with respect to shares in which they have a positive, zero or negative net economic interest.

The rationale for shareholder activism is grounded in the desire to constrain the interest costs that arise from the separation of ownership and control in the large corporation. The rise of institutional shareholdings offered incentives for shareholders to discipline corporate managers. In Part A., I identified the conditions under which shareholders with private interests would rationally sacrifice overall shareholder value for private gain: Whenever shareholders expect to earn greater returns from advancing their private interests than it costs them as shareholders to do so, they will derive net benefits from using their shareholder power opportunistically. Part B. set forth numerous divisions among the interests of shareholders. Whether such interests will drive the actions of shareholders, however, depends in large part on the constraints on shareholders of pursuing self-serving behavior.\textsuperscript{82}

The main objection to the argument that large shareholders are likely to use their power opportunistically is that their ability to do so is checked by the shareholder voting principle of majority rule.\textsuperscript{83} In this regard, proponents of increasing shareholder power contend that shareholders will not be able to pursue successfully their private agendas to the detriment of shareholders generally because they will be unable to obtain majority support for such initiatives. According to this view, the only proposals that will succeed are those that increase shareholder value because this objective is the only one that shareholders have in common. Schwab and Thomas have noted, for example, that union-shareholder activity encompasses both initiatives aimed at enhancing shareholder value generally and initiatives designed to further unions’ traditional organizing and collective-bargaining goals.\textsuperscript{84} They argue, however, that because other shareholders will be skeptical of proposals that favor the special interests of labor, union-shareholders will have difficulty forming coalitions with them.\textsuperscript{85}

When shareholders have private interests, however, a simple majority voting rule, in which shareholders vote in a binary “yes” or “no” fashion on issues, cannot be relied upon to produce only shareholder value-increasing outcomes. ...
There is evidence indicating that shareholders use direct negotiations with corporate management to bargain for their private interests. In a study of direct negotiations between the Teachers Insurance and Annuity Association-College Retirement Equities Fund (TIAA-CREF), a fund that manages pension money for teachers and other employees of tax-exempt organizations, and companies at which TIAA-CREF made shareholder proposals, 71 percent of the companies reached a negotiated settlement with TIAA-CREF prior to the vote on the shareholder proposal. More generally, Institutional Shareholder Services, a consulting firm that advises institutional investors on corporate governance issues, stated recently that constructive dialogue between shareholders and corporations has replaced confrontation, with communications taking place “off stage, the results out of the limelight.”

Thus, we cannot rely on majority voting to ensure that only shareholder value-enhancing initiatives will succeed. Large shareholders may form coalitions that further their private interests but reduce overall shareholder value. They may also engage in negotiations with corporate management to achieve their own objectives. These possibilities cast doubt on the view that if shareholders are given increased power, then they will use that power to increase shareholder value.

### Conclusion

Should we rely on shareholders to act as effective monitors of management? Others have put forth persuasive arguments for director primacy—a board-centered model for the management of public companies—arguing that we should not. In Stephen Bainbridge’s director-primacy theory, the board of directors “is a sui generis body—a sort of Platonic guardian—serving as the nexus for the various contracts comprising the corporation.” Increasing director accountability to shareholders necessarily involves constraining board discretion. From the director-primacy perspective, however, increasing shareholder power undermines the very raison d’être of boards—to establish a central corporate decision maker with authority to contract for the corporation in the context of differing interests and information among the corporation’s various factors of production. In these circumstances, consensus-based decision making, the alternative to board primacy, is inefficient.

Margaret Blair and Lynn Stout have taken a different approach to justifying the broad discretion vested in boards. Their “team production” view of corporate governance argues that the ex ante wealth of both shareholders and other corporate constituencies is maximized by rules that give directors freedom to consider the interests of all the groups that make specific investments in the corporation. Thus, the proper focus
of corporate governance should, in their view, be on designing and implementing incentives for board behavior that do not involve strengthening shareholders. Instead, team production theory treats directors as “mediating hierarchs,” whose job it is to balance the interests of all the corporation’s constituents, not just shareholders, in serving the interests of the entire firm.93

This article sheds additional light on the shareholder-primacy versus director-primacy debate in that it suggests a further rationale for vesting primary decision making authority in the board of directors. It contends that shareholders have widely divergent interests that may give them incentives to pursue their private objectives at the expense of overall shareholder value. In contrast, directors, who owe fiduciary duties to all shareholders, are more likely to be able to mediate shareholder conflicts and make decisions on behalf of shareholders as a class.

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1 See Lucian Arye Bebchuk, The Case for Increasing Shareholder Power, 118 HARV. L. REV. 833, 842 (2005) (“Effective corporate governance, which enhances shareholder and firm value, is the objective underlying my analysis.”). Later in the article, Professor Bebchuk refers only to the enhancement of shareholder value as his metric for effective corporate governance. Id. at 892 (“I have thus far discussed how giving shareholders the power to make rules-of-the-game decisions would improve corporate governance and increase shareholder value.”); see also id. at 908 (“I have argued that making shareholder intervention possible would operate to reduce agency costs between management and its shareholders and to enhance shareholder value.”).

I refer to this objective as maximizing “shareholder value” or “shareholder wealth.” This is a narrower objective than that of maximizing “firm value,” which incorporates the preferences of nonshareholder constituencies of the firm, such as lenders. See Jill E. Fisch, Measuring Efficiency in Corporate Law: The Role of Shareholder Primacy, 31 IOWA J. CORP. L. (forthcoming 2006) (observing that although “empirical scholars have largely equated firm value with shareholder value, the two concepts are not identical”). For a general discussion of possible corporate finance objectives, see Aswath Damodaran, Corporate Finance: Theory and Practice 11–14 (2d ed. 2001).


4 See id. at 604; Stephen M. Bainbridge, Director Primacy and Shareholder Disempowerment, 119 HARV. L. REV. 1735 (2006) (replying to Bebchuk, supra note 1); see also Jennifer Arlen & Eric Talley, Unregulable Defenses and the Perils of Shareholder Choice, 152 U. PA. L. REV. 577 (2003) (contending that managers have available to them means of evading shareholder oversight in the takeover context through unregulable or unobservable actions and that such behavior could destroy shareholder value to a greater extent than shareholder oversight enhances it).

5 See Margaret M. Blair & Lynn A. Stout, A Team Production Theory of Corporate Law, 85 VA. L. REV. 247, 286 (1999) (emphasizing the role of a firm’s board of directors as mediating conflicts among the firm’s various “team members”); see also Reinier Kraakman et al., The Anatomy of Corporate Law: A Comparative and Functional Approach 18 (2004) (“As a normative matter, the overall objective of corporate law—as of any branch of law—is presumably to serve the interests of society as a whole.”); Martin Lipton & Steven A. Rosenblum, A New System of Corporate Governance: The Quinquennial Election of
Directors, 58 U. CHI. L. REV. 187, 205 (1991) (endorsing a model of the corporation in which the interests of "stockholders, managers, and other constituencies" are relevant).

6 See Blair & Stout, supra note 5, at 288.

7 Id. at 291.

8 Corporate law recognizes that "controlling" shareholders have incentives to engage in self-dealing and thus imposes fiduciary duties on them to minority shareholders. See Zahn v. Transamerica Corp., 162 F.2d 36, 44 (3d Cir. 1947). Noncontrolling shareholders, on the other hand, are presumed to be unable to exercise their power to advance their private interests. See, e.g., Weinstein Enters., Inc. v. Orloff, 870 A.2d 499, 507 (Del. 2005); Citron v. Fairchild Camera & Instrument Corp., 569 A.2d 53, 70 (Del. 1989); Gilbert v. El Paso Co., 490 A.2d 1050, 1055 (Del. Ch. 1984), aff'd, 575 A.2d 1131 (Del. 1990). The leading exceptions in the academic literature to the foregoing generalization are the explorations by Jeffrey Gordon and Edward Rock into the possibility that noncontrolling shareholders will assert their influence in a self-serving manner. See Jeffrey N. Gordon, Shareholder Initiative: A Social Choice and Game Theoretic Approach to Corporate Law, 60 U. CIN. L. REV. 347 (1991); Edward B. Rock, Controlling the Dark Side of Relational Investing, 15 CARDOZO L. REV. 987 (1994).

9 By “private” interests, I mean those interests of a shareholder that are not shared by shareholders generally. See infra note 42.


11 See infra notes 31–32 and accompanying text.

12 Although the phrase “corporate democracy” has been associated with a variety of meanings, I use it here to refer to a greater role for equity investors in corporate governance and more management accountability to shareholders. See Alan R. Palmiter, The Shareholder Proposal Rule: A Failed Experiment in Merit Regulation, 45 ALA. L. REV. 879, 900 (1994).

13 See DEL. CODE ANN. tit. 8, § 141(a) (2001). The typical corporate statutes discussed subsequently in the text above are based on the Delaware General Corporation Law, which applies to the majority of U.S. publicly traded companies. See Lucian Ayre Bebchuk & Alma Cohen, Firms’ Decisions Where to Incorporate, 46 J. L. & ECON. 383, 391 tbl.2 (2003).

14 tit. 8, § 141(k).

15 § 109(a).

16 § 251(c).

17 § 271(a).

18 § 275(b).

19 § 242(b).


21 tit. 8, § 211(d).

22 See ROBERT CHARLES CLARK, CORPORATE LAW § 13.6, at 576 (1986).

23 Because a corporation’s board of directors generally has discretion over whether to pay for the campaign costs of dissident shareholders, shareholders challenging incumbent directors are likely to be reimbursed for their expenses only if they succeed in gaining control over the board of directors. See Lucian Ayre Bebchuk & Marcel Kahan, A Framework for Analyzing Legal Policy Towards Proxy Contests, 78 CAL. L. REV. 1071, 1106-10 (1990).

See Bebchuk, supra note 1, at 846–47.

See supra notes 15–18 and accompanying text.


See, e.g., Bebchuk, supra note 1, at 908 ("[M]aking shareholder intervention possible would operate to reduce agency costs between management and its shareholders and to enhance shareholder value."); see also Donaldson Assures Leading House Democrats About Shareholder Access Proposal, 22 CORP. SECRETARY’S GUIDE: CORP. DIRECTIONS 65 (2005) (reporting Congressional sentiment that the "lack of accountability on the part of boards of directors remains one of the most glaring deficiencies in corporate governance today"). See generally Bernard S. Black, Institutional Investors and Corporate Governance: The Case for Institutional Voice, 5 J. APPLIED CORP. FIN. 19 (1992) (describing the potential benefits of invigorating institutional monitoring of corporate managers).

Bebchuk, supra note 1, at 865–75, 892–98. More limited measures to increase shareholder power that have been advanced recently include: (1) granting shareholders the right to have their director nominees placed on the company's proxy statement and ballot under certain circumstances (Security Holder Director Nominations, Exchange Act Release No. 34-48626, Investment Company Act Release No. 26206 (proposed Oct. 14, 2003)), available at http://www.sec.gov/rules/proposed/34-48626.htm (last visited Dec. 14, 2005); (2) electing directors by majority, rather than plurality vote, see James J. Hanks, Jr., It's All in the Numbers—"Majority Voting" for Directors, INSIGHTS, Mar. 2005, at 2; (3) eliminating staggered boards, see Steven Syre, Directors Feel the Heat, BOSTON GLOBE, Dec. 23, 2004, at C1; and (4) requiring shareholder approval of poison pills, see A New Corporate Governance World: From Confrontation to Constructive Dialogue, 2004 POSTSEASON REPORT 7–8 (Institutional Shareholder Servs., Rockville, Md.), available at http://www.issproxy.com/pdf/2004ISSPSR.pdf.

See id. at 842.

See id. at 842 ("My analysis indicates that the considerable weakness of shareholders in U.S. companies is not a necessary consequence of the dispersion of ownership. This weakness is at least in part due to the legal rules that insulate management form shareholder intervention.").

See id. at 908 ("I have argued that making shareholder intervention possible would operate to reduce agency costs between management and its shareholders and to enhance shareholder value.").

This Article does not address the first assumption above—the debate over whose interests the corporation should serve. Not only has that subject been discussed thoroughly, see supra notes 4–5, it also seems clear that if one believes that stakeholder interests are entitled to weight in corporate governance, then shifting power to shareholders is per se undesirable. Instead, the primary aim of this Article is to explore whether shareholders are likely to make use of any incremental power conferred upon them, and, if so, to what end they will deploy that power.

38 Albert O. Hirschman remarked that dissatisfied members of an organization face a choice between promoting their interests (voice) and deserting the enterprise (exit). ALBERT O. HIRSCHMAN, EXIT, VOICE, AND LOYALTY 30–31 (1970). In effect, increasing shareholder power subsidizes voice, thereby encouraging shareholders to use more of it before exercising their exit option.


40 To the extent attention has been given to investor conflicts of interest, it has addressed intrashareholder conflicts of interest within institutional shareholders; that is, the second-order agency problem between the managers of institutional shareholders and their beneficiaries. These conflicts diminish the disciplining role of institutional shareholders because the managers of institutional investors often face incentives to side with corporate managers, on whom they may rely for business, against the interests of the institutional shareholders’ beneficiaries. Consequently, intrashareholder conflicts of interest raise a separate source of concern about the efficacy of relying on shareholders to discipline corporate managers. See, e.g., Bernard S. Black, Shareholder Passivity Reexamined, 89 MICH. L. REV. 520 (1990). 595–608; John C. Coffee, Jr., Liquidity Versus Control: The Institutional Investor as Corporate Monitor, 91 COLUM. L. REV. 1277, 1321–28 (1991); Edward B. Rock, The Logic and (Uncertain) Significance of Institutional Shareholder Activism, 79 GEO. L.J. 445, 469–76 (1991). But see Gordon, supra note 8 (raising concerns about opportunistic shareholder behavior); Rock, supra note 8 (same).

41 See, e.g., Bebchuk, supra note 1, at 883–84; Stewart J. Schwab & Randall S. Thomas, Realigning Corporate Governance: Shareholder Activism by Labor Unions, 96 MICH. L. REV. 1018, 1082–84 (1998). But see Stephen M. Bainbridge, Director Primacy: The Means and Ends of Corporate Governance, 97 Nw. U. L. REV. 547, 557–58 & 558 n.53 (2003) (pointing out that, under conditions of uncertainty, shareholder opinions are likely to diverge over how best to maximize the company’s share value); Lynn A. Stout, Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation, 81 VA. L. REV. 611 (1995) (arguing that investor disagreement is an important and powerful force that explains many business phenomena and should be taken into account by policymakers).

42 Shareholders’ private interests fall into two, sometimes overlapping, categories. First, certain shareholder private interests are separate from, or “external” to, the shareholder’s investment interest in its shares. In other words, such interests are not related to share value. An example of such an external interest is a union pension fund’s interest in organizing workers or influencing collective-bargaining negotiations. While a shareholder in the union pension fund may have an interest in how a firm deals with these matters, that interest is external to its interest as a pure shareholder. See infra text accompanying notes 73–77.

The second category of shareholder division involves differences of opinion over how to maximize shareholder value given an investor’s peculiar characteristics, such as its investment horizon or tax status. Such private interests are “internal” to a shareholder’s investment interest in its shares in that even if the shareholder had no external interests, its peculiar characteristics would still affect how it desired the firm to be run. Thus, a diversified shareholder would want the firm to undertake riskier projects than would a shareholder with a disproportionately high investment in the firm.

Both types of shareholder division have the potential to generate interest costs and squabbling costs. Shareholders with external or internal private interests may generate interest costs vis-à-vis all other shareholders who do not share such interests to the extent they successfully distort firm decisionmaking toward their own interests. The likelihood that internal private interests will generate interest costs is mitigated, however, by the clientele effect—the notion that investors with similar preferences are attracted to similar types of stocks. See Richard A. Booth, Discounts and Other Mysteries of Corporate Finance, 79 CAL. L. REV. 1053, 1065–66 (1991) (noting that “a[though the taxation of dividends is commonly used to illustrate the clientele effect, it is not the only factor that may attract a particular investor to a particular stock”). When shareholders expend resources to further their external
or internal private interests, or to counteract those of other shareholders, they also incur squabbling costs.


49 See id.

50 See id.


54 Hawley & Williams, supra note 53, at 21.

55 See generally Chamu Sundaramurthy & Douglas W. Lyon, Shareholder Governance Proposals and Conflicts of Interests Between Inside and Outside Shareholders, 10 J. Managerial Issues 30 (1998) (exploring the conflict of interest between internal and external shareholders within the context of shareholder-sponsored proposals to repeal antitakeover provisions). For a more detailed discussion of the private interests that characterize insiders, see infra text accompanying notes 58–60.


60 See id. at 140.
61 See Thomas & Cotter, supra note 30, at 16–17 (comparing levels of shareholder support according to type of shareholder proponent).
62 See Schwab & Thomas, supra note 41, at 1019.
66 Id. § 186(c)(5).
69 Id. § 1104(a)(1)(C).
70 See Schwab & Thomas, supra note 41, at 1080.
71 Id. at 1035.
72 Id.
73 See O’Connor, supra note 63, at 114.
76 Id.
79 See Martin & Partnoy, supra note 78, at 778.
80 Id. at 780–86.
81 See id. at 777–78.
82 Shareholders are not presumed generally to have fiduciary duties to one another. See supra note 8. Shareholders acquire fiduciary duties only when they exert a sufficient level of control over the corporation. See Weinstein Enters., Inc. v. Orloff, 870 A.2d 499, 507 (Del. 2005). The point at which a shareholder becomes a controlling shareholder varies with the facts and circumstances of each case. There is, for example, no minimum percentage ownership requirement that confers controlling status on a shareholder. Rather, a shareholder is deemed controlling and becomes a fiduciary with respect to other shareholders when that shareholder “steps out of [its] role as a stockholder and begins to usurp the functions of director in the management of corporate affairs.” See Gottesman v. General Motors, 279 F. Supp. 361, 383–84 (S.D.N.Y. 1967); see also Weinstein, 870 A.2d at 507 (holding that a minority shareholder must have “actual exercise of control over the corporation’s conduct” in order to acquire fiduciary obligations). In other words, a controlling shareholder is one that can dictate corporate policy. While special interest shareholders employ a variety of means to influence corporate policy, they are typically not in a position to set firm policy. THEIR relationship with the corporations in which they hold shares is therefore
unpoliced by fiduciary duty law. In other words, they are free to trade off overall shareholder value for private gain.

83 See, e.g., Bebchuk, supra note 1, at 883–84; Schwab & Thomas, supra note 41, at 1082–84.

84 See Schwab & Thomas, supra note 41, at 1023.

85 Id. at 1082–83.


87 See A New Corporate Governance World, supra note 32, at 3.

88 Bainbridge, supra note 41, at 550–51 (footnote omitted).

89 See id. at 573.

90 See id. at 572–73.

91 See id. at 558–59.

92 See Blair & Stout, supra note 5, at 288.

93 See id. at 291–92.
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Changing the Terms of the Private Prisons Debate†

Sharon Dolovich

During the 1980s and 1990s, the population of America’s prisons and jails soared to unprecedented levels.1 Watching the costs of incarceration rise accordingly and finding themselves with responsibility for many more inmates than they were able to accommodate in existing facilities, state officials turned to the private sector for help. They were met by entrepreneurs offering a range of services designed to appeal to the overtaxed prison administrator, including everything from the siting and building of new prisons to the day-to-day management of whole inmate populations. By 2003, over 90,000 inmates across the country were housed in prisons and jails run by for-profit prison management companies.2

This emergence of privately-run, for-profit prisons, or “private prisons,”3 sparked a heated debate,4 at the heart of which has been one basic question: should responsibility for offenders convicted by the state be delegated to private, for-profit contractors, or should incarceration continue to be administered exclusively by public institutions staffed by state employees? The private prisons issue has thus widely been viewed as a choice—even a competition—between alternative organizational forms.

But this way of framing the debate—as a choice, or even a competition, between public and private prisons—is the wrong way to think about the issue. This comparative lens only leads us to exaggerate the differences between the two systems, when in fact, heretical though this may sound, in terms of day-to-day structure and functioning, private prisons operate pretty much like public prisons.

The real question is not whether the management structure of our penal facilities should be public or private. It is instead why all our prisons, public and private alike, fall so far short of satisfying our obligations to those we incarcerate. Once we get beyond the comparative frame, a focus on private prisons can shed considerable light on this question, by throwing into sharp relief many problematic aspects of the penal system as a whole which we currently take for granted, and thus no longer really see.

What does the study of private prisons tell us that might shed light on the dynamics of violence and abuse in American prisons? My work in this area suggests that the
danger posed by the state’s use of private prisons to the possibility of safe and humane prison conditions stems from three identifiable practices:

(1) the delegation to prison officials of considerable discretion and power over a largely vulnerable and dependent inmate population, without either adequate strategies for sustaining corrections officials or adequate accountability mechanisms for preventing prisoner abuse;

(2) the contracting out to for-profit entities for the provision of prison services directly affecting the health, safety and well-being of prisoners, in order to save states money on the cost of corrections; and

(3) the unquestioned acceptance of the idea that sentencing policy is appropriately shaped through advocacy by interest groups with a strong financial interest in increased incarceration rates and longer prison sentences.

These practices are not exclusive to private prisons. To the contrary, each is a standard feature of the prison system in general. We should thus expect the dangers they pose to extend equally to public prisons. And if this is so, the lessons that emerge from studying private prisons will have direct application to the penal system more broadly.

In what follows, I offer a brief account of how private prisons work, focusing particularly on the structure of private prison contracts. Given that the contractual structure of private prisons is what most distinguishes private prisons from publicly-run facilities, one might expect the subsequent analysis to reflect the comparative approach, emphasizing differences over similarities. Instead, what we find are lessons with direct application to the prison system in general. These lessons may be briefly summarized as follows: each of the practices enumerated above creates dynamics likely to compromise the possibility of safe and humane prison conditions. A meaningful commitment to this possibility thus requires that these practices be curtailed, or at the very least that they be engaged in warily, with attention to the ways that (1) inadequate accountability mechanisms; (2) contracting out to for-profit entities for the provision of crucial prison services to save money on the cost of corrections and (3) allowing sentencing policy to be influenced by interest groups with a financial interest in increased incarceration can, if we are not careful, create or exacerbate the conditions for prisoner abuse.
Private prison contracts award contractors a set payment per inmate per day in exchange for assuming responsibility for running the facility and providing for inmates’ needs. As Richard Harding puts it, on these arrangements, “the state remains the ultimate paymaster and the opportunity for private profit is found only in the ability of the contractor to deliver the agreed services at a cost below the negotiated sum.”

These contracts present a difficult challenge for contractors seeking to profit from the arrangement. All sides agree that prison contractors must not allow either the quality of conditions of confinement or inmate safety to drop below existing levels. Yet if the state is to reduce the cost of its prisons through contracting out, the contract price must be less than the total cost the state would otherwise incur in operating the facility. And if the private providers are likewise to make money on the venture, they must spend less to run the prisons than the contract price provides. For such arrangements to be remunerative for both parties, therefore, private prisons must be run at a considerably lower cost than the state would otherwise incur in running the same facilities. The contractor thus has an incentive to reduce overhead costs as much as possible.

How might this contract structure affect the conditions of confinement? To put it crudely, the less money spent on meeting inmate needs, the more money goes into the contractor’s pocket. And because labor costs represent the largest item on any prison’s balance sheet, the most obvious place for a prison contractor to cut costs is on staffing and training prison guards. But if contractors cut costs in this area, prisoner safety is likely to be compromised. Guarding inmates requires constant interaction in a tense atmosphere with people who are bored, frustrated, resentful and possibly dangerous. To protect inmates from harm and to ensure their own personal safety under these conditions, prison guards require training, experience, good judgment and presence of mind. But guards who are overworked and under-trained, or who are working in prisons that are understaffed, are at a disadvantage in such a volatile environment, and will thus be less effective at maintaining safe and secure prison conditions. Money-saving strategies that include hiring fewer guards, paying them less and cutting back on their training thus increase the threat to inmates of physical and sexual assault, among other abuses.

Private prison employees are not covered by the civil service protections that public prison guards enjoy, and are unlikely to be unionized. They are thus vulnerable to cuts in their salaries, benefits and training should contractors choose to make them. But even still, it might be argued that the temptation prison contractors face to cut labor costs is effectively checked through the combined effects of several tools of governmental
regulation and oversight, which create incentives for contractors to invest in their labor force notwithstanding the lure of cutting labor costs. However, a careful look at the regulatory mechanisms that are supposed to create such counter-incentives—the threat of legal liability for constitutional violations, the requirement of accreditation by the American Correctional Association (ACA), contractually required monitoring of private prison facilities and the threat of replacement by competing contractors—reveals that none actually operates effectively in this regard. In terms of the courts, the constitutional rights of prisoners have been interpreted extremely narrowly, and even assuming prisoners could demonstrate constitutional violations, procedural restrictions imposed in the last decade on prisoner suits brought in the federal courts can make it very difficult for prisoners even to get a hearing. The prospect of prisoners’ recovery against private prison guards is thus too attenuated to be likely to push contractors to invest adequately in labor. The ACA accreditation process occurs too infrequently, and is too focused on written policies over actual practices, to represent a real incentive to greater contractor investment in labor. Likely because effective monitoring is expensive, the monitoring and oversight of private prisons by state officials, intended to motivate contractual compliance, is in practice extremely limited. And the small number of viable contractors, combined with the cost to the state of switching providers, means that the threat of replacement by competitors does little to promote sufficient investment in staffing and training.

Given these limitations, prison contractors, seeking to increase their margins, may be expected to under-invest in staffing and training in the ways predicted above. And indeed, this is precisely what these contractors have done. Private prison employees do tend to be less qualified (because less well remunerated) and less well-trained than their public sector counterparts. And as a result, as a careful reading of the available data confirms, private prisons on the whole show greater levels of violence even than public prisons.

Viewed through the comparative lens, the foregoing would be perhaps seen as a vindication of public prisons as against private ones. But this conclusion would be absurd, for without a doubt, public prisons, too, can be violent, dangerous, inhumane places. Instead, the above analysis suggests two distinct conclusions, both of which point to practices likely to compromise the humanity of conditions of confinement in all penal facilities, whether public or private. First, a considerable risk to inmates’ health, safety and well-being is created whenever corrections officials are accorded extensive discretion and power over prisoners in the absence of adequate accountability mechanisms for preventing prisoner abuse. And, unfortunately, the regulatory tools
that exist to check prisoner abuse in the public sphere are scarcely more effective than those that apply to the private prison context.\(^12\) (Indeed, in the case of the courts and ACA accreditation, they are identical.) We urgently need, therefore, to strengthen all these tools to ensure that they perform their intended function.

Second, there is a danger to the health, safety and well-being of prisoners whenever the state, in an effort to save money on the cost of corrections, contracts out the provision of essential prison services to companies aiming to make a profit from the venture. This caution extends not just to contracts for running whole prisons, but also to the contracting out of discrete prison services like food service, medical and dental care, psychiatric care, rehabilitative programming and inmate classification. As has just been seen, absent effective checks, we can expect for-profit contractors to cut costs even at the expense of inmates. Creating disincentives to this behavior is, therefore, crucial. But ensuring meaningful oversight and accountability costs money, and any time the states contract out in order to reduce their prison budgets, state officials are going to be reluctant to spend what it takes to ensure prisoners’ ongoing security and well-being. This set of dynamics means that contracting out even discrete prison services to for-profit contractors when the state’s goal is cost-cutting is a recipe for seriously compromised conditions of confinement.\(^13\)

We should thus be wary of contracting with any entities that promise to reduce the cost to the state of providing essential services to prisoners in exchange for the chance to make a profit for themselves. Certainly, experiences with prison health management companies bear out this caution. To take just one example, in 2003 alone, Correctional Medical Services (CMS) took in over $500 million contracting with prisons in 30 states to provide medical care for inmates. Although the company is extremely secretive about its practices,\(^14\) investigations have revealed a litany of stories of inmates who died or suffered serious long-term disability because of treatment delayed or denied;\(^15\) of staff—doctors and nurses—being hired despite their having been suspended from the practice of medicine or otherwise disciplined by the Medical Board issuing their licenses\(^16\) and of policies deliberately designed to minimize the amount of medical care ultimately provided to prisoners in need of treatment.\(^17\)

Meeting inmates’ needs and ensuring their safety is expensive, and requires a certain minimum investment. The example of private prisons teaches that if a proposal for contracting out necessary prison services offers drastic or even noteworthy cuts in state expenditures and also anticipates a financial benefit for the contractor, the proposal must be closely scrutinized. And we also ought to scrutinize carefully any independent
efforts on the part of state officials to make publicly-run prisons financially self-sustaining or to run them at a profit. State corrections officials are scarcely immune from pressures to reduce the cost of running the prisons. And depending upon the approach, these efforts, too, could well pose a risk of serious harm to inmates.

Opponents of private prisons raise a further concern, one not directly arising from the operation of private prisons themselves, but rather from the possible political activity of the emergent private prison industry. This concern is that the state’s use of private prisons could create a powerful interest group with a financial interest in increased incarceration and the political power to influence sentencing policy in this direction, regardless of whether the ensuing punishments would be justifiable in terms of legitimate punitive purposes. The premise of this concern—one to which all citizens may be expected to subscribe—is that prison sentences are illegitimate to the extent that they are imposed only in order that other members of society might benefit financially. And the worry is that, should the private prison industry, which stands to gain financially from increased incarceration, enjoy undue influence over the direction of sentencing policy, we could not be sure that the sentences ultimately imposed were legitimate and not merely a way to secure healthy returns for the private prison business.

Put in these stark terms, this concern may seem far-fetched. But interestingly, what one finds in the private prisons literature is not a denial that the state’s use of private prisons could create this dynamic, but instead the assertion that, even were a private prison lobby empowered to affect prison sentences in the way just described, it would hardly be unique. To the contrary, we are told, such a lobby would enter a politicized arena in which powerful interest groups already work to influence criminal justice policies in ways consistent with the financial interests of their members. That this is so is incontrovertible. Perhaps most notorious in this regard is the California Correctional and Peace Officers’ Union (CCPOA), which represents all of California’s correctional officers. One of the most powerful lobby groups in California, CCPOA consistently supports state legislation providing for enhanced sentencing, seemingly regardless of the legitimacy of the punishments thereby imposed. But it is not just prison guards who view harsher sentencing policies through the lens of financial advantage. Even legislators have come to view prison policy as a means to feather their own nests and those of their constituents, and routinely jockey to have new prisons built in their districts as a means of economic development. Of course, once the prisons have been built, sustaining the financial position of the communities that won them...
requires maintaining or even increasing incarceration levels. Legislators know this, as do their constituents. There is thus the possibility that sentencing policy is shaped with this set of interests in mind, and that some voters, in advocating legislation that is “tough on crime,” are more concerned with their pocketbooks than with ensuring that only those who deserve to be incarcerated are sentenced to prison time.

The fact, however, that this same dynamic is not exclusive to private prisons is hardly a reason for unconcern. To the contrary, it is all the more reason to question the legitimacy of existing sentencing policy.

To a great extent, the current state of conditions in America’s prisons is traceable to extreme overcrowding, a situation stemming from the unprecedented increase in America’s prison population over the past two decades. And this increase is itself traceable to major policy shifts in national sentencing policy. Mandatory minimums for drug offenders; “three strikes” (particularly the California version, strongly supported by CCPOA); “truth in sentencing”; the decline of indeterminate sentencing and the abolition of discretionary parole: all these policies and trends have combined to yield today’s phenomenon of mass incarceration.

Would the same policies have been enacted were the development of sentencing policy free from the influence of parties viewing incarceration as a strategy for economic development or wealth generation? It is impossible to say. But the fact that we cannot definitively answer this question in the affirmative should give us pause. Whatever we might think of an interest group model of politics, in which individual groups seek to influence policies in ways that further their economic interests, this model is out of place when the issue is criminal punishment. Incarceration is among the most severe and intrusive manifestations of power the state exercises against its own citizens. When the state incarcerates, it strips offenders of their liberty and dignity and consigns them for extended periods to conditions of severe regimentation and physical vulnerability. And the more individuals incarcerated, the more compromised those conditions are likely to be. It is, therefore, imperative that punishments be imposed parsimoniously and only for legitimate reasons.

The interest group model of politics is deeply entrenched in American political life. It is thus hard even to know what to do with the idea that the use of this model might be inappropriate in the context of criminal sentencing, at least to the extent that advocates seek financial gain rather than punishment for legitimate reasons. But at the very least, it bears questioning the notion that sentencing policy is appropriately shaped according to this standard model. Prisons are big business in the United States
today, and the more prisons there are, the bigger the business. This fact alone should make us skeptical of the mass incarceration that currently defines the American penal system—and of the political processes by which this phenomenon has come about.

Conclusion

The debate over private prisons has largely been framed as a choice between public prisons and private ones. I have suggested that this is the wrong way to think about the issue. Exploring the problems with private prisons does not vindicate the public system. It instead raises questions about a range of penal practices operative in the prison system in general, practices that we have long taken for granted and thus no longer question. The challenge is to get past the false opposition between public and private. Only then will we recognize the way the study of private prisons operates as a “miner’s canary,” warning us that not just the structure of private prisons but also that of our punishment practices in general may need serious reconsideration.
† This essay is based on testimony given at hearings held by the Commission on Safety and Abuse in America’s Prisons in St. Louis in November 2005. See www.prisoncommission.org. For a longer and more fully elaborated exploration of the issues raised here, see Sharon Dolovich, State Punishment and Private Prisons, 55 Duke L.J. 437 (2005).

1 In 1985, there were over 740,000 people behind bars in the United States, up from 226,000 ten years previously. By 1990, this number had hit 1.1 million; by 1995 it was almost 1.6 million, id., and by 2005, it was almost 2.2 million. U.S. Dept of Justice, Sourcebook of Criminal Justice Statistics, available at http://www.albany.edu/sourcebook/toc_6.html.

2 See Paige M. Harrison & Jennifer C. Karberg, Bureau of Justice Statistics, U.S. Dept. of Justice, Bulletin No. 203947: Prison and Jail Inmates at Midyear 2003 (2004) (reporting that private prison facilities held 94,361 inmates at mid-year 2003). In the late 1990s, the capacity of private prisons was reportedly as high as 120,000 beds. But according to the United States Department of Justice, Bureau of Justice Statistics, the number of inmates actually incarcerated in private facilities in 1999 was just shy of 70,000. See Allen J. Beck & Jennifer C. Karberg, Bureau of Justice Statistics, U.S. Dept. of Justice, Bulletin No. 185989: Prison and Jail Inmates at Midyear 2003 (2004), supra (reporting that the number of private prison inmates at mid-year 2000 was up 9.1% from the previous year, which would have put the actual number of inmates housed in private facilities in 1999 at 69,093). By mid-year 2003, this number reached an apparent high of 94,361. See Harrison & Karberg, supra.

The figure of 120,000 thus appears exaggerated as an indicator of the actual market share of private prisons.

3 Richard W. Harding, Private Prisons and Public Accountability 2 (1997) [hereinafter Harding 1997] (defining private prisons as “arrangements whereby adult prisoners are held in institutions which in a day-to-day sense are managed by private sector parties whose commercial objective is to make a profit from such activities”).

4 This debate, which continues today, has generated a voluminous literature. See Dolovich, supra, at 440 n. 4 (collecting sources).

5 Harding, supra note 3, at 2.


7 Indeed, some states make such cost savings a condition of contracting, writing the requirement right into the statutes. The Tennessee statute, for example, provides that no contract bid may be accepted unless “the proposer’s annual cost . . . is at least five percent (5%) less than the likely full cost to the state of providing the same services . . . .” Tenn. Code. Ann. § 41-24-104(c)(1)(E) (2004); see also Fla. Stat. 957.07 (2004) (providing that the [Corrections Privatization] Commission may not enter into a contract . . . unless it determines that the contract will result in cost savings to the state of at least seven percent over the public provision of a similar facility”) (quoted in Richard Harding, Private Prisons, 28 Crime & Just. 265, 271 (2001)).

8 As one industry observer explained it early on, because such a high percentage “of a prison’s budget goes to staffing and training,” private providers “must reduce expenditures in these areas if they are going to make a profit.” Douglas W. Dunham, Note, Inmates’ Rights and the Privatization of Prisons, 86 Colum. L. Rev. 1475, 1498 n.158 (1986) (quoting Richard Ford, Director of Jail Operations, Natl Sheriffs’ Ass’n).

9 True, unlike public prison guards, private prison guards are not entitled to qualified immunity from constitutional claims brought under § 1983. See Richardson v. McKnight, 521 U.S. 399, 412 (1997). But this doctrinal advantage is unlikely to make much difference to private prison inmates. Such prisoners will only benefit from Richardson where judges find the violation of a constitutional right that had not heretofore been “clearly established.”
Harlow v. Fitzgerald, 457 U.S. 800, 818 (1982). Only in such cases could a prison guard plausibly claim qualified immunity, and thus only in such cases would Richardson’s abrogation of this defense for private prison guards effect a substantive change to the result. If, however, courts are to find that prisoners have constitutional rights not already clearly established, judges must expand the set of prisoners’ constitutional rights already recognized. And at present, there is little reason to expect federal judges to be willing to do so. Only during the late 1960s and 1970s did the Supreme Court seem willing to extend prisoners’ constitutional protections. And even during that brief period, the extent of this willingness was limited. The decades since, moreover, have seen a reinstatement of the “hands-off” attitude that predated the prisoners’ rights movement. This recent retrenchment has been marked by a series of decisions paring back on the rights articulated during the period of reform and creating new and substantial hurdles to the success of prisoners’ constitutional claims. And these conditions are unlikely to change while public attitudes to incarcerated offenders remain as they are. Thus the denial to private prison guards of the defense of qualified immunity is unlikely to benefit sufficient numbers of inmate plaintiffs to act as a meaningful check on the excesses of private contractors.

10 I support these claims more fully in Dolovich, supra, at 480-500.

11 See id. at 502-06.

12 See id. at 506-10.

13 All our prisons—“public” as well as private—contract out a range of necessary services to private for-profit contractors in order to save money on the cost of corrections. The alternative to private prisons is thus not wholly “public” prisons, but rather prisons in which state-employed prison administrators contract out discrete services to for-profit providers who, in their spheres, are subject to the same pressures and temptations as private prison providers.


16 See Andrew Skolnick, Prison Deaths Spotlight How Boards Handle Impaired, Disciplined Physicians, J. AM. MED. ASS’N, Oct. 28, 1998, at 1387 (detailing CMS’s hiring practices, which include hiring medical personnel whose licenses have been suspended or revoked by state medical boards); id. (explaining that some states allow the reinstatement of medical licenses restricting the holder to “practice in a penal institution”).

17 One former CMS employee, who served for five years as a supervising nurse for CMS, recounted a host of such policies including those made to reduce the number of doctors’ visits:

Appointments were made for weeks or months down the road, knowing that the inmate would not be there anymore. Or we would make appointments for days that we knew the inmate was going to be in court. They don’t keep the trial dates in the medical file, but you just call the booking desk up front and ask them when the trial date is. Then you make their next appointment for that date. We were told to tell them, there was a canned phrase, “Don’t worry, you have an appointment. We just can’t tell you when it is because of security reasons.” So you would be consoling someone, knowing full well that they weren’t going to get to see anybody. You just put them right back at the bottom of the list again.

Hylton, supra note 14, at 53.

18 See, e.g., Logan, supra note 6, at 152-59.

19 See, e.g., Dan Morain & Jenifer Warren, Battle Looms over Prison Spending in State Budget, L.A. TIMES, Jan. 22, 2003, at 1 (noting that the “26,000-member prison guards union...is among the biggest campaign donors in California, giving $3.4 million to...[California
Governor Gray Davis directly and indirectly since his first run for governor in 1998, including more than $1 million last year alone”.

20 For example, in 1999, the California legislature approved a bill to establish a $1 million pilot program that would provide alternative sentencing for some nonviolent parole offenders. CCPOA, however, was opposed. The union presumably expressed this opposition to Governor Gray Davis, for despite the widespread bipartisan support the measure enjoyed, Governor Davis—who had received $2.3 million in contributions from CCPOA during his previous election campaign, vetoed it. See Judith Tannenbaum, Prison’s a Growth Industry, S.F. CHRONICLE, Sept 27, 1999, at A25.

Jerry Kang’s teaching and scholarly pursuits center around civil procedure, communications and race. Professor Kang has published on such important communications topics as cyberspace privacy, pervasive computing, social cognitive analyses of mass media policy and cyber-race. He authored Communications Law & Policy: Cases and Materials (2d edition Foundation 2005), a leading casebook in the field. An expert on Asian-American communities, he is co-author of Race, Rights, and Reparation: The Law and the Japanese American Internment (Aspen 2001). He joined UCLA School of Law in fall of 1995 and was elected Professor of the Year in 1998, and received the Rutter Award for Excellence in Teaching in 2007.
Recent social cognition research has provided stunning evidence of implicit bias against various social categories. In particular, it reveals that most of us have implicit biases against racial minorities notwithstanding sincere self-reports to the contrary. These implicit biases have real-world consequence—in how we interpret actions, perform on exams, interact with others and even shoot a gun. The first half of this Article imports this remarkable science into the law reviews and sets out a broad intellectual agenda to explore its implications. The second half examines where implicit bias comes from, and focuses on vicarious experiences with racial others mediated through electronic communications. This, in turn, raises a timely question of broadcast policy sparked by the FCC’s controversial 2003 Media Ownership Order. There, the FCC repeatedly justified relaxing ownership rules by explaining how it would increase, of all things, local news. But local news is replete with violent crime stories prominently featuring racial minorities. Consumption of these images, the social cognition research suggests, exacerbates our implicit biases. In other words, as we consume local news, we download a sort of Trojan Horse virus that increases our implicit bias. Unwittingly, the FCC linked the “public interest” to racism. Potential responses, such as recoding the public interest and examining potential firewalls and disinfectants for these viruses, are discussed in light of psychological, political and constitutional constraints.

“There is no immaculate perception.”
—Commonly attributed to Nietzsche

“You are what you eat.”
—Nutritional maxim

“In all fighting, the direct method may be used for joining battle, but indirect methods will be needed in order to secure victory.”
—Sun Tzu
Consider the following studies, with an open mind.

Computer Crash. Social cognitionist John Bargh asked participants to count whether an even or odd number of circles appeared on a computer screen. After the 130th iteration, the computer was designed to crash, and the participants were told to start over. A hidden video camera recorded their reactions. Third-party observers then evaluated those recordings to measure participants’ frustration and hostility. What neither participants nor observers knew was that for half the participants, a young Black male face was flashed subliminally before each counting iteration; for the other half, the face was White. As rated by the observers, those who had been shown the Black faces responded with greater hostility to the computer crash.

Mug shot. Political scientists Frank Gilliam and Shanto Iyengar created variations of a local newscast: a control version with no crime story, a crime story with no mug shot, a crime story with a Black suspect mug shot and a crime story with a White suspect mug shot. The Black and White suspects were represented by the same morphed photograph, with the only difference being skin hue—thus controlling for facial expression and features. The suspect appeared for only five seconds in a ten-minute newscast; nonetheless, the suspect’s race produced statistically significant differences in a criminal law survey completed after the viewing. Having seen the Black suspect, White participants showed 6% more support for punitive remedies than did the control group, which saw no crime story. When participants were instead exposed to the White suspect, their support for punitive remedies increased by only 1%, which was not statistically significant.

Math Test. Social psychologist Margaret Shih asked Asian American women at Harvard University to take a hard math test. Before taking the exam, each participant answered a questionnaire designed to prime subtly different social identities: female (with questions relating, for example, to coed dormitory policy) or Asian (with questions relating, for example, to language spoken at home). A control group answered questions related to neutral topics, such as telecommunications usage. As measured by an exit survey, these questions had no conscious impact on self-reports of test difficulty, self-confidence in math ability, the number of questions attempted or how well participants thought they did. Yet something happened implicitly. The group that had its Asian identity triggered performed best in accuracy (54%); the group that had no identity triggered came in second (49%) and the group that had its female identity triggered ranked last (43%). “Being” Asian boosted, while “being” female depressed, math performance. Of course, these students were both.
Shooter Bias. Social cognitionist Joshua Correll created a video game that placed photographs of a White or Black individual holding either a gun or other object (wallet, soda can, or cell phone) into diverse photographic backgrounds.5 Participants were instructed to decide as quickly as possible whether to shoot the target. Severe time pressure designed into the game forced errors. Consistent with earlier findings, participants were more likely to mistake a Black target as armed when he in fact was unarmed (false alarms); conversely, they were more likely to mistake a White target as unarmed when he in fact was armed (misses). Even more striking is that Black participants showed similar amounts of “shooter bias” as Whites.

What is going on here? Quite simply, a revolution. These studies are the tip of the iceberg of recent social cognition research elaborating what I call “racial mechanics”6—the ways in which race alters intrapersonal, interpersonal and intergroup interactions. The results are stunning, reproducible and valid by traditional scientific metrics. They seriously challenge current understandings of our “rational” selves and our interrelations.

In Part I, I import crucial findings from the field of social cognition with emphasis on the recent “implicit bias” literature. This research demonstrates that most of us have implicit biases in the form of negative beliefs (stereotypes) and attitudes (prejudice) against racial minorities. These implicit biases, however, are not well reflected in explicit self-reported measures. This dissociation arises not solely because we try to sound more politically correct. Even when we are honest, we simply lack introspective insight. Finally, and most importantly, these implicit biases have real-world consequences—not only in the extraordinary case of shooting a gun, but also in the more mundane, everyday realm of social interactions.

A vast intellectual agenda opens when we start probing what this new knowledge might mean for law. I start by asking a fundamental question: “Where does bias come from?” One important source is vicarious experience with the racial other, transmitted through the media. If these experiences are somehow skewed, we should not be surprised by the presence of pervasive implicit bias. What, then, might we do about such media programming given the rigid constraints of the First Amendment? To be sure, private actors of good faith can voluntarily adopt best practices that decrease implicit bias and its manifestations. But can the state, through law, do anything?

If there is any room for intervention, it would be in the communications realm of broadcast, which enjoys doctrinal exceptionalism. In broadcast, notwithstanding the
First Amendment, we tolerate the licensing of speakers. In broadcast, we tolerate suppression of speech we dislike, such as indecency and violence. In broadcast, we tolerate encouragement of speech we like, such as educational television and local-oriented programming. All this is in the name of the “public interest,” the vague standard that Congress has charged the Federal Communications Commission with pursuing.

That “public interest” standard was recently reshaped in the controversial June 2003 Media Ownership Order. There, the FCC repeatedly justified relaxing ownership rules by explaining how such changes would increase, of all things, local news. Since local news was viewed as advancing “diversity” and “localism,” two of the three core elements of the “public interest,” any structural deregulation that would increase local news was lauded.

Troubling is what’s on the local news. Sensationalistic crime stories are disproportionately shown: “If it bleeds, it leads.” Racial minorities are repeatedly featured as violent criminals. Consumption of these images, the social cognition research suggests, exacerbates our implicit biases against racial minorities. Since implicit bias is fueled in part by what we see, the FCC has recently redefined the public interest so as to encourage the production of programming that makes us more biased. Unwittingly, the FCC linked the public interest to racism. No one spotted the issue for the Commission.

A. Racial Schemas

1. Schemas Generally—A schema is a “cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among those attributes.” For instance, when we see something that has four legs, a horizontal plane and a back, we immediately classify that object into the category “chair.” We then understand how to use the object, for example, by sitting on it. This schematic thinking operates automatically, nearly instantaneously.

We employ schemas out of necessity.

Different schema types exist for different types of entities, including human beings. When we encounter a person, we classify that person into numerous social categories, such as gender, (dis)ability, age, race and role. My focus is on race.

2. Racial Schemas—Through law and culture, society provides us (the perceivers) with a set of racial categories into which we map an individual human being (the target) according to prevailing rules of racial mapping. Once a person is assigned to a racial category, implicit and explicit racial meanings associated with that category are
triggered. These activated racial meanings then influence our interpersonal interaction. All three elements (presented as ovals in Figure 1)—racial categories, racial mapping rules and racial meanings—constitute components of the racial schema.

Critical race scholars regularly repeat the mantra that “race is a social construction.”11 My social cognitive account provides a particularized understanding of that general claim: all three components—racial categories, mapping rules and racial meanings—are contingent, constructed and contestable. Not one of these elements is biologically inevitable.

In sum, schemas automatically, efficiently and adaptively parse the raw data pushed to our senses. These templates of categorical knowledge are applied to all entities, including human targets. Racial schemas, because they are chronically accessible, regularly influence social interactions.

3. Automaticity—The Computer Crash experiment reveals that we do not have to consciously “see” the Black male face for it to influence our behavior. Such findings indicate that schemas operate not only as part of a conscious, rational deliberation that, for example, draws on racial meanings to provide base rates for Bayesian calculations (what social cognitionists might call a “controlled process”). Rather, they also operate automatically—without conscious intention and outside of our awareness (an “automatic process”).12

To summarize: we think through schemas generally, and through racial schemas specifically, which operate automatically when primed, sometimes even by subliminal stimuli. The existence of such automatic processes disturbs us because it questions our self-understanding as entirely rational, freely choosing, self-legislating actors. We
are obviously not robots that mechanically respond to stimuli in precisely programmed ways. We do respond to individuating information, when we are motivated and able to do so. Nevertheless, we ignore the best scientific evidence if we deny that our behavior is produced by complex superpositions of mental processes that range from the controlled, calculated and rational to the automatic, unintended and unnoticed. Finally, we must recognize that these biases are not random errors; rather, they have a tilt. After all, the participants in the Computer Crash experiment got more hostile, not friendlier, after being flashed Black faces. Why?

B. Implicit Bias

1. The Problem: Opacity—Social psychologists have long sought to measure the nature and content of the racial meanings contained within our racial schemas. One way to measure is simply to ask people directly. But are such self-reports trustworthy? An individual may feel awkward showing her ambivalence, anxiety or resentment toward specific racial categories.13

More troubling, we may honestly lack introspective access to the racial meanings embedded within our racial schemas. Ignorance, not deception, may be the problem. Relatedly, our explicit normative and political commitments may poorly predict the cognitive processes running beneath the surface. It is as if some “Trojan Horse” virus had hijacked a portion of our brain

2. The Solution: Measuring Speed—How have social cognitionists measured the bias in racial meanings if it is so opaque? One method has been to use sequential priming procedures that take advantage of the automaticity of schemas. The Implicit Association Test (IAT) has become the state-of-the-art measurement tool.14 The IAT examines how tightly any two concepts are associated with each other. In a typical experiment, two racial categories are compared, say “Black” and “White.” Next, two sets of stimuli (words or images) that correspond to the racial meanings (stereotypes or attitudes) associated with those categories are selected. For example, words such as “violent” and “lazy” are chosen for Blacks, and “smart” and “kind” for Whites.

Participants are shown a Black or White face and told to hit as fast as possible a key on the left or right side of the keyboard. They are also shown words stereotypically associated with Blacks or Whites and again told to hit a key on the left or right side of the keyboard. In half the runs, the Black face and Black-associated word are assigned to the same side of the keyboard (schema-consistent arrangement). In the other half, they are assigned opposite sides (schema-inconsistent arrangement). The same goes for the White face/White-associated stimulus combination.
Tasks in the schema-consistent arrangement should be easier, and so it is for most of us. How much easier—as measured by the time differential between the two arrangements—provides a measure of implicit bias. The obvious confounds—such as overall speed of participant’s reactions, right- or left-handedness and familiarity with test stimuli—have been examined and shown not to undermine the IAT’s validity.

3. The Results: Pervasive Implicit Bias—Using the IAT and similar tools, social cognitionists have documented the existence of implicit bias against numerous social categories. According to Nilanjana Dasgupta, the “first wave” of research demonstrated that socially dominant groups have implicit bias against subordinate groups (White over non-White, for example). By her count “almost a hundred studies have documented people’s tendency to automatically associate positive characteristics with their ingroups more easily than outgroups (i.e. ingroup favoritism) as well as their tendency to associate negative characteristics with outgroups more easily than ingroups (i.e. outgroup derogation).” These studies address not only automatic attitudes (prejudice), but also automatic beliefs (stereotypes). In the United States, bias has been found against Blacks, Latinos, Jews, Asians, non-Americans, women, gays and the elderly. Implicit bias against outgroups has also been found in other countries.

Fascinating is the overwhelming evidence that implicit bias measures are dissociated from explicit bias measures. Put another way, on a survey I may honestly self-report positive attitudes toward some social category, such as Latinos. After all, some of my best friends are Latino. However, implicit bias tests may show that I hold negative attitudes toward that very group. This is dissociation—a discrepancy between our explicit and implicit meanings.

C. Behavioral Consequences
By now, even patient readers demand a payoff: Do racial schemas alter behavior? More particularly, does implicit bias represent anything besides millisecond latencies in stylized laboratory experiments? What is the evidence, for instance, that the IAT predicts any real-world behavior, much less anything that is legally actionable?

Research addressing behavioral consequences has been called the “second wave” of implicit bias research. There is now persuasive evidence that implicit bias against a social category, as measured by instruments such as the IAT, predicts disparate behavior toward individuals mapped to that category.

1. Interpreting—Agentic Backlash. Laurie Rudman and Peter Glick examined the relationship between implicit bias against women and their job interview evaluations.
Four tester candidates were created for the position of a computer lab manager: agentic man, androgynous man, agentic woman, and androgynous woman. In the “agentic” profile (for both genders), the videotaped interview and “life philosophy” essay of the job candidates emphasized self-promotion and competence. In the “androgynous” profile (again, for both genders), the written essay added qualities of interdependence and cooperation. Half the study participants were told that they had to evaluate the candidates for a job that required masculine qualities; the other half were told that it also required some feminine qualities. After reviewing the interview tapes and the essays, participants rated the candidates on three measures: competence, social skills and hireability.

The participants evaluated women differently from men in only one setting. In the feminized job condition (in which the job explicitly called for the ability to cooperate with others), the agentic female was rated less hireable than the identical agentic male. The researchers isolated the mediating variable to be differences in evaluation of “social skills,” not “competence.” In other words, if the job required cooperative behavior, women who showed agentic qualities were penalized more than their identical male counterparts.

In addition to rating the job applicants, the participants completed a gender IAT and explicit gender stereotype questionnaires. Not surprisingly, explicit bias measures did not correlate with how participants evaluated the social skills of agentic females. What did correlate were their IAT scores: the higher the implicit bias against women, the lower the social skills rating.

Biased interpretation can have substantial real-world consequences. Consider a teacher whose schema inclines her to set lower expectations for some students, creating a self-fulfilling prophecy. Or a grade school teacher who must decide who started the fight during recess. Or a jury who must decide a similar question, including the reasonableness of force and self-defense. Or students who must evaluate an outgroup teacher, especially if she has been critical of their performance. The Agentic Backlash study provides support for a more specific version of our tendency toward schema-consistent interpretation by demonstrating behavioral consequences of implicit bias.

2. Performing—Differential assessments may not be caused entirely by subjective interpretations. Rather, racial meanings transmitted through the culture, coupled with implicit cognitive processes, may alter how we actually perform on objectively measured tests. Evidence comes from the remarkable “stereotype threat” literature launched by psychologist Claude Steele. In a seminal experiment, Claude Steele and
Joshua Aronson gave a difficult verbal test to White and Black Stanford undergraduate students. One group was informed that the test was ability diagnostic—testing how smart they were. Another comparable group, given the same test, was told that the test was ability nondiagnostic—simply a laboratory problem-solving task. In the latter condition, the Black students performed comparably to equally skilled White students. But in the former condition, Black students greatly underperformed equally skilled White students.

The apparent explanation for this odd result is that somehow the stereotype that Blacks are intellectually inferior got activated in the former group. According to Steele, this “stereotype threat” may have raised the group’s fear that by doing poorly, they would reinforce a negative stereotype of the group they belong to. Thus, doing poorly had a “double consequence”: not only individual failure but also confirmation of the negative stereotype. This anxiety somehow disrupted their performance.

What is amazing is that not only can test scores be depressed, but they can also be boosted. That was the finding of the Math Test study described in the Introduction. By unconsciously activating a particular identity, performance on difficult tests by the very same category of people could be boosted upward (Asian) or depressed downward (woman).

I want to be up front about the limited state of our knowledge. We have no deep understanding of such bizarre testing phenomena. But even without any clear explanation, we can safely say that racial stereotypes, both negative and positive, can be activated implicitly and explicitly to alter test performance in striking ways. We should remember stereotype threat each time we judge someone, including ourselves, on the basis of a test score.

3. Interacting—Nonverbal Leakage. Recent research demonstrates that implicit bias, as measured by reaction time studies, also predicts behavior in stranger-to-stranger social interactions, such as interviews and face-to-face meetings. Researchers have termed this phenomenon behavioral “leakage.” Allen McConnell and Jill Leibold were the first to demonstrate the linkage between IAT results and intergroup behavior. In this study, White participants completed an explicit bias survey and took the IAT. They were guided through the first part of the experiment by a White female experimenter but through the last part of the experiment by a Black female experimenter. Both experimenters asked questions of participants according to a prepared script. Participants’ interactions with both experimenters were videotaped.
Trained judges blind to the participants’ bias scores coded the videotaped interactions, focusing on nonverbal behaviors such as friendliness, eye contact and number of speech errors. In addition, the experimenters were asked to evaluate their interactions with each participant. A strong correlation was found between the IAT scores and the ratings of both the judges as well as the experimenters.

These nonverbal behaviors that leak out from our implicit bias influence the quality of our social interactions. In classic experiments by Carl Word, Mark Zanna and Joel Cooper, White interviewers were trained to display less friendly nonverbal behavior—the sort that has now been correlated with higher implicit bias against racial minorities. When such behavior was performed in front of naïve White interviewees, those interviewees gave objectively worse interviews, as measured by third parties blind to the purpose of the experiment. In addition, the perceiver's (interviewer's) unfriendly nonverbal behavior can instigate retaliatory responses from the target (interviewee), causing a positive feedback loop. This creates a vicious circle that reinforces the racial schema. Worse, the perceiver's decision not to hire the target based on that social interaction is understood as legitimately on “the merits.”

4. Shooting—But for some of us, things get much, much worse. Recall the Shooter Bias study. Under threat conditions that police officers face, our racial schemas incline us to shoot Black men faster. Keith Payne performed the first gun study in 2001. Joshua Correll and his colleagues performed a second gun study in 2002. They created a simple videogame that placed White or Black targets holding either guns or other objects (such as wallets, soft drinks or cell phones) into realistic background settings. The researchers directed participants to decide as soon as possible whether to shoot or not shoot. Consistent with Payne’s earlier results, participants were more likely to trigger “false alarms” against a Black target (that is, shooting when no gun was present); conversely, they were more likely to “miss” against a White target (that is, not shooting when a gun was present).

The researchers next tested whether “shooter bias” (as measured by the difference in response times to White and Black targets) was correlated with other bias measures. They were also asked about their personal views of the violence, dangerousness and aggressiveness of African Americans (an explicit measure of a personal stereotype, reflecting actual endorsement of the stereotype). Finally, they were asked how most White Americans would answer the same question (an explicit measure of a cultural stereotype, reflecting mere knowledge of the stereotype). The personal stereotype
measure, reflecting endorsement, showed no correlation with shooter bias—again, demonstrating dissociation. Interestingly, what did correlate was the measure of the cultural stereotype. The race of the player surprisingly had no impact on shooter bias. Recall Amadou Diallo, the young West African immigrant standing in the doorway to his apartment, who was shot at forty-one times by New York police who “saw” a gun that did not exist. It should haunt us to read social science that suggests that if Diallo were White, he may still be alive. For those who doubt race played any such role, the Shooter Bias studies cannot be pooh-poohed as another tiresome play of the “race card.” For those who always knew race mattered, here is cold quantification. And more chilling is the fact that Whites and Blacks both exhibited shooter bias—a contention that would be hard to make politically without the test results.

D. A Research Agenda

My model of racial mechanics is a simple application of schematic thinking. We map individuals to racial categories according to the prevailing racial mapping rules, which in turn activate racial meanings that alter our interaction with those individuals. The mapping and activation are automatic, and the racial meanings that influence our interaction may be stereotypes and prejudice we explicitly disavow. But disavowal does not mean disappearance, and it turns out that reaction time measures, such as the IAT, can measure the latent persistence of these implicit racial meanings. And implicit bias has behavioral consequences, which can be deadly.

As future research confirms, constrains and elaborates these results, a vast research agenda will open for those who explore the nexus of law and racial mechanics. Topics on that agenda include:

- the role of intent in all bodies of law;
- criminal law (for example, racial profiling, self-defense, community policing, jury selection, penalty setting);
- antidiscrimination law (for example, disparate treatment, disparate impact, unconscious discrimination, hostile environments, mortgage lending);
- civil rights law and policy (for example, affirmative action’s contact hypothesis, role model justifications, merit definitions, advocacy strategies, housing segregation);
- lawyering and evidence (for example, strategies and rules with which to engage jurors’ implicit biases);
- education law and policy (for example, teaching strategies, interpretation of tests, debiasing programs and environments);
- privacy law (for example, comparing measures of implicit bias, such as the IAT, with polygraph results; widespread use of fMRI brain scans; IATs for Article III confirmations or legislators).
• labor law (for example, comparing IATs to other psychological tests, such as the Myers-Briggs test, given before hiring or promotion; employment discrimination; new compliance intermediaries; evidentiary privileges for voluntary debiasing programs35);
• constitutional law (for example, equal protection intent versus impact, autonomy as a constitutional value, paternalism);
• cultural policy (for example, spectrum regulation, campus speech codes, subsidization of production and distribution of debiasing content, media ownership policy);
• remedies, both voluntary and court-ordered (for example, requiring debiasing screensavers as part of a settlement in a discrimination suit; providing debiasing booths in lobbies where jurors wait to be picked; providing debiasing software installed on computers).

Some might say that I am calling for an overeager extension of a premature science, embraced for political reasons. And one must concede that science has been and will always be exploited for political purposes. Just as the Right might jump on *Bell Curve* findings, the Left might jump on stereotype threat findings. There will always be those who out of convenience declare faith in some set of scientific explanations without due diligence. Accordingly, the goal has to be honest, public and transparent engagement on the merits.

This requires, for instance, highlighting scientific findings that cut against one’s political orthodoxy. The most vivid example this Article points out is the fact that even African Americans seem to suffer from shooter bias. I also point out that Asian Americans generally have implicit biases against African Americans that are almost as strong as those held by Whites. Neither finding is convenient to progressive politics, but that does not mean they should be swept under the rug. And in this Article, they are not.

Recognizing our self-understandings to be provisional, we must still confront the difficult choices to come. As social cognitionists further demonstrate the possibility of altering levels of implicit bias—and explore the mechanisms to do so most efficiently—we will encounter difficult philosophical and legal questions about our autonomy, our normative commitments to racial equality and the proper role of explicit collective action by private and public actors to decrease implicit bias.37
A. Tuning In to Broadcast

In the second half of this Article, I pursue a concrete application of the racial mechanics model. This Part concerns, of all things, recent FCC decisions about the local news. To understand my choice of topic, we must start with a fundamental question: “Where do racial meanings come from?” Racial meanings that accrete in our schemas can, on the one hand, come from “direct experiences” with individuals mapped into those categories. On the other hand, the racial meanings can arise from what I call “vicarious experiences,” which are stories of or simulated engagements with racial others provided through various forms of the media or narrated by parents and our peers. Given persistent racial segregation, we should not underestimate the significance of vicarious experiences. Even if direct experience with racial minorities more powerfully shapes our schemas, vicarious experiences may well dominate in terms of sheer quantity and frequency.

The next question becomes, “Why are racial meanings biased against racial minorities?” One hypothesis is that people encounter skewed data sets—or as the computer scientists say, “garbage in, garbage out.” If these principally vicarious experiences, transmitted through electronic media, are somehow “skewed,” then the racial meanings associated with certain racial categories should also be skewed.

Suppose that social cognitionists identify which types of vicarious experiences trigger and exacerbate bias and which ameliorate it. Private parties will obviously be free to act on the basis of such discoveries. Voluntary attempts to create a “diversity” of role models on television reflect some such impulse, in addition to financial self-interest since “diversity” is sometimes good for business. But what about collective action, mediated through the state and implemented through law?

Maybe the state can do nothing. But there is one communications medium that has always tolerated substantial state intervention: broadcast. In the United States, broadcast is regulated in a public-private partnership. As the Communications Act of 1934 makes clear, the electromagnetic spectrum that broadcasters employ as the wireless “channel” of communications is not private property. Instead, it is owned by the government, held in public trust for all. The United States licenses that spectrum to private parties who exploit that resource not only for private commercial gain but also for the “public interest.” No one may broadcast without a license from the federal government, which authorizes the use of a particular frequency, at a specified transmission power, within a designated geographical area.
In the 1934 Act, Congress created the FCC and charged it with managing the spectrum to further the “public convenience, interest, or necessity”—the public interest standard. In addition to regulating entry by assigning frequencies, the FCC has power to mold, at least softly, the content of broadcast. Given our robust constitutional and political commitment to free expression, one might wonder how such constraints are tolerated. But under current First Amendment law, the medium matters: the Supreme Court has accepted scarcity and intrusiveness/unique availability justifications to permit greater regulation of the spectrum, as compared to other media, such as print.

In its history, the FCC has promulgated (and the courts have enforced) regulations that restrict the broadcast of content deemed “bad,” such as obscenity, indecency and excessive commercialization. Specific to antiracism, the FCC, at the instruction of the courts, has revoked the broadcast licenses of stations that favored segregation and aired anti-Black racial epithets. Conversely, the FCC has also promulgated regulations that promote content deemed “good” through informational programming guidelines, community needs and interests ascertainment requirements, the fairness doctrine and children’s educational television guidelines. Specific to questions of race, the FCC has also tried to promote “good” and diverse content by increasing minority ownership of stations through affirmative action. Finally, the FCC has regulated market structure at each stage of production, distribution and consumption. Examples regarding production include the now-defunct Prime Time Access Rules (PTAR) and financial-syndication (“FinSyn”) rules. Examples regarding distribution include the various rules concerning station ownership that were altered in the recent media ownership deregulation. Examples regarding consumption include the V-chip requirement of the 1996 Telecommunications Act.

The point of this catalog of congressional and FCC interventions is not to defend each regulation on its merits. But they, nonetheless, show that our commitment against shaping broadcast content is far from categorical.

**B. Redefining the Public Interest**

The touchstone for governmental management of broadcast is the “public interest” standard. That standard has recently been explicated in an unusual way. At least in the context of ownership policy, the public interest has been functionally equated with the local news.

In June 2003, a divided FCC lifted numerous media ownership restrictions in the name of the “public interest.”
The FCC began by deconstructing “public interest”52 into its three constituent components: diversity, competition and localism. Interesting was how the FCC decided to measure “viewpoint diversity”:

Although all content in visual and aural media have the potential to express viewpoints, we find that viewpoint diversity is most easily measured through news and public affairs programming. Not only is news programming more easily measured than other types of content containing viewpoints, but it relates most directly to the Commission’s core policy objective of facilitating robust democratic discourse in the media. Accordingly, we have sought in this proceeding to measure how certain ownership structures affect news output.53

Although the FCC was willing to credit news magazine programs, such as 60 Minutes and Dateline,54 it refused to consider other programming formats. The Fox Network specifically invited the FCC to credit entertainment programming that addressed or challenged stereotypes, such as “Will & Grace,” “Ellen,” “The Cosby Show” and “All in the Family”55 The FCC declined.

Local news also played a starring role in one other component of the public interest: “localism.” Localism has never been consistently defined in the Commission’s analysis. In its order, the FCC did not clarify the term, but it did establish a methodology for measuring localism. It focused again on “programming responsive to local needs and interests, and local news quantity and quality”56 For two out of the three fundamental components of the “public interest”—diversity and localism—the FCC highlighted the significance of local news production.57

In sum, “local news” has become the critical component of the FCC’s “public interest” analysis, at least in the media ownership context. The supervening norm that the FCC must pursue, the “public interest,” has now become practically identical to the number of hours of local news a station broadcasts.58 But what in fact is on the local news?

C. Local News

1. Crime and Punishment—Violent crime. Crime occupies a heavy share of broadcast news programming. The PEJ’s annual study of local news programming consistently finds that local newscasts spend about a quarter of their time on crime stories.59

Violent crime news stories frequently involve racial minorities, especially African Americans. One reason is that racial minorities are arrested for violent crimes more
frequently on a per capita basis than Whites. Given our social cognition review, we can predict what watching local news might do to us. If subliminal flashes of Black male faces can raise our frustration, as shown by the Computer Crash study, would it be surprising that consciously received messages couched in violent visual context have impact, too? In fact, we have already seen in the Mug shot study, described in the Introduction, that even ephemeral exposure to race can alter our opinions about crime and punishment.

In the Mug shot study, Gilliam and Iyengar also used survey data to corroborate their experimental findings. In a large survey conducted at approximately the same time and location as the experiments, participants answered questions about their political opinions and media consumption habits. Three statistically significant correlations emerged: greater viewing of local news led to greater support for punitive remedies, more old-fashioned racism and more “new racism.” Such results should give us all pause. On the basis of this evidence alone, one could challenge the FCC’s unmindful adoration of local news as furthering the public interest—at least as local news is currently constituted.

2. Trojan Horse Viruses —I now make explicit what I have so far left implicit: local news programs, dense with images of racial minorities committing violent crimes in one’s own community, can be analogized to Trojan Horse viruses. A type of computer virus, a Trojan Horse installs itself on a user’s computer without her awareness. That small program then runs in the background, without the user’s knowledge, and silently waits to take action—whether by corrupting files, e-mailing pornographic spam or launching a “denial of service” attack—which the user, if conscious of it, would disavow.

Typically, a Trojan Horse comes attached secretly to a program or information we actively seek. For instance, we might download a new program for a trial run, and embedded inside may be a Trojan Horse that installs itself without our knowledge. Or, we might browse some website in search of information, and a small JavaScript bug may be embedded in the page we view. Here is the translation to the news context: we turn on the television in search of local news, and with that information comes a Trojan Horse that alters our racial schemas. The images we see are more powerful than mere words. As local news, they speak of threats nearby, not in some abstract, distant land. The stories are not fiction but a brutal reality. They come from the most popular and trusted source.
How do we know violent crime stories can, like Trojan Horses, exacerbate implicit bias? The Mug shot study and other work by political scientists using the newscast paradigm are suggestive. Further evidence comes from studies that demonstrate media primings of racial schemas. For example, we now know that exposure to violent rap music can increase implicit bias against African Americans and that playing the video game Doom can increase one’s implicit self-concept of aggressiveness—all the while having no statistically significant impact on one’s explicit, self-reported views. Still further evidence comes indirectly from research Nilanjana Dasgupta calls the “third wave” of implicit bias research, which examines the malleability of implicit bias. This research demonstrates that implicit bias can be exacerbated or mitigated by the information environments we inhabit.

Positive Role Models. Consider, for example, how exposure to positive exemplars of subordinated categories can decrease implicit bias. Nilanjana Dasgupta and Anthony Greenwald found that implicit attitudes could be changed without conscious effort simply by exposing people to particular types of content. Participants were first given a “general knowledge” questionnaire. For the pro-Black condition group, the researchers used names and images of positive Black exemplars, such as Martin Luther King, Jr., and negative white exemplars, such as Jeffrey Dahmer. For the pro-White condition group, the valences of the images were reversed (Louis Farrakhan and John F. Kennedy, for example). Finally, for a control group, the questionnaire required correct identification of insects and flowers. After finishing the questionnaire, participants took an IAT and then completed a survey of racial bias.

The type of questionnaire had no impact on participants’ explicit bias as measured by the self-reports. By contrast, the researchers found that the questionnaires had a surprisingly significant effect on implicit bias as measured by the IAT: those participants who had experienced the pro-Black condition reduced their implicit bias by more than half. These results persisted for over twenty-four hours, as measured by a follow-up test.

Mental Imagery. A study by Irene Blair, Jennifer Ma and Alison Lenton focusing on counterstereotypic mental imagery is also telling. Motivated by evidence that visualization shares many characteristics with real experiences and thus can influence learning and behavior, they tested whether mental imagery could moderate implicit stereotypes. Individuals instructed to visualize a counterstereotypic image would, in effect, be priming themselves in a way that would make counterstereotypic actions easier.
In the first experiment, one group of participants was instructed to spend a few minutes imagining a strong woman, her attributes and abilities, and the hobbies she enjoys; another group was asked to imagine a Caribbean vacation. Those who imagined the strong woman registered a significantly lower level of implicit stereotype in the IAT.

Coed Education. For those who are rightly skeptical about external validity—translating laboratory findings into real-world results—there is now some evidence that exposure to counterstereotypic exemplars decreases implicit bias in real-world situations. Nilanjana Dasgupta and Shaki Asgari performed a longitudinal study of female students before and after their first year of college. Half the participants were recruited from a coeducational college, whereas the other half attended a women’s college. Both groups took tests measuring explicit and implicit bias and completed campus experience questionnaires. The two groups started with statistically indistinguishable levels of implicit bias: both groups viewed women stereotypically, as more “supportive” than “agentic.” What happened after one year of college? On average, the implicit bias of those who had attended women’s colleges disappeared. By contrast, the implicit bias of those who had attended coeducational colleges increased. Providing further evidence of dissociation, the groups’ explicit self-reported endorsements of stereotypes did not change regardless of the college attended or time of measurement.

But what was the mediating variable? The only statistically significant correlation was to “exposure of female faculty” (and not, for example, number of courses taken with gender-related content, say in the women’s studies department).

To summarize: Local news provides data that we use consciously in a rational analysis to produce informed opinions on, say, criminal punishment. But these newscasts also activate and strengthen linkages among certain racial categories, violent crime and the fear and loathing such crime invokes. In this sense, the local news functions precisely like a Trojan Horse virus. We invite it into our homes, our dens, in through the gates of our minds, and accept it at face value, as an accurate representation of newsworthy events. But something lurks within those newscasts that programs our racial schemas in ways we cannot notice but can, through scientific measurements, detect. And the viruses they harbor deliver a payload with consequences, affecting how we vote for “three strikes and you’re out” laws, how awkwardly we interact with folks and even how quickly we pull the trigger.
A predictable objection is that the violent content, including crime committed by racial minorities, is a feature, not a bug. In other words, the data presented are not skewed and instead faithfully reflect a reality that the local news did not create. I have three responses to this “accuracy objection”: the data are likely not fairly presented; our memories and abilities to see patterns are selective and we interpret the data in self-serving ways.

D. Virus Protection

The social cognition studies that I have presented are not without their ambiguity, confusion and contradiction. They often raise as many questions as they answer. That said, a prima facie case has been made about the existence of implicit bias, its dissociation from explicit self-reports of bias, its measurability through reaction time designs and its impact on behavior. Although weaker, a prima facie case has also been made that a nontrivial stream of negative meanings is provided through the local news. These images not only strengthen long-term, well-learned associations between certain racial categories and certain racial meanings, but also activate specific responses or states. Social scientists will, I believe, further confirm these claims over the next decade. What then?

1. Recoding the Public Interest —First, we should reject the strong linkage the FCC made between the public interest and the number of hours of local news aired.

Second, the FCC should reconsider its decision to limit viewpoint diversity analysis to news and public affairs programming. Recall that various stakeholders, such as the Fox Network, wanted counterstereotypic entertainment programming to count in the viewpoint diversity calculus. The FCC declined. But if we care about implicit bias, counting only local news in the public interest analysis is perverse. In the malleability studies, for instance, many of the positive minority images that decreased implicit bias were entertainment celebrities. In other words, the best scientific evidence is that repeated exposure to Bill Cosby, no doubt in part because he is also “Dr. Huxtable,” decreases our implicit bias. Of course, there may be substantial costs to opening this diversity can of worms. But at the very least, the FCC should be forced to make a public accounting.

Third, further study through a Notice of Inquiry is warranted. Relevant lines of inquiry include:

• How should the “public interest” be defined?
• What are the costs and benefits of using “local news” to define the “public interest?”
Fourth, the FCC in conjunction with media elites should publicly explore how the news exacerbates implicit bias, with an eye toward voluntary development and adoption of “best journalistic practices.” Examples include scrupulously checking against disparate treatment of minority suspects in crime stories, minimizing unnecessary racial mapping and avoiding the worst inflammatory images. These best practices could extend beyond crime stories, to seek more diverse representation of “experts” and to emphasize the value of positive stories of racial minorities promoting safety and harmony within the local community. The FCC could catalyze this conversation through various informal bully pulpit and jawboning techniques. In addition, the FCC could institute greater self-monitoring and self-reporting requirements about the percentage of news minutes focusing on violent crime during some randomly sampled time periods. Such data could bring social and market pressure to bear on how stations discharge their public interest responsibilities.

In the vast electronic ocean of vicarious experiences swirling around us, who knows what total impact crime stories in local news have in comparison to representations of minorities in music videos, video games, entertainment programming and motion pictures? However, regardless of the relative significance of news, we should not allow a poor articulation of the “public interest” standard to go unchallenged simply because the problems of negative stereotypes and prejudice against racial minorities are so enormous. Finally, although the focus has been on the local news, this public discussion would shine a new light on racial meanings generated and delivered throughout all media. Maybe nothing will be done about it, in the name of profit and freedom of expression. But at the least, we as a society will better understand what we have chosen to do, through act and omission.

2. Thought Experiments—I now take a more radical turn, by engaging in two thought experiments. At the outset, I concede that the scientific case for the efficacy of these proposals may not be strong, depending on where the burden of proof is set. Nonetheless, considering more provocative measures may be illuminating.
So I return to the metaphor of local news as Trojan Horse viruses. In these terms, the prior recommendation to recode the “public interest” standard was a call to stop encouraging the production of programs that turned out to be Trojan Horses. But in the realm of computer security, more aggressive antivirus strategies are available: build a firewall to decrease the exposure, and push out disinfectants to treat the infection.

(a) Firewall: Capping Crime Stories – Questioning governmental encouragement of the Trojan Horses of race is one thing. But might we go a step further and affirmatively build a firewall against them? We ban obscenity outright. It would, however, be inconsistent with any reasonable interpretation of the First Amendment to try to ban local news, crime stories, or even particular ways in which stories are conveyed.73

(b) Disinfection: Public Service Announcements – The other antivirus strategy is disinfection, to push out antidotes to the Trojan Horses that we admit.

In more familiar doctrinal terms, disinfection is counter speech. And if the firewall approach felt uncomfortably like censorship, disinfection avoids such associations. To be clear, disinfection does not necessarily take the form of ponderous documentaries about race. Although such shows may decrease explicit bias, they may not be best suited to tweak implicit bias. As John Bargh said, we must “fight automatic fire with automatic fire.”74

The malleability studies suggest that positive images of racial minorities alter the cache of racial meanings as well as make positive exemplars more accessible. So, consider numerous variations on a strategy of debiasing public service announcements (d-PSAs).75 For purposes of argument, suppose that social cognitionists confirm that d-PSAs decrease implicit bias in substantial amounts. Even if the effect is temporary, viewers would be debiased daily, given the amount of television that Americans watch. How might we utilize d-PSAs? The strategy could differ along the following variables: state action (mandatory/voluntary); notice (subliminal/supraliminal) and consent (opt-out/opt-in).

First, consider state action. On the one hand, the FCC could require broadcast licensees to show some quota of d-PSAs. This would be state action that burdened licensee speech. That is not to say that stations would challenge such a regulation or that they would succeed in court. For example, broadcast stations have never challenged the current children’s educational television programming rules, which strongly encourage broadcasters to show three hours of such programming per week.76
On the other hand, a licensee may voluntarily broadcast these d-PSAs, as an exercise of its editorial judgment in discharging its “public interest” responsibilities.

Second, consider notice. On the one hand, experiments such as the Computer Crash study suggest that d-PSAs could work even if they are subliminal (compare again with fluoridation or an antivirus software package that automatically updates itself weekly, without user intervention). They would also have the attractive characteristic of not taking up advertising time. Of course, subliminal programming would never be tolerated by the American people.77

On the other hand, these announcements could be supraliminal, similar to current PSAs. What might be different is that these announcements could last just a few seconds, more like scenes from a fast-cut music video than a lugubrious documentary.

Finally, consider how the audience could manifest its assent to receiving these d-PSAs. Suppose we include an implicit bias option in the next generation V-chip, which is embedded in our television sets. Then, only those viewers who consented to d-PSAs would be exposed to them. Those who thought this was mind control could avoid them entirely. Choice could be exercised through an “opt-out” or an “opt-in” regime. In an “opt-out” regime, if the viewer does nothing, she will be exposed to these announcements; by contrast, in an “opt-in” regime, the viewer must take some affirmative action to program her V-chip to gain access to these announcements.

<table>
<thead>
<tr>
<th>Option</th>
<th>State Action (mandatory/voluntary)</th>
<th>Notice (subliminal/supraliminal)</th>
<th>Consent (opt-out/ opt-in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>mandatory</td>
<td>subliminal</td>
<td>opt-out</td>
</tr>
<tr>
<td>2</td>
<td>mandatory</td>
<td>subliminal</td>
<td>opt-in</td>
</tr>
<tr>
<td>3</td>
<td>mandatory</td>
<td>supraliminal</td>
<td>opt-out</td>
</tr>
<tr>
<td>4</td>
<td>mandatory</td>
<td>supraliminal</td>
<td>opt-in</td>
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<tr>
<td>5</td>
<td>voluntary</td>
<td>subliminal</td>
<td>opt-out</td>
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<tr>
<td>6</td>
<td>voluntary</td>
<td>subliminal</td>
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<tr>
<td>7</td>
<td>voluntary</td>
<td>supraliminal</td>
<td>opt-out</td>
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<tr>
<td>8</td>
<td>voluntary</td>
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Table 1 lists the possible disinfection strategies. They range from most to least disconcerting. Option 1, which is mandatory on the licensee, subliminal, and requires opt-out by the viewer, seems Orwellian—although a truly totalitarian state would not tolerate opt-out, not even by turning off the “two-way screen.” Thankfully, one
could not imagine such a strategy ever being adopted politically or being tolerated constitutionally in the United States. In sharp contrast, Option 8, a voluntary decision by licensees to broadcast disinfection, which is supraliminal and thereby provides clear notice, and requires an affirmative opt-in for individual viewers to see d-PSAs in the first place, sounds both politically feasible and constitutional. After all, how different is this from current PSAs against smoking or violence? Compare also the decision to produce and broadcast a Sesame Street that features positively valenced characters of all races (and species) enjoying integrated neighborhoods that do not reflect any real city in America. Is this not one of the reasons why we opt in to these programs on behalf of our children?

My goal here is not to analyze each option along the metrics of political feasibility, scientific soundness and constitutional validity. Rather, I have two more modest goals. The first is simply to point out the feasibility of a disinfection strategy using the same vector that caused infection in the first place. Options 7 and 8 would be the most realistic places to start. The second goal is to suggest how various strategies could be implemented in ways that respect individual choice enough to avoid constitutional problems.

3. The Autonomy Objection—For some, everything I have said is deeply disturbing. It is an invitation to state manipulation of its citizenry. It is a disrespectful caricature of the human mind, which is not a mere computer vulnerable to viruses. It is a direct affront to the individual’s autonomy. This is the “autonomy objection.” It is strongly felt. It is understandable. It is untenable.

This objection incorrectly supposes that, prior to state intervention (to build a firewall or to broadcast disinfection), we existed in some virginal state without coercion or manipulation. But I have demonstrated that Trojan Horses are being broadcast right now, everywhere, in late-breaking, saturation coverage. The Trojan Horses have been beaming into our brains since we were old enough to be parked in front of a television. Private actors have always been engaging us, sometimes unknowingly, sometimes shrewdly, on the implicit level. My recommendations are only to counter implicit fire with implicit fire.

The arc of this article has been long, and given its multiple goals, it has been more evocative than comprehensive. A primary goal is to make the case for using social cognition in critical race studies. In the 1980s and 1990s, debates raged about the best or most appropriate methodology with which to engage in “criticism”
of law and legal institutions on matters of racial equality. Countless articles explored, for example, whether narrative defended through postmodernism would be the best or only way. Countless articles explored whether minority scholars did or should have preferred standing to make these inquiries. We have learned from those debates, and the time has come to move on and add things new. This Article has been an attempt to demonstrate how and why that should be done.

The benefits will not flow only in one direction, from science into law. Instead, legal analysts who are subject to different craft norms can apply and extend the science into the policy realm in ways that social cognitionists cannot. Less instrumentally, as outsiders, we can identify scientific blind spots. The upshot is a call for a new school of thought called “behavioral realism,” in which legal analysts, social cognitionists (with emphases in implicit bias and stereotype threat literatures), evolutionary psychologists, neurobiologists, computer scientists, political scientists and behavioral (law and) economists cooperate to deepen our understanding of human behavior generally and racial mechanics specifically, with an eye toward practical solutions. The next generation of critical race scholars should be at the forefront of this endeavor and not in some rearguard action. Sitting on the back of this bus is not an option.

A more modest goal of this Article is to bridge divides within the law itself. As in Cyber-race, I am trying to cajole legal scholars working in cyberlaw and communications to engage with race as well as other social categories of subordination. At the same time, I am trying to persuade race scholars to select unconventional points of entry by adopting unorthodox subjects, metaphors and analytic tools. The cross-fertilization should help us think things anew. The crucible for this Article has been the FCC’s recent mass media ownership deregulation—specifically the Commission’s fixation on local news. Local news explicitly furthers the public interest, but its fetish for violent crime makes it a Trojan Horse, a “thing that undermines from within.”

I have made a solid case for recoding the FCC’s definition of the public interest to decrease its reliance on local news. I recognize that counting hours of local news is simple, but something can be both simple and wrong.

I close with a caution and a call. The caution is that the remarkable science of implicit bias could draw all of our interest and attention. But implicit bias is not the only source of pervasive and persistent inequalities among social groups. Explicit bias still thrives in many circles. Durable inequality may also be maintained by structural arrangements that are no longer tightly connected to bias, implicit or explicit. Implicit bias should not circumscribe the content of our concerns.
Mahzarin Banaji, a leading scientist in the field of implicit bias, has suggested that “one measure of the evolution of a society may indeed be the degree of separation between conscious and unconscious attitudes—that is, the degree to which primitive implicit evaluations that disfavor certain social groups or outgroups are explicitly corrected at the conscious level at which control is possible.”\textsuperscript{81} Although my response to the autonomy objection was framed at the individual level, Banaji’s insight restates that response at the level of entire societies. Maybe this alignment between the explicit and implicit cannot be reached, at least not perfectly. Evolutionary psychology will surely have its say. Still, achieving this convergence is our challenge. It is our call.
†Excerpt from the full article “Trojan Horses of Race,” 118 Harv. L. Rev. 1489 (2005).


2 See Bargh et al., supra note 1, at 239. Hostility measures were scored on a scale of 0 to 10, with 10 being most hostile. The blind coders evaluated the White-primed participants at a hostility of M = 2.13; by contrast, they coded the Black-primed participants at M = 2.79. The difference was statistically significant at p < 0.05. Id. Readers who see this effect as small might consider that each face appeared on the screen for only about one-fortieth of a second. Id. at 238.

3 Franklin D. Gilliam, J r. & Shanto Iyengar, Prime Suspects: The Influence of Local Television News on the Viewing Public, 44 Am. J. Pol. Sci. 560, 563-67 (2000) (describing experimental procedure). Participants answered a preliminary questionnaire, which solicited basic demographic, political affiliation, and media habits data, prior to watching the newscasts and completed a detailed questionnaire gauging crime-related and racial attitudes after the newscast. Id. at 564. The crime-related attitudes that were measured were fear of crime, dispositional explanations for crime, and support for punitive criminal justice. Id. at 565. Racial attitudes were measured on both “old fashioned” and “new” racism scales. See id. at 566. The 2331 participants were residents of the Los Angeles metropolitan area. Id. at 564. Reflecting the demographics of the area, 53% of the participants were White, 22% Black, 10% Asian, and 8% Latino. Fifty-two percent were women, 49% had graduated from college, 45% were Democrats, and 25% were Republicans. Id.

4 See Margaret Shih et al., Stereotype Susceptibility: Identity Salience and Shifts in Quantitative Performance, 10 Psychol. Sci. 80, 80-81 (1999).


9 See Fiske & Taylor, supra note 8, at 18-19 (noting differences between interpreting people and objects, which include the facts that people perceive back, can alter their behavior because they are being observed, and are often more complicated than objects).

10 There is evidence that we usually acquire social categories in this order: gender, age, then race. See Susan T. Fiske, Stereotyping, Prejudice, and Discrimination, in 2 The Handbook of Social Psychology 376 (Daniel T. Gilbert et al. eds., 4th ed. 1998).


12 To be careful, we should distinguish what we mean by “automatic.” Fiske and Taylor describe five different meanings or criteria associated with the term: that the operation of some schema is unintentional (does not require any explicit goal); involuntary (always occurs in the presence of relevant environmental triggers); effortless (does not consume limited cognitive resources or processing capacity); autonomous (does not need to be controlled once the process has been initiated); and outside awareness (occurs without consciousness
of initiation or of the process itself). Fiske & Taylor, supra note 8, at 271. I use the term “automatic” principally to emphasize that it is unintentional and outside our awareness. Whether these processes are truly “involuntary” will be discussed below.

13 There is clear evidence of such impression management. For example, in the well-known “bogus pipeline” studies, Edward J. Jones and Harold Sigall convinced participants that they were attached to a machine that would measure their true attitudes regardless of what they in fact said. The participants did not know that the machine was bogus. Their explicit self-reports changed significantly when they were hooked up to this bogus machine. See Edward E. Jones & Harold Sigall, The Bogus Pipeline: A New Paradigm for Measuring Affect and Attitude, 76 Psychol. Bull. 349 (1971); see also Russell H. Fazio et al., Variability in Automatic Activation as an Unobtrusive Measure of Racial Attitudes: A Bona Fide Pipeline?, 69 J. Personality & Soc. Psychol. 1013, 1014 (1995) (discussing the possibility of a bona fide pipeline).

14 One of the attractive features of the IAT is that it generally produces much larger effects than did prior priming methodologies. See Jens B. Asendorpf et al., Double Dissociation Between Implicit and Explicit Personality Self-Concept: The Case of Shy Behavior, 83 J. Personality & Soc. Psychol. 380, 382 (2002). For the most current recommendations on how to conduct and read IATs, see Anthony G. Greenwald et al., Understanding and Using the Implicit Association Test: I. An Improved Scoring Algorithm, 85 J. Personality & Soc. Psychol. 197 (2003). Readers are invited to take the test themselves online at the Project Implicit website. See Project Implicit, IAT Home, at http://implicit.harvard.edu/implicit/demo (last visited Feb. 13, 2005). For a list of other implicit bias measurement tools, see Irene V. Blair, The Malleability of Automatic Stereotypes and Prejudice, 6 Personality & Soc. Psychol. Rev. 242, 260-61 (2002).


17 On a 5-point scale, with 5 being the most hireable, M (agentic male) = 3.52 versus M (agentic female) = 2.84 (p < 0.05). See id. at 753. On the hireability index, there was no disparate treatment of agentic men and agentic women in the masculine job condition. Also, across both job conditions, the androgynous men and women fared equally well. To repeat, disparate treatment was seen when the job required the candidate to be “supportive,” and agentic men were not penalized but agentic women were. See id.

18 Id. (r = -0.49, p < 0.001).

19 Id. at 753-54.

20 Id. at 751-52.

21 The authors recognized that the behavior link had been demonstrated for other implicit bias measures. See Allen R. McConnell & Jill M. Leibold, Relations Among the Implicit Association Test, Discriminatory Behavior, and Explicit Measures of Racial Attitudes, 37 J. Experimental Soc. Psychol. 435, 436 (2001); see also Russell H. Fazio et al., Variability in Automatic Activation as an Unobtrusive Measure of Racial Attitudes: A Bona Fide Pipeline?, 69 J. Personality & Soc. Psychol. 1013, 1018 (1995) (showing correlation between “facilitation” scores and subjective ratings of Black experimenter regarding friendliness and interest of participant).


24 See supra pp. 42-43.

25 This finding was statistically significant at p < 0.02. Joshua Correll et al., The Police Officer’s Dilemma: Using Ethnicity To Disambiguate Potentially Threatening Individuals, 63 J. PERSONALITY & SOC. PSYCHOL. 1314, 1319 (2002). However, when outlier target images were put back into the dataset, the significance disappeared. The researchers removed certain outlier images because they produced so many errors, suggesting that something in the background image or person’s clothing produced misleading impressions. Id.


27 See, e.g., id. at 419-20 (discussing the use of IAT in jury selection process). Consider also what SJT might have to say about the significance of minority representation on juries. The Supreme Court, in Castaneda v. Partida, 430 U.S. 482 (1977), cautioned that “[b]ecause of the many facets of human motivation, it would be unwise to presume as a matter of law that human beings of one definable group will not discriminate against other members of their group.” Id. at 499 (addressing discrimination against Mexican Americans in grand jury selection); see also id. at 503 (Marshall, J., concurring) (pointing to social scientists’ agreement that “members of minority groups frequently respond to discrimination and prejudice by attempting to disassociate themselves from the group, even to the point of adopting the majority’s negative attitudes towards the minority”).

28 See, e.g., Irene V. Blair et al., The Influence of Afrocentric Facial Features in Criminal Sentencing, 15 PSYCHOL. SCI. 674, 677 (2004) (finding no disparate sentencing on the basis of race in Florida data set, but finding that within each racial category, White or Black, those individuals with more afrocentric facial features received harsher sentences); see also United States v. Clary, 34 F.3d 709, 710 (8th Cir. 1994) (rejecting the district court’s ruling that the crack cocaine statute and U.S. Sentencing Guidelines violated African-American defendants’ equal protection rights). The Eighth Circuit specifically rejected the lower court’s reliance on “unconscious racism” and disputed the idea that stereotypical media representations of crack users influenced Congress. Id. at 713. Legal interest in the findings of social cognitionists may lead to a reopening of the issue. Cf. Theodore Eisenberg & Sheri Lynn Johnson, Implicit Racial Attitudes of Death Penalty Lawyers, 53 DEPAUL L. REV. 1539, 1553 (2004) (finding that capital defense attorneys have implicit bias scores similar to the rest of the population).


30 Obviously, this issue has been on the research agenda for critical race theory for a long time. See, e.g., Charles R. Lawrence III, The Id, the Ego, and Equal Protection: Reckoning with Unconscious Racism, 39 STAN. L. REV. 317, 324-26 (1987).


32 See, e.g., Christopher L. Aberson et al, Implicit Bias and Contact: The Role of Interethnic Friendships, 144 J. SOC. PSYCHOL. 335, 344 (2004) (finding correlations between close friendships with out-group minorities and lower implicit bias scores).
33 See, e.g., Jody Armour, Stereotypes and Prejudice: Helping Legal Decisionmakers Break the Prejudice Habit, 83 CAL. L. REV. 733, 766-72 (1995), (arguing against formal colorblindness and in favor of allowing counsel to address issues of race directly in order to counteract potential bias among jurors).

34 See, e.g., M. Saujani, “The Implicit Association Test”: A Measure of Unconscious Racism in Legislative Decision-Making, 8 MICH. J. RACE & L. 395, 414 (2003) (suggesting that legislators could be forced to take the IAT “on the stand”). Leading social cognitionists, such as Anthony Greenwald and Mahzarin Banaji, would resist such crude applications of the IAT.


37 Those uninterested in mass media policy or FCC regulation may be ready to stop reading. As explained earlier, the two Parts were written to be read in a modular fashion. However, I encourage readers to at least review the “malleability” studies in section II.C.2, infra pp. 56-59, so as to avoid an unnecessarily pessimistic view of the scientific research.


39 See id. § 303(c).


41 See FCC v. Pacifica Found., 438 U.S. 729-30, 748-49 (1978) (citing the “uniquely pervasive presence” of broadcast, which is “uniquely accessible to children,” as grounds for allowing the FCC to put a negative mark in a broadcast station’s license file for broadcasting comedian George Carlin’s indecent “Filthy Words” monologue).


44 See, e.g., 18 U.S.C. § 1464; see also Pacifica, 438 U.S. at 748-51. In practice, the indecency ban has resulted in time channeling of potentially “indecent” speech to the safe harbor of late night. See 47 C.F.R. § 73.3999(b) (“No licensee of a radio or television broadcast station shall broadcast on any day between 6 a.m. and 10 p.m. any material which is indecent”); Action for Children’s Television v. FCC, 58 F.3d 654, 656 (D.C. Cir. 1995) (upholding time channeling as constitutional).

45 See The Revision of Programming and Commercialization Policies, Ascertainment Requirements, and Program Log Requirements for Commercial Television Stations, 98 F.C.C.2d 1076, 1101 (1984) [hereinafter TV Deregulation Order] (describing a 1973 order setting guidelines of sixteen minutes per hour for commercials). Although most of the commercialization guidelines were lifted in 1983, the Court of Appeals for the D.C. Circuit prevented the lifting of these caps in children’s television. See Action for Children’s Television v. FCC, 821 F.2d 741, 744, 750 (D.C. Cir. 1987).


47 Until the broadcast deregulation of the early 1980s, broadcast stations were required to show at least 5% local programming, 5% informational programming (news and public affairs), or 10% total non-entertainment programming. See The Revision of

48 See id. at 1097 (describing then-existing ascertainment requirements).


50 See In re Review of the Prime Time Access Rule, 11 F.C.C.R. 546, 547 (1996) (describing rules that generally limited network affiliates in the top fifty markets from broadcasting more than three hours of network or off-network programming during the four prime-time hours). These rules were repealed in 1995. See generally JERRY KANG, supra note 46 at 432-33 (2001).

51 The vote was 3-2, along party lines. Media Ownership Order, supra note 7, at 13,620.


53 Id. Media Ownership Order, supra note 7, at 13,631.

54 It is not clear that the FCC actually did count such programs in any systematic way in its structural analyses. It instead focused on the number of hours of local news, with some discussion of news quality as measured by industry awards and/or viewer ratings.

55 Media Ownership Order, supra note 7, at 13,631.

56 Id. (emphasis added).

57 The FCC recognized one final component of the “public interest”: “competition.” Nothing especially relevant to local news came up in this analysis. However, the FCC did clarify that it would measure “competition” not solely by looking at competition in advertising markets. The FCC said it would consider other metrics as well, such as measures of audience share. See id. at 13,639-40.

58 Beltway insiders and industry players may think me naïve in taking the Commission at its word. Local news may have been a convenient cover to justify certain regulatory changes sought for other reasons. Or it might have been a largely dissatisfying political compromise that captures no single Commissioner’s understanding of the “public interest.” Of course, the same could be said of the written opinions of appellate courts. But official explanations carry weight, not only for judicial opinions but also FCC reports. Departing from or ignoring these explanations and reasons in subsequent actions would be grounds for reversal under the “arbitrary and capricious” review of the Administrative Procedure Act. See, e.g., Schurz Communications, Inc. v. FCC, 982 F.2d 1043, 1053-54 (7th Cir. 1992) (finding new FinSyn rules arbitrary partly because the Commission did not explain its deviation from its prior 1983 tentative decision).


60 See FBI, U.S. DEPT OF JUSTICE, CRIME IN THE UNITED STATES 2002: UNIFORM CRIME REPORTS 17 (2003) (reporting the racial breakdown of violent crime arrestees: 59.7% White, 38.0% Black, 2.3% other), available at http://www.fbi.gov/ucr/cius.htm. Whites constitute 75.1% of the population, while Blacks constitute 12.3% of the population. U.S. Census Bureau, Race Alone or in Combination: 2000, at http://factfinder.census.gov/servlet/
For murder arrestees during 2002, 47.7% were White and 50.0% were Black. FBI, supra, at 17. For similar statistics, see ROBERT ENTMAN & ANDREW ROKECKI, THE BLACK IMAGE IN THE WHITE MIND 49, 79 (2000); and See, e.g., J on Hurwitz & Mark Peffley, PUBLIC PERCEPTIONS OF RACE AND CRIME: THE ROLE OF RACIAL STEREOTYPES, 41 AM J. POL SCI. 375, 376 (1997) (summarizing eclectic literature demonstrating that Whites “respond more punitively to blacks than to those of their own race”). This disproportionality in arrest rates is likely exacerbated, however, by unfavorable portrayals of Black criminals by local news media and concentration of news stories featuring blacks in violent crime stories. See id. (citing KATHLEEN HALL JAMIESON, DIRTY POLITICS: DECEPTION, DISTRACTION, AND DEMOCRACY (1992); and Robert M. Entman, Blacks in the News: Television, Modem Racism and Cultural Change, 69 JOURNALISM Q. 341 (1992)) (“These findings strongly suggest that the media contribution is one of both linking blacks to the issue of crime and, moreover, rendering stereotypes of blacks more negative.”).

See Gilliam and Iyengar, supra note 3, at 571 tbl.5 (reporting that at the p < 0.01 level, there was a 4% increase for punitive remedies, a 4% increase in old-fashioned racism, and a 7% increase in “new racism”). Gilliam and Iyengar characterize “new racism” as “symbolic, subtle, covert, hidden, or underground.” Id. at 566 (internal quotation marks omitted); see also JAMES M. AVERY & MARK PEFFLEY, RACE MATTERS: THE IMPACT OF NEWS COVERAGE OF WELFARE REFORM ON PUBLIC OPINION, IN RACE AND THE POLITICS OF WELFARE REFORM 131, 136 (Sanford F. Schram et al. eds., 2003) (internal citations omitted) (“Experimental evidence suggests that even a brief visual image of a black male in a typical nightly news story on crime is powerful and familiar enough to activate viewers’ negative stereotypes of blacks, producing racially biased evaluations of black criminal suspects. In their experimental studies manipulating the skin color of a male perpetrator in a local news broadcast, Gilliam and associates found that when the perpetrator was African American, more subjects endorsed punitive crime policies and negative racial attitudes after watching the news broadcast.”).

Laurie Rudman and Matthew Lee found that a thirteen-minute audio-only exposure to violent, misogynistic rap music increased the implicit racial bias of participants, as measured by the IAT. See Laurie A. Rudman & Matthew R. Lee, Implicit and Explicit Consequences of Exposure to Violent and Misogynous Rap Music, 5 GROUP PROCESSES & INTERGROUP REL. 133, 137-38 & tbl.1 (2002). Those participants in the “prime” condition listened to rap music that portrayed African Americans as violent and sexist. Id. at 136 (providing lyric samples). Those in the “control” group listened to contemporary pop tunes. Id. Then, the participants took a stereotype IAT, categorizing Black versus White names (for example, Jamal versus Hank) and negative versus positive words (for example, hostile versus calm). See id. at 136-37. Primed subjects generated higher IAT scores. See id. at 137 (reporting scores of M = +327 ms for primed subjects versus M = +107 ms for control subjects at the p < 0.001 level).

Not surprisingly, the rap music prime also displayed increased measures of explicit bias on a self-reported stereotype endorsement scale. Id. at 138 tbl.1. However, the only statistically significant increase was in participants identified as “high prejudice” according to the MRS. See id. This evidence of priming and dissociation indicates that “low prejudice” people can sincerely claim that rap music does not influence their explicit agreement with racial stereotypes; nevertheless, like a Trojan Horse, the audio input will at least temporarily increase their implicit bias. See id. at 145 (“E]ven low prejudiced people are unlikely to recognize the power of the situation and implicit stereotypes when they make interpretative judgments about others.” (citation omitted)).

Eric Uhlmann and Jane Swanson examining how playing violent video games might alter one’s self-concept of aggressiveness. See generally Eric Uhlmann & Jane Swanson, Exposure to Violent Video Games Increases Automatic Aggressiveness, 27 J. ADOLESCENCE 41 (2004). One hundred and twenty-one psychology students participated in the experiment, in which one group played the violent first-person shooter video game Doom for ten minutes and another group played Mahjong: Clicks, an absorbing puzzle game. Id. at 43. Participants then took an IAT measuring the implicit connections between Self and Other and Aggressive
and Peaceful. Id. at 44. Finally, participants answered explicit self-reports about their own aggressiveness. Id. Participants who played Doom implicitly associated themselves more with the concept of aggressiveness than did those who played Mahjongg: Clicks. See id. at 46 (reporting that at the p = 0.036 level, “participants in the Doom condition were more likely to automatically associate themselves with aggression (M = -130 ms, s.d. = 153 ms) than participants in the Mahjongg condition (M = -201 ms, s.d. = 204 ms), a difference that was statistically significant”). Although women had implicit self-concepts that were more peaceful than men (p = 0.023), there was no interaction between participant gender and game condition. See id. Moreover, Doom had no impact on explicit self-reports. See id. at 47. Collectively, this and the music study discussed above, see supra note 62, suggest that the electronic media we encounter can activate certain schemas and at least temporarily increase certain implicit associations.


65 The net decrease in latency came from faster reaction times for the “Black + pleasant” and the “White + unpleasant” combinations in the IAT. Interestingly, the latencies for the “White + pleasant” and the “Black + unpleasant” combinations did not change across the various exemplar conditions. See id.


67 Researchers selected forty-two undergraduates—seventeen male and twenty-five female—as participants. See id. at 830.

68 See id.

69 See id. at 831. For the neutral imagery group, the reaction time difference between the schema-consistent and schema-inconsistent blocks was ninety-five milliseconds. For the counterstereotypic imagery group, the difference was twenty-four milliseconds, which reached statistical significance at p < 0.05. See id. at 831 tbl.1.


71 The IAT effect for those attending a women’s college started at 31 ms and went down to -5 ms. By contrast, the IAT effect for those attending a coed college started at 74 ms and went up to 128 ms. See id at 651.

72 Id. (p = 0.004). Initially, the number of math and science courses taken also seemed to produce a significant effect. However, the researchers determined that this was caused by the fact that math and science courses at coeducational colleges were disproportionately taught by male faculty. Controlling for the effect of number of female faculty, the interaction between math-science courses and implicit bias lost significance. See id. at 652-53.

73 Voluntary decisions not to mention race unless relevant to the story are another matter, and may reflect good journalistic judgment. Although one may be able to do this in text, since names may not guarantee racial mapping, one cannot so easily do this with images. See Kang, supra note 6, at 1156 (discussing different techniques of racial mapping as a function of text, voice, and video).


75 A PSA is any announcement (including network) for which no charge is made and which promotes programs, activities, or services of federal, state, or local governments (e.g., recruiting, sale of bonds, etc.) or the programs, activities or services of nonprofit organizations (e.g., United Way, Red Cross blood donations, etc.) and other announcements regarded as
serving community interests, excluding time signals, routine weather announcements, and promotional announcements.

George Dessart, Public-Service Announcement, in 3 Encyclopedia of Television 1849 (Horace Newcomb ed., 2d ed. 2004). Stations are not required to broadcast PSAs. However, a station's choice to do so provides some evidence of its discharging its "public interest" requirements.


77 There are no federal or state statutes directly banning subliminal messages or advertisements. See Scot Silverglate, Comment, Subliminal Perception and the First Amendment: Yelling Fire in a Crowded Mind?, 44 U. Miami L. Rev. 1243, 1266 (1990). At the federal level, the FCC has announced publicly that it believes subliminals are against the public interest, but the Commission has never issued regulations or a more formal policy statement. See Harry Schiller, Note, First Amendment Dialogue and Subliminal Messages, 11 N.Y.U. Rev. L. & Soc. Change 331, 359 (1983). With respect to subliminal advertisements, the Lanham Act's ban on unfair trade practices may apply, although there have been no examples of such litigation. Nicole Grattan Pearson, Note, Subliminal Speech: Is it Worthy of First Amendment Protection?, 4 S. Cal. Interdisc. L.J. 775, 783-84 (1995). Also, it is possible that the FTC could invoke its general enforcement authority against unfair and deceptive practices, and the Bureau of Alcohol, Tobacco, Firearms, and Explosives has issued express regulations against subliminal advertisements for products within its jurisdiction. See Silverglate, supra at 1268-69 (1990). Finally, the National Association of Broadcasters and the major television networks are officially on record against subliminals. Pearson, supra, at 783; Schiller, supra, at 354.

78 See George Gerbner et al., Growing Up with Television: The Cultivation Perspective, in Media Effects: Advances in Theory and Research 17, 17-37 (Jennings Bryant & Dolf Zillman eds., 1994) (describing how television cultivates and socializes all of us, with focus on the authors' "Cultural Indicators" project); see also id. at 29-30 (demonstrating that heavy exposure to television increases the tendency to view the real world as violent, mean, and dangerous). Gerbner's research, though, has been controversial. See Barrie Gunter, The Question of Media Violence, in Media Effects: Advances in Theory and Research, supra, at 163, 184-86.


80 18 The Oxford English Dictionary 574 (2d ed. 1989) ("Trojan horse: according to epic tradition, the hollow wooden horse in which Greeks were concealed to enter Troy; fig. a person, device, etc., insinuated to bring about an enemy's downfall; a person or thing that undermines from within. ... ").

The connections between science, law and culture inspire Professor Jennifer Mnookin. Her interests include evidence theory, expert evidence and law and culture, with a focus on law and film. Other current work explores the history of expert and visual evidence in the American courtroom. A member of the UCLA School of Law faculty since 2005, she has served as chair of The Association of American Law Schools Section on Evidence and on its executive committee. In 2007, she became the vice dean for faculty and research at UCLA School of Law. Professor Mnookin is a co-author of the treatise *The New Wigmore: Expert Evidence* (with Kaye and Bernstein, 2004). She has published in leading law journals and written op-ed pieces for leading American newspapers.
In a well-told murder mystery, the reader is left hanging until the very end. Figuring out what actually happened is part of the reader’s job, as the author metes out clues and false leads, hints and distractions, bit by bit until it all fits together in a denouement that, ideally, is both surprising and satisfying.

Looking back on People v. Castro, there is no particular mystery about what happened. There is no reason to doubt that the defendant, Joseph Castro, a handyman, did in fact commit the murders with which he was charged, the fatal stabbings of Vilma Ponce and her two-year-old daughter. In fact, in People v. Castro, there was no trial, for the defendant ended up pleading guilty to second degree murder before the trial began. The case we now call People v. Castro was nothing more than a preliminary hearing about the admissibility of evidence at trial. Nor did People v. Castro lead to any change in legal rules or to a formal, explicit shift in any evidentiary doctrine.

Why then, should we tell the story of People v. Castro? What is it about a preliminary hearing in New York City in 1989 that adduced no new legal standard that has led to the case being cited more than 130 times by later courts and equally often in law review articles? And why is it worth retelling in detail more than 15 years later?

People v. Castro was a preliminary hearing about the admissibility of DNA evidence in the courtroom. It was by no means the first such case—more than a handful of trial courts had already permitted DNA evidence when the preliminary hearing in Castro, that would last 14 weeks and take up more than 5000 transcript pages, began in February, 1989. But People v. Castro was, in its own way, an extraordinary drama: the dramatis personae were not the defendant or eyewitnesses or the relatives of the victim, but instead, leading research scientists, including winners of MacArthur genius grants and future Nobel Prize winners; forensic biologists who had developed the use of DNA identification for courtroom use and some determined attorneys who, with both grit and luck, managed to put together a set of arguments about the inadequacy of the state’s DNA evidence that the judge simply could not ignore. At the preliminary hearing, it was not Joseph Castro who was on trial so much as it was forensic DNA. Much to the surprise of the public, not to mention significant swaths of the legal and
scientific community alike, the verdict on new technology that emerged from Castro was the Scotch verdict of “not proven.”

Although the hearing in Castro may not have ultimately made much difference to Joseph Castro, beyond likely reducing the sentence that he was offered in a plea bargain, its broader consequences were significant indeed. Castro arguably inaugurated a radical, though perhaps in the end, temporary, shift in the evaluation of DNA evidence. Prior to Castro, no court had even come close to rejecting DNA evidence. But Castro made it clear that DNA evidence was vulnerable, and enterprising defense attorneys poked and prodded those vulnerabilities in numerous subsequent cases across the country over the next several years, leading a number of courts to reject DNA evidence altogether, something that would have been nearly unthinkable prior to Castro.

Castro directly and indirectly affected not only attorneys but scientists, too. Castro led to a host of changes of standards in forensic DNA laboratories, and contributed to a set of controversies that motivated additional research, among scientists themselves. Forensic DNA, although no one quite realized it at the time, existed in a tinderbox. Castro was the spark that set off a firestorm over the reliability of forensic DNA, a flare-up that grew so heated and intense that press accounts referred to what ensued as “the DNA wars.” These battles played out not only in the courtroom but in the pages of leading scientific journals like Nature and Science. It took a number of years, additional court disputes, continued scientific research and the weighing-in of two distinguished commissions created by the National Research Council, to reach stability and closure in both the legal arena and the scientific one.

People v. Castro is also useful for the insight it provides into the complex intersection of science and law. We can see, on the one hand, how unnatural the adversarial system and its dictates can seem to scientists. We will even see how productive it was, in Castro, for the scientists to make an end-run around the adversary system and behave in ways that were both irregular and, in the end, enormously helpful for the production of consensus in the case. Castro could therefore be Exhibit A in a sharp critique of the adversarial method of proof, at least with respect to the evaluation of novel scientific techniques. But at the same time, Castro also shows how the adversarial system—at least in those instances when parties have equal access to highly qualified experts—may be especially well-suited for revealing limitations and weaknesses in evidence that other evaluative methods, including scientific peer review, reputation and publication, may not necessarily uncover. Castro therefore illustrates how the adversarial testing of expert evidence may be both truth-obscurring and truth-producing, depending on the circumstances.
Finally, in addition to being an object lesson in the inevitably awkward relationship between legal ways of doing things and scientific ones, Castro may perhaps be a beacon. There are significant debates going on right now about many other kinds of forensic evidence, and precisely what and how much evidence of reliability the courts ought to require from them. The substance of the preliminary hearing in Castro stands for the idea that the standards of research scientists ought to be the standards of forensic science—an idea that, if taken to its logical extreme, could make many kinds of commonly-used forensic evidence, from fingerprint identifications to expert document examination to ballistics analysis inadmissible in court until additional research is done to establish the validity of the claims to which forensic experts routinely testify.

In addition to raising these interesting questions about science and law, People v. Castro is an interesting story, and it is with the story of the case that we shall begin. After laying out the background facts, I will present an abbreviated history of DNA evidence and its legal use prior to Castro, and then describe in some detail the preliminary hearing that made Castro special. Then we shall explore the aftermath of Castro, concluding with broader ruminations about Castro, the use of science in the adversarial system and forensic science.

A young man returned to the Bronx apartment he shared with his common-law wife, 20-year-old Vilma Ponce, late in the afternoon on February 5, 1987. He unlocked both of the two locks on the door, but could not enter because the chain locking the door was attached from the inside. He called out the name of his wife and daughter, but was answered only by silence. Concerned and somewhat anxious, he attempted to phone his wife, thinking that perhaps she was sleeping. When no one answered, he called his mother, who lived nearby, to see if she had any possible explanation, but she hadn't spoken to his wife since earlier that afternoon. Growing increasingly concerned, he asked his mother to call the police. He stood outside his building, and attempted to whistle up to his apartment, thinking that maybe his wife or daughter would hear him. Just then he saw a ghastly sight: a man leaving the building, his face, arms and shoes smeared with blood. Moments later, the police arrived. When they entered the apartment, they discovered that Ponce, six months pregnant at the time, and Natasha, the couple's two-year-old daughter, both lay dead, victims of a brutal stabbing. Ponce, found nude from the waist down, had been perforated nearly 60 times, and her small daughter's body had been stabbed at least 16 times. While the victim's boyfriend initially failed to pick Castro out of an array of photographs, he subsequently identified Joseph Castro as the man he saw leaving the building with
bloody hands that afternoon. Castro lived nearby, and did odd jobs in various buildings in the neighborhood, including, on occasion, Vilma Ponce’s.  

Police investigation found further evidence to buttress the eyewitness identification of Castro and to support a circumstantial case that Castro was indeed the murderer. According to one of Vilma Ponce’s friends, Ponce had pointed Castro out to her on the street just a week before the murder, complaining that he frequently made suggestive remarks to her. Her friend told her to tell her husband, but Ponce said she didn’t want to provoke a possibly violent confrontation between the two men. The police found that one of the locks on Ponce and Rivera’s door was improperly installed, and therefore didn’t work—and they discovered that Joseph Castro himself, assisting the building superintendent’s nephew, had helped to install the malfunctioning lock just two weeks earlier. In addition, because the police found Ponce’s just-bought groceries, including meat and chicken, still sitting in a bag on the living room sofa rather than in the refrigerator, they speculated that Ponce had been surprised by her attacker just after getting home—perhaps before she had a chance to latch the second, actually-functioning lock on her door.

All of this was suggestive: it provided the outlines for a story that fingered Castro as a possible suspect and gave tantalizing hints of both motive and opportunity. But the police still might not have had a persuasive case had they not, when they questioned Castro, seized a watch he was wearing, stained with what looked like dried blood. If it was blood and if it could be persuasively linked to Vilma or Natasha, that would transform a circumstantial case into a slam-dunk story of Castro’s guilt.

The prosecution sent Joseph Castro’s watch for DNA testing in the summer of 1987. A few weeks later, Lifecodes, the company that conducted the test, reported that the DNA found on the watch matched Vilma Ponce’s DNA profile. Lifecodes claimed that the chance that a person selected at random from the population would match the blood found on that watch was a minuscule 1 in 189,200,000.

Testing blood for blood types goes back many decades, and over the years ever-more sophisticated tests had been developed. Nonetheless, just a few years earlier, no such definitive identification would have been possible. Although blood testing had grown increasingly sensitive, and had long been able to reliably determine that an individual was not the source of a particular blood sample, it could not do any more than show that an individual was a possible source of a blood sample, one
among a significant number of people that had the same blood type or the same blood proteins.

Then in 1984, a British scientist named Alec Jeffreys, a DNA researcher at the University of Leicester, made an astounding and surprising discovery. He was studying myoglobin, a protein that stores oxygen, and quite by accident, while working on a problem related to gene mapping, not individual identification, Jeffreys and his colleagues realized that they had found a way to examine a region of DNA that was both inherited in Mendelian fashion (that is, passed along through the generations, half from each parent) and highly variable across individuals. Jeffreys first published the news of his invention in March of 1985, and by July, he and his co-authors were claiming in the prestigious scientific journal Nature, that the new technology was a reliable and “unambiguous” way to identify individuals. Quite self-consciously, Jeffreys gave this new technique a name that would resonate: DNA fingerprinting.

Drawing on the widespread belief in the uniqueness and power of fingerprinting was a masterful PR move—it both suggested that DNA evidence shared in the cultural authority of its predecessor, the fingerprint, and it provided for the non-scientific, for those who knew nothing about DNA at all, a mental image of what it was that this new technique could do. As Jeffreys reported in an interview,

One of the reasons we called this DNA fingerprinting was absolutely deliberate. If we had called this “idiosyncratic Southern blot profiling,” nobody would have taken a blind bit of notice. Call it “DNA fingerprinting” and the penny dropped.2

Sure enough, the penny did drop; the technique quickly got worldwide attention. It was used for the first time in a legal setting that very year, in an immigration dispute in England over whether a teenage boy was in fact a legitimate British citizen returning to be reunited with his British mother, or somebody else, a mere faker who had tampered with a passport. The family’s lawyer persuaded Jeffreys to use the new technique to analyze the boy’s DNA, and the tests results identified the boy as the mother’s biological son. In the face of this DNA evidence and under pressure from the appellate tribunal, the British Home office ended up withdrawing their case. This saved the tribunal from having to decide about the admissibility and validity of a powerful but untested brand new technology. Press accounts nonetheless celebrated both the result and the new technique.3
Shortly thereafter, in 1986, the technique was put to use for the first time in a criminal investigation. A teenage girl had been raped and murdered in rural England in 1983, and then in 1986, another girl was found dead nearby. A kitchen worker with a low IQ was fingered as a possible suspect. The DNA evidence from both murders was tested against the suspects, and it turned out that the two criminal samples matched each other, strongly suggesting that the same person committed both crimes. But much to the disappointment of police investigators, neither sample matched the original suspect. The kitchen porter was freed, the first criminal suspect in history to be exonerated by his own DNA. Frustrated and desperate for new leads, police eventually decided to take on a genetic manhunt: every man in the appropriate age range in the vicinity was asked voluntarily to submit blood for testing. Although thousands of samples were tested, none matched the DNA evidence extracted from the semen found at the murder sites. An enormous and controversial effort seemed to have produced nothing useful. Then the police got a much-needed lead: it turned out that a young man who worked at a bakery let slip that he had been coaxed into giving blood in place of one of his co-workers. Police unraveled the story and confronted the co-worker, who promptly confessed to the murders. The DNA evidence confirmed the confession: this time, the police had found the killer.

By 1987, Jeffreys and his research institute had sold their rights in their DNA technique to ICI, a private company that would further develop and commercialize their new technique. That same year, ICI opened up Cellmark Diagnostics USA, and began to offer the technique for paternity testing and forensic matters in the United States. Around the same time, another company, Lifecodes, began offering its services for forensic analysis—based on somewhat different techniques for analyzing DNA, but also designed to provide reliable information about whether two biological samples were likely to have come from the same source.

The DNA techniques used by both companies measured the length of particular genes. DNA profiling looks at specific parts of the human DNA with no known function (therefore sometimes called “junk DNA”). At these places, or loci, on the genome, short sequences of DNA are repeated, but the number of repetitions is highly variable across the population. (These are known as VNTRs, or “variable number tandem repeats.”) Each possible variant is called an allele. Every person inherits DNA from both parents, so an individual will typically have two alleles at each locus. At any one locus, two people could easily have the same allele, but if you examined their alleles at several different loci, the chance that all their alleles would match decreases exponentially.
To examine DNA with these methods, it is first chopped into small pieces using special enzymes that break it apart whenever certain patterns of base pairs within the DNA are found. This broken-up DNA is next divided up using a technique called “electrophoresis,” in which the DNA is loaded into a lane in a gelatin slab. In the forensic context, the DNA found at the crime scene would be loaded into one lane, while the DNA known to come from, say, the victim and the suspect are each loaded into their own lanes. All the lanes are then subjected to an electrical current, and because they are different sizes, they travel at different speeds down the gel. Then the DNA is converted from double-stranded to single stranded, transferred and affixed to a membrane and exposed to a radioactive “probe” that latches onto it and can be visualized by exposing x-ray film to the membrane. This produced an autoradiogram, or “autorad,” which visually displays the bands attributable to each allele at each locus. If two DNA samples came from the same person, the bands displayed on the autorad would line up and show a “match.”

Both companies advertised their new techniques in very strong terms. One advertisement in Trial magazine proclaimed “Only DNA Fingerprinting Determines Paternity in Just Two Words: Yes / No. Thirty billion to one accuracy in one conclusive test.” “NO ifs, NO maybes,” announced another advertisement. In Criminal Justice magazine, around the time of the Castro case itself, one of Cellmark’s advertisements showed two cuffed hands linked by a chain in the shape of the DNA double helix, explaining that DNA fingerprinting “positively identifies suspects . . . by examining a suspect’s one-of-a-kind genetic material.”

These advertisements—making strong claims for the technology and broadcasting total confidence in its results—illuminate not only how DNA analysis was portrayed by its developers, but also the context in which the first judges in the American courtroom received the exciting new technique. It was presented—not only in these advertisements, but to some extent in the early court cases as well, as a kind of “magic bullet”—powerful, infallible, almost miraculous.

In a number of the earliest court cases involving DNA, scrambling defense lawyers were unable to find any expert witnesses of their own. For example, in Andrews v. State, the prosecution hired as a consultant and expert witness David Housman, a prominent biologist from MIT. The defense, by contrast, had no expert witnesses. Later, the defense attorney in the case explained that although he had made calls to many biology departments, he was unable to find anyone interested in getting involved—and many scientists had told him that if Housman was standing behind the evidence, than it was almost certainly valid.
According to historian of science Jay Aronson, this problem grew even more acute over the next year. In addition to the impressively-credentialed molecular biologists who worked for the DNA testing companies, prosecutors soon had at their disposal a growing list of highly respected academic researchers who were prepared to testify in favor of the new technology. Very prominent scientists—geneticist Kenneth Kidd from Yale, molecular biologist Richard Roberts (who would go on to win the Nobel prize in biology in 1993), and several others of equally high repute—testified about the principles of molecular biology and population genetics, and affirmed the legitimacy and validity of the DNA identification techniques. The early defense witnesses—when there were any at all—were not nearly as prominent. Interestingly, the prominent scientists testifying for the prosecution, while leading experts in DNA techniques in general, had very little knowledge about the forensic use of DNA or what distinctive problems might arise in the forensic identification context. Questions of technology transfer—the special problems that might arise in translating DNA testing from the research laboratory or clinical setting into the forensic science context—did not strike these experts as either salient or problematic. Nor had they examined in detail the specific probes and validation techniques used by the DNA profiling companies, nor the data underlying their population genetics. In fact, both the probes that the companies were using and their population databases were deemed by the companies to be proprietary knowledge, trade secrets.

Given this state of affairs, it is not all that surprising that the early judicial opinions about DNA evidence not only deemed the technique admissible, but sometimes engaged in rhetoric that borders on the reverential. For example, in People v. Wesley, the first trial judge in New York State to consider the admissibility of DNA evidence wrote:

The immediate advantage of DNA fingerprinting... is the claimed certainty of identification. Blood-grouping identification tests often can narrow down the number of suspects to from 30 to 40% of the population. The laboratory the People propose to utilize claims a mean power of certainty of identification for American Whites of 1 in 840,000,000; for American Blacks, 1 in 1.4 billion. There are approximately only five billion people in the entire world.

The overwhelming enormity of these figures, if DNA fingerprinting proves acceptable in criminal courts, will revolutionize the administration of criminal justice. Where applicable, it would reduce to insignificance the standard alibi defense. In the area of eyewitness testimony, which has been claimed to be responsible for more miscarriages of justice than any other type of evidence,
again, where applicable, DNA fingerprinting would tend to reduce the importance of eyewitness testimony. And in the area of clogged calendars and the conservation of judicial resources, DNA fingerprinting, if accepted, will revolutionize the disposition of criminal cases. In short, if DNA fingerprinting works and receives evidentiary acceptance, it can constitute the single greatest advance in the “search for truth,” and the goal of convicting the guilty and acquitting the innocent, since the advent of cross-examination.8

New York, like most states at that time, evaluated novel forms of scientific evidence under the Frye standard, named for a 1923 case in which a systolic blood pressure test, an early and crude attempt at a lie detector, was excluded from evidence.9 Admissibility under this test depended on whether the new form of science was “generally accepted” by the relevant scientific communities. Sure enough, after a detailed review of both the substance of the testimony and the glowing credentials of the prosecution experts, the trial judge in Wesley found that DNA fingerprinting was “reliable and has gained general acceptance in the scientific community,” and hence, was admissible in court.10

The judge in Wesley was especially reassured by his belief that DNA evidence could never provide an erroneous result. He wrote:

A matter of extreme significance testified to by Dr. Roberts, and confirmed by [the other prosecution experts] and unrefuted by the defense experts, is that it is impossible under the scientific principles, technology and procedures of DNA fingerprinting (outside of an identical twin), to get a “false positive”—i.e., to identify the wrong individual as the contributor of the DNA being tested. If there were insufficient DNA for the test, or if the test, or any of its steps, were performed improperly, no result at all would be registered—in other words, the autoradiograph would be blank. Thus the dichotomy can never be between an accurate answer and a false answer, but only between an accurate answer and “no answer.” Under the undisputed testimony received at the hearing, no “wrong” person, within the established powers of identity for the test, can be identified by the DNA fingerprinting test.

This assumption—that interpreting a DNA test was a straightforward process that would inevitably provide either the right answer or no answer at all—was shared by many of the early courts that considered the admissibility of DNA evidence. As we shall see, after Castro, this belief was no longer tenable.
Meanwhile, at the end of November, 1988, an academic conference was taking place that would turn out to have significant consequences for the Castro case. Some molecular biologists and forensic scientists had decided to organize a meeting at the renowned Banbury Center to create the opportunity for a wide variety of participants in DNA typing—including molecular biologists, forensic scientists, population geneticists, lawyers and judges, to discuss DNA techniques, their power and their limits. This meeting was the first structured occasion for discussion between university-based academic molecular biologists and commercially employed forensic scientists, and by all accounts, the conversations were both lively and contentious.

One of the participants at the Banbury Conference was Eric Lander, a brilliant MIT scientist who had received a MacArthur “genius” grant one year earlier for his work on techniques to help decipher the human genome. At the Banbury conference, he presented a paper suggesting that the population genetics and statistical issues surrounding the interpretation of DNA profiling—essentially, the knowledge necessary for making the claim of a 1-in-something chance that a random person would have matched the biological material in question—were significantly more complicated than the private companies had acknowledged. Over the course of the meeting, his probing remarks combined with his critical perspective caught the attention of two defense attorneys participating in the conference, Barry Scheck and Peter Neufeld. Both were members of a New York State panel commissioned to study the forensic use of DNA, and they had also recently taken over Joseph Castro’s defense from a court-appointed lawyer who felt overwhelmed by the DNA evidence. Scheck and Neufeld are now very well known both for their creation of the Innocence Project, which uses post-conviction DNA evidence to exonerate the wrongly convicted, and for their role as members of O.J. Simpson’s defense team. At the time of the Banbury conference, Scheck was a clinical law professor at Cardozo and Neufeld a sole practitioner, and they were beginning to look for experts who might be able to help them challenge the DNA evidence in the case.

Toward the end of the conference, Peter Neufeld approached Eric Lander and asked him to take a look at the DNA evidence in the Castro case. As Neufeld told the story to the press after the Castro case was over, Lander took a look at the autorad and said,

“Let me show you how we do things in science.” Lander then called over several colleagues, slapped the autorad up against a window, and said, “Match, or no match?”

“Garbage,” one responded.

“Do it again,” said another.

“Garbage,” said a third.11
Neufeld asked Lander if he would testify for the defense in the Castro case. He declined. He had plenty on his plate already, and besides, at some level, he doubted that there were serious problems with Lifecodes’ methods or their implementation. But he did agree to help educate Scheck and Neufeld about DNA evidence and to assist them in making effective discovery requests in the case.

The more Lander learned about Lifecodes’ practices in this case, the more disturbed he became. By the time the Castro case was over, Lander had agreed to testify after all, had written a 50-page report for the defense and had devoted more than 350 hours of his time, all of it pro bono, to the case.

By the time the Castro hearing began in February 1989, DNA had been used in quite a few cases throughout the country; some knowledgeable participants estimated that it might already have been used in as many as 80 proceedings nationwide. In many more cases defendants had accepted plea bargains in the face of DNA evidence. Up until Castro, every judge confronted with DNA evidence had deemed it admissible. However, these cases had resulted in only a handful of written opinions and even fewer appellate opinions.

The Castro hearing—which lasted more than three months—was presided over by Judge Gerald Sheindlin, who would thereafter retain an abiding interest in DNA. He later wrote two books relating to DNA: Blood Trail: True Crime Mysteries Solved by DNA Detectives, and Genetic Fingerprinting: The Law and Science of DNA Evidence, both published in 1996, as well as a never-produced screenplay about a murder case in which DNA evidence played a role. Sheindlin also did a stint from 1999-2001 as a television jurist on The People’s Court. (Sheindlin’s wife Judy, at the time of the Castro hearing, was a Supervising Judge on the Manhattan Family Court—but she is much better known today as television’s Judge Judy.)

The prosecution, led by Risa Sugarman, the homicide bureau chief for the Bronx district attorney’s office, began its case by offering the testimony of geneticist Richard Roberts, who explained DNA typing and told the court that it was indeed generally accepted in the scientific community. The next witness was Michael Baird, Lifecodes corporation’s chief scientist, who described the techniques and methods Lifecodes used to get results. Up to this point, the preliminary hearing seemed to be business as usual, not particularly different from, say, the prosecution’s evidence presented in the Wesley case a year earlier.
But then Eric Lander entered the picture. Michael Baird later told an interviewer,

“Things were going pretty routinely in terms of presenting the background, presenting the data, presenting the information. Suddenly Eric Lander shows up for the defense and has a booklet that is numerous pages thick that has what he critiques as all kinds of problems with the case. The prosecutor in that case is like, ‘Who is this guy? Where did he come from?’ . . . You know Scheck and Neufeld spent half a day just on his credentials to show that this guy walks on water before the judge.”

Indeed, Lander's participation in Castro marked the first time that the defense counsel had an expert witness every bit as illustrious as those offered by the prosecution.

But well beyond Lander's sterling credentials, Scheck and Neufeld were able to present a number of extremely significant challenges to Lifecodes' DNA evidence. In brief, the defense arguments fit into three categories: (1) that Lifecodes had failed to follow their own protocols for both declaring a match and interpreting its probability; (2) that forensic analysis posed challenges different from DNA analysis in the research setting, and that these technically demanding challenges posed by “technology transfer” had not yet been fully met by Lifecodes, as indicated by some of their analysis and interpretation of the blood evidence in this case and (3) that there were additional problems with the population genetics databases that Lifecodes was using to determine the probability of a “match.”

In Lifecodes’ report of their test of the DNA found on Castro’s watch, they stated that they were able to test the blood at three loci. At each of these loci, they reported a precise match between Vilma Ponce’s blood and the stain found on Castro’s watch. At one of the loci, the D2S44 locus, they reported that both samples were homozygous (in other words, had two identical alleles, or just one band on the autorad) and had a band sized at 10.25 kb (Kb stands for kilobase, a unit of size measuring 1000 base pairs on the DNA ladder). But when Lander and the attorneys looked over the materials they had received through discovery, they learned that, in fact, the band in Ponce’s blood was actually 10.35 kb, and the band from the bloody watch measured 10.16 kb. (The reported 10.25 was, in fact, the average of the two measurements.) Small variations in measurement were nothing uncommon—the hard question was how much discrepancy in measured size could still support the claim that the two bands really did “match.”
In published papers, Lifecodes had maintained that technicians first made matches “visually”—in other words, they “eyeballed” them to see if they looked the same. But they also claimed that visual matches were confirmed through computerized comparison, and their own protocols required that the bands size be within three standard deviations of each other in order to call it a match. But Lander found that 10.16 and 10.35 differed from each other by more than three standard deviations! And this wasn’t the only example of interpretive overreaching. Similarly, he found that one of the bands on another of Ponce’s loci differed from the “matching” band on the bloodstain by more than 3 standard deviations. In other words, if Lifecodes had followed their own published standards about when to declare a match, they actually should have said that the blood from the watch and Vilma Ponce’s blood did not definitively match.

On cross-examination, Michael Baird was forced to acknowledge that, no matter what the published papers said, in fact, Lifecodes technicians often just identified a match solely through visual observation, rather than using any predetermined objective standards. Scheck was pleased by this damaging concession, and lifted his arms “in a touchdown-like motion,” to the irritation of the district attorney. On redirect, Baird pointed out that all of the measured bands were within three standard deviations of the average measurement. When Lander testified later in the hearing, he mocked Baird’s effort to recover: “That’s similar to saying New York and Boston are both within one hundred and twenty-five miles [of] each other because they’re each within one hundred and twenty-five miles of Hartford. I found it somewhat difficult to take seriously.”

Even more disturbing, while Lifecodes was clearly a little loose about the measurements required for declaring a match, when it came time to determine the probability of a match, they used a different matching rule, one much stricter than the 3 standard deviations. In essence, they appeared to be using one set of rules for deciding whether a match existed, and another, stricter rule for determining the statistical likelihood that two samples matched. To illustrate the problem with this disparity, suppose that I wanted to know how many law students at a particular school were both 24 years old and had summer birthdays. In order to decide who counted, suppose I defined “summer” broadly and counted all 24 year olds with birthdays anytime between March and October, inclusive. But then in order to decide how likely it was that someone I picked at random from the law school community would “match” my criteria—that is, be 24 and have a summer birthday—suppose I now only counted those people with birthdays between June and August. Using these narrower criteria, I might find that only 1 in 25 people picked at random matched. But using the broader criteria, I might find instead that 1 in 10 matched. The misleading aspect is to use one criterion for
determining what counts as a match and a different one for interpreting the probability of a match—and yet that is exactly what Lifecodes seemed to have done. As Lander put it in his testimony:

Whatever choice you make for your matching rule, when you go and tell a court what is the chance this would have arisen at random in the population, you had better be using the same matching rule. To do otherwise is to report a probability that is simply not true. If I go out and I catch matches with a ten-foot wide butterfly net and I say I caught a match, and then I come to court and I say, and it was so rare that I caught this match, and I will prove it to you by showing that when I go out with a six inch butterfly net, I never catch matches in the population, that would be absurd.

The defense, by looking closely at the actual data on which Lifecodes’ claims were made, was therefore able to show significant problems with Lifecodes’ implementations of their own procedures.

In the research and diagnostic setting, and with paternity testing as well, the issues involved with using DNA are more straightforward. Blood is plentiful. It can be taken under sterile conditions, and kept uncontaminated. If something isn’t quite right with one testing procedure, the scientist can run another sample just to make sure. If the scientist runs out of blood, she can go back to the source and get more. By contrast, in the forensic setting, scientists often have only minute samples of blood, perhaps quite old, possibly contaminated with bacteria or other materials from the crime scene—and some of these contaminants might themselves contain DNA from other sources. Depending on the sample size and the techniques used, running one sample might use up all of the available blood—in which case, if anything goes wrong, the examiner would be out of luck. As Judge Sheindlin put it in his opinion in Castro, “for forensic purposes, there is only one bite at the apple.”

One of the ways that scientists using the new technology made sure that everything was working properly was by having a “control lane,” in which they tested DNA from a known source, to make certain that all of the probes were working properly. In Castro, Lifecodes had properly used a control lane—but figuring out whose DNA had been used in the control lane became a comedy of errors. At first, Baird testified that the blood used in the control lane came from the HeLa cell line, a commercially available cell line widely-used in research and experimentation. But another Lifecodes employee testified that the blood probably came from a male scientist who worked at Lifecodes,

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and Baird subsequently agreed with this assessment. However, the control DNA had not reacted with a probe that targeted parts of the Y-chromosome—which, if the control DNA were male, it should have done. Baird explained that this Lifecodes employee must have an unusual genetic condition in which his Y chromosome was “short,” and thus happened not to react with this probe.

Lander was skeptical. A genetic condition like the one Baird described would be extremely rare—and it would be both odd and extremely poor judgment to use for control purposes the DNA of an employee who was so genetically atypical. Upon further investigation, Lifecodes established that, sure enough, the “control” DNA belonged to a different Lifecodes employee, this time a female.

The defense suggested that the dreadful recordkeeping and sloppiness illustrated by Lifecodes’ inability accurately to identify the source of the control DNA was both inexcusable and illustrative of a part of a more general pattern of unjustifiably poor quality control that made their results uncertain and untrustworthy. Lander detailed many other problems with the laboratory’s records: failures to note experiments that had been run, failure to note dates accurately, failure to label autorads correctly. While granting that “no one of these things is fatal,” Lander opined that “so many of them are questionable here that it makes me worry a great deal about whether a recognized procedure was in place for doing [these experiments].” In addition, it appeared that Lifecodes had knowingly used a probe they realized was contaminated. At one point on the autorad, there was an extra band on Ponce’s DNA not visible on the blood from the watch. Lifecodes went to great length, and performed several experiments, to establish that this extra band was bacterial in origin—the result of a contaminated probe, rather than the result of an actual difference between Ponce’s DNA and the bloodstain from the watch. The defense suggested that to continue to use a contaminated probe was scientifically unacceptable. While Baird explained that they had no choice, because making a new probe would have entailed significant delays, the defense claimed this was another example of sloppiness, and an example of how commercial interests had gotten in the way of doing science properly.

Then, at another locus, the blood taken from the watch appeared to reveal two bands not present in Ponce’s blood sample. Baird testified that he was confident that these bands were the result of contamination and should therefore be ignored. But the defense claimed that Baird had no scientific basis for his confidence, and strongly criticized the laboratory for failing to do further experiments that could have definitively established whether or not these bands were genuine.
Lander also emphasized the danger of examiner bias: the danger that people—even scientists—tend to see what they are looking for when they interpret an autorad. He said that in his lab at MIT, they sometimes joked about the risk that a scientist might “hallucinate a band” when they expected to see one, and “just as one hallucinates bands where one expects to see them, one tends to discount things where one does not expect to see them.” Therefore conducting the follow-up tests necessary to check any interpretations that might have been colored by prior expectations was absolutely critical. In his opinion, Lifecodes routinely failed to do that.

Baird, in retrospect, thought that the problem was in part the daily reality of forensic science being evaluated from the lofty perspective of research scientists. He said in a 1994 interview, “The reality is that when you do a test on a forensic sample, it is what it is, and you have to interpret it. It isn’t my fault if the sample is contaminated or mixed or shitty. ... I’m just trying to interpret what’s there.”

The defense also raised important issues in Castro about the the use of population genetics in the case; that is, the methods by which Lifecodes determined not the fact of a match but its statistical meaning. To figure out how often one would expect to find two DNA samples that matched at a given set of loci, a scientist must have information about how frequently each allele is found in the population, and must also know to combine the likelihood of each particular allele into one combined frequency statistic. (To oversimplify slightly, one key issue was whether databases divided into major racial subgroups (e.g., Caucasian, Black, Hispanic) could actually provide adequate information about the frequency with which particular alleles were distributed in a population. Some believed these databases to be sufficient, while others thought that because some ethnic subgroups might tend to intermarry—e.g., Irish-Americans might tend to marry other Irish-Americans at a rate greater than chance—these general databases might misstate the expected allele distribution in particular subpopulations.) In Lander’s view, scientists had not yet developed adequate knowledge about these matters to calculate the statistical meaning of a match with complete confidence.

All in all, the defense was able to show persuasively that Lifecodes had exercised poor judgment, engaged in shoddy quality control practices, and that their conclusions could not simply be presumed accurate. As Judge Sheindlin wrote in his opinion, “In a piercing attack upon each molecule of evidence presented, the defense was successful in demonstrating to this court that the testing laboratory failed in its responsibility to perform the accepted scientific techniques and experiments in several major respects.”
Shortly after Eric Lander had finished testifying for the defense, he and Richard Roberts, one of the key witnesses for the prosecution in the case, ran into each other at a scientific meeting on genome mapping in Cold Spring Harbor. Lander gave Roberts a copy of his written report about Lifecodes’ DNA evidence in the case and suggested that Roberts would likely find it to be interesting reading. Roberts was certainly troubled by what he read. In fact, he was so troubled that he proposed that all of the expert witnesses in the case—both prosecution and defense witnesses—should gather to talk about the issues, scientist to scientist, no lawyers allowed. Although eight of the ten witnesses who were contacted liked the idea of meeting, only four were able to fit the meeting into their schedules. On May 11, 1989—before the conclusion of the preliminary hearing—Lander, Roberts and two other witnesses (one from the defense, one from the prosecution) convened a mini-conference to see what they all thought about the evidence in Castro. They found that there was, indeed, much upon which they could agree.

After the meeting, the attendees issued a joint statement that left the prosecutors in Castro almost helpless: “Overall, the DNA data in this case are not scientifically reliable enough to support the assertion that the samples . . . do or do not match,” they concluded. “If this data were submitted to a peer reviewed journal in support of a conclusion, it would not be accepted.” The consensus of the experts on both sides that the evidence was invalid made it very difficult to imagine that the court would find it nonetheless to be “generally accepted” by the scientific community. All of the experts on both sides of the case, except for Michael Baird from Lifecodes, eventually endorsed the conclusions reached in this meeting.

The prosecution successfully kept the joint statement itself from being introduced in the hearing, on the grounds that it was hearsay. But the defense responded by calling several prosecution expert witnesses to the stand, who repeated under oath the conclusions that they had reached about the inadequacy of the particular DNA evidence in the case. In a way, the joint meeting and its consequences made Sheindlin’s job in the Castro case a good deal easier: when the standard is “general acceptance” and the enormously-credentialed, hand-picked experts on both sides actually reach a consensus, who is the judge to second guess these shared conclusions of the experts?

Such a gathering of witnesses on both sides, ex parte, was of course highly irregular; with a flair for the dramatic, Peter Neufeld later called it “unprecedented in the annals of law.” “We wanted to be able to settle the scientific issues through reasoned
argument, to look at the evidence as scientists, not as adversaries,” Richard Roberts explained afterwards to the press. “We all did so much better when we sat down without the lawyers, and had a reasoned scientific discussion. Perhaps it’s time the system changed.” Indeed, the scientists’ joint statement criticized the use of the courtroom as a venue for reaching scientific consensus:

All experts have agreed that the Frye test and the setting of the adversary system may not [be] the most appropriate method for reaching scientific consensus. The Frye hearing is not the appropriate time to begin the process of peer review of the data…. The setting also discourages many experts from agreeing to participate in the careful review of the data.16

The joint statement also called on the National Academy of Sciences to organize a committee to study the questions surrounding the use of forensic DNA.

Roberts, in particular, had harsh words for the adversarial process in his comments to the press. “Lawyers are more interested in getting certain words down on the written record than in arriving at the truth. Lawyers hope or want witnesses to say slightly more than they feel comfortable saying. . . . I do not find that the best way to reach the truth.” While the scientists’ discomfort with adversarial processes is understandable, it is also undoubtedly the case that Castro—the hearing itself, the ruling, and the significant publicity—revealed far more about how Lifecodes was conducting its DNA tests than any non-adversarial process had yet done. Outside of the setting of the courtroom, it is very difficult to imagine a research scientist of Eric Lander’s caliber spending as much time and effort analyzing in detail the work product of a commercial forensic laboratory. The adversarial process has both flaws and excesses, but it also is a setting in which participants can drill down, analyze and unpack weaknesses in evidence in ways that may sometimes risk being unfair—but that also can be very revealing. Lander, for example, was able to work with Lifecodes’ data and examine their protocols because courts can force the disclosure of material that in other settings could be kept confidential as trade secrets and proprietary information.

Roberts himself had testified in a number of earlier cases for Lifecodes, without ever having seen the kinds of data that Lander, Scheck and Neufeld had insisted upon in Castro. He simply assumed that the prosecutor and Lifecodes were showing him all of the relevant information. He had seen his role primarily as providing background information about DNA in general, but of course, both his presence and the substance of his testimony served to shore up the legitimacy of the forensic use of DNA in
particular. Roberts may have criticized the adversary process, but it was this same process that led directly to the production of information that changed his mind about the DNA sample in Castro.

To be sure, the use of expert evidence within an adversarial legal system has obvious dangers: it encourages expert participants to make stronger statements than they might in other settings, to become partisans rather than fair-minded evaluators or to overstate minor errors or mistakes that may be an inevitable part of any human endeavor. But it is important to recognize that adversarial methods can have a productive dimension as well: until the hearing in Castro, no one had any idea that Lifecodes was not following its own procedures and protocols in a variety of meaningful ways. Up to that point, neither scientific conferences, nor publication, nor peer review, nor internal laboratory checks or audits had brought to light what the adversary process made quite visible: both the significant deficiencies in how Lifecodes had handled the DNA in the Castro case, and more generally, that there were a number of important, not fully resolved problems relating to the transfer of DNA techniques into the forensic setting.

At the end of the preliminary hearing, Judge Sheindlin had presided over the longest, most in-depth legal examination of DNA profiling that had ever taken place. He had listened to days on end of testimony at the cutting edge of science, substance that he acknowledged was often far outside of his comfort zone. As he told the defense counsel at one point during Lander’s cross-examination, “I don’t have any scientists who I can ask about these things; therefore, I stand up here—sit up here alone attempting, as best as I can struggle. I work on [these issues] after Court session until late in the evening so that I can understand it.”

Judge Sheindlin explained in his ruling that he would be guided by a three-prong test for examining whether the prosecution’s DNA evidence met the Frye standard of general acceptance:

Prong I. Is there a theory, which is generally accepted in the scientific community, which supports the conclusion that DNA forensic testing can produce reliable results?

Prong II. Are there techniques or experiments that currently exist that are capable of producing reliable results in DNA identification and which are generally accepted in the scientific community?

Prong III. Did the testing laboratory perform the accepted scientific techniques in analyzing the forensic sample in this particular case?”

The Ruling
Sheindlin recognized that courts often viewed the Frye test as encompassing only the first two prongs, figuring that the third prong—the case-specific implementation of the general tests—went to the weight of the evidence rather than its admissibility. Whether or not the third prong was appropriately defined as part of the Frye test or as something separate from it, Sheindlin thought that it was a crucial focus for pre-trial assessment of DNA. “[G]iven the complexity of the DNA multistem identification tests and the powerful impact that they may have on the jury, passing muster under Frye alone is insufficient to place this type of evidence before a jury without a preliminary, critical examination of the actual testing procedures performed in a particular case,” he explained.18

In his ruling, Scheindlin went through each prong in turn, one by one. He first provided an introductory primer to both DNA identification in general (Prong I), and the forensic use of DNA for determining identification (Prong II). Prong I was, he thought, quite unproblematic: “The evidence in this case clearly establishes unanimity among all the scientists and lawyers as well that DNA identification is capable of producing reliable results.” Sheindlin also answered Prong II, the question of whether there were presently techniques for reliably making DNA identifications in the forensic context, in the affirmative.

But when it came to the third prong, whether the specific tests were adequately performed by the laboratory in analyzing the DNA sample, in this case, Sheindlin’s answer was a resounding “no.” He spent several pages describing the “major respects” in which Lifecodes “failed to conduct the necessary and scientifically accepted tests;” such as their unacceptable use of an apparently contaminated probe, their failure to use adequate controls for sex typing, their failure to do further tests to assess the two extra bands seemingly visible in the watch sample and their failure to use the same standards for measuring the existence of a match and assessing its statistical probability. As a result of these many lapses, Sheindlin concluded that he would permit at trial any evidence of exclusion—that is, that two samples did not match—but he would exclude the evidence suggesting a match between the watch sample and Vilma Ponce’s DNA. In other words, the prosecution would be able to offer evidence that the blood found on the watch did not belong to Castro, but they would not be able to say that it was almost certainly Ponce’s. Because Sheindlin decided that the evidence of a DNA match would not be permitted at trial, he deemed it unnecessary to delve into the questions of population genetics, an area that had played a relatively small role in Castro but would assume much greater importance in subsequent cases.
This marked the conclusion of what “some have referred to as the most comprehensive and extensive legal examination of DNA forensic identification tests held to date in the United States.” Sheindlin’s decision marked the very first time that any American judge had restricted the use of DNA evidence in court. In addition, his opinion made clear that when scrutinized carefully, DNA tests in actual practice might turn out to have serious flaws.

And yet, without a doubt, Sheindlin’s framework cabined the defense victory by making the emphasis quite particularistic and local, emphasizing Lifecodes’ sloppy examination of this DNA comparison rather than recognizing problems with their forensic DNA analyses more generally. Given the many embarrassing revelations that had emerged at trial, and considering that nearly all the experts had reached a consensus that this particular DNA test could not be validly interpreted, an opinion that rejected the DNA evidence in this case without formally casting any doubt on the forensic use of DNA more generally was about the best outcome that the prosecution could have wished for. In fact, in their final brief, the prosecution had acknowledged that the DNA evidence in this case was insufficiently reliable: “Here, the People believe that we have not met our burden of demonstrating by a preponderance of the evidence that the accepted scientific techniques were utilized in this case. The scientific evidence generated in this case, as a whole, is too ambiguous to be admissible in a criminal case.”

By the time the hearing was over, the prosecution was thus granting that this particular DNA match was unreliable, and was hoping that Sheindlin would nonetheless recognize the general validity of forensic DNA typing. In this sense, although they, of course, had been forced by the defense over the course of the hearing to back-pedal considerably, the prosecution got exactly what it had hoped for from Judge Sheindlin’s ruling. By contrast, Scheck and Neufeld were sorely disappointed: from their point of view, there was little reason to believe that Lifecodes had been unusually careless or sloppy in their testing of the evidence in Castro. It seemed clear to them that the problems with Lifecodes’ protocols and quality control were both systemic and widespread, rather than the result of atypical lapses in this particular case alone. They would no doubt have preferred Sheindlin to have reached a more general conclusion, something that would have clearly signaled that forensic DNA, while highly promising, was not yet ready for prime time. They would have liked him to have recognized that the problems with Lifecodes’ analysis were so serious as to implicate his second as well as his third prong.

Though Sheindlin’s unwillingness to make his criticisms in a more generalized way greatly frustrated Scheck and Neufeld, Sheindlin’s analysis under Prong II was not
a complete whitewash of Lifecodes in particular or forensic DNA more generally. The opinion did recognize the importance of inquiring into technology transfer. Unlike several of the earlier judges who had assessed the admissibility of DNA evidence, Sheindlin well understood that DNA identification techniques’ validity in other contexts did not necessarily translate into reliability in the forensic context, where there might be particular problems arising from the sometimes miniscule amounts of available biological material, from possible contamination or deterioration of the sample and from more difficult problems of measurement interpretation. Even though Sheindlin did conclude that the presently available techniques were adequate for dealing with these special difficulties of forensic DNA testing, the opinion was significant for at least recognizing them as difficulties that had to be dealt with.

Moreover, Sheindlin explicitly took issue with the widespread assumption, captured, for example by the court’s ruling in People v. Wesley, that DNA testing would necessarily produce either the right answer or no answer at all. Sheindlin explained that while several earlier cases had suggested that “improper procedures and experiments will automatically and clearly be revealed, this court, on the contrary, advises caution in reviewing the procedures. For example, contaminated samples, probes or controls, may produce extra bands on the autorads which can cause differing scientific opinions in the interpretation of the autorads. On the other hand, degradation of a sample may fail to produce a band, again resulting in interpretation problems.” Any court that took Castro seriously could no longer repeat the oft-made, comforting claim that there was no such thing as a false positive, nor buy into the implicit corollary that a DNA test was virtually self-interpreting.

Thus the case was quite a mixed result. Certainly it was a partial and significant victory for the defense, but at the same time, because it was so narrowly drawn, the Bronx district attorney’s office could simultaneously call it a “victory of national importance” that reaffirmed the general validity and admissibility of DNA evidence. Interestingly, the opinion itself makes only a passing and opaque reference to the important fact that by the time the hearing had concluded, almost all of the experts for both sides (and even the prosecution itself) had conceded that the DNA test in this case was inconclusive. The savvy reader can find, in footnote 12, an aside mention that two of the prosecution’s experts were recalled by the defense and, having earlier testified to the reliability of DNA identification, now allowed that the laboratory’s lapses made this particular result inconclusive.
When Joseph Castro pleaded guilty to second degree murder on September 15, 1989, he admitted that the blood on the watch was likely that of Vilma Ponce after all. With that, the Castro case officially came to an end, but the controversies over DNA most certainly did not.

In the wake of Castro, Lifecodes made several significant changes to their internal procedures. For example, they began to use a computer-based matching system instead of relying only on visual comparison to declare a match, and they modified the way that they determined the frequency of alleles in their population databases: essentially, they took a number of Eric Lander’s suggestions. (Lander himself was invited to testify in 57 DNA cases in the six months after Castro. Though he provided some technical assistance in a handful of select cases, he turned down all 57 of the offers to testify.)

In addition, the Castro hearing, along with the joint statement signed by the experts from both sides, fueled a growing belief that forensic DNA needed to be examined and studied by an authoritative, neutral group of scientists and other experts. In December 1989, the National Academy of Sciences appointed a committee to investigate and, if possible, forge a consensus, about the scientific resolution of the many technical and procedural issues surrounding the forensic use of DNA that the Castro hearing had highlighted.

Considering the many revelations of the pre-trial hearing, Sheindlin’s opinion was about as narrowly-drawn as possible, but it was still a watershed moment for the forensic use of DNA. Along the way, the case had received a good deal of publicity, and newspapers in the months after Castro wrote about DNA quite differently than they had before. Doubt and uncertainty replaced the earlier tendency toward breathless enthusiasm. “DNA fingerprinting doesn’t live up to initial promise,” read one headline in the fall of 1989; “DNA ‘Fingerprinting’ Questioned; Geneticist Says Test May Be Less Reliable Than First Believed,” said another. “Caution Urged on DNA Fingerprinting,” warned Science magazine. “DNA Tests Unravel?” asked the National Law Journal. After Castro, journalists, the public, judges and jurors all became more willing to question DNA: it no longer seemed like an infallible magic bullet.

Castro affected the scientific landscape as well. In June, 1989, Eric Lander published an article in Nature concluding that the courts had been “too hasty” to accept DNA. He described in detail why forensic DNA fingerprinting is far more technically challenging than the diagnostic use of DNA. He also laid out a challenge to the scientific
community: “It is my belief that we, the scientific community, have failed to set rigorous standards to which courts, attorneys, and forensic-testing laboratories can look for guidance—with the result that some of the conclusions presented to courts are quite unreliable.” Lander called in strong terms for both additional scientific study and greater regulation and oversight. The case thus spurred greater scientific interest in the actual practices of forensic DNA testing and led to increased attention to questions of quality control, autorad interpretation and population genetics.

In this changed climate, defense attorneys became both more aggressive about challenging DNA and better able to locate the people and resources to mount effective challenges. In addition, more scientists began to evince a professional interest in the issues raised by forensic DNA evidence, especially in the questions surrounding population genetics and the statistical meaning of a match. After Castro, there is no doubt that DNA evidence in court received substantially more scrutiny—and a number of courts, including several state Supreme Courts, subsequently decided that problems with the DNA evidence made either restriction or exclusion necessary.

Indeed, over the next few years, the legal controversies over DNA increased in intensity and vociferousness. A Los Angeles Times Magazine article could write, in 1992, that “the battle over DNA fingerprinting has become the most entertaining and bewildering legal spectacle around.” While quality control issues remained significant, and questions of autorad interpretation received increased focus and attention, the most significant issue of all—both in the courtroom and in the pages of prestigious scientific journals—surrounded the questions of population genetics that Scheindlin’s opinion had punted. These battles raged not only in court but in prestigious scientific journals. For example, in a highly unusual move, the authors of an article on population genetics issues in the prestigious journal Science were asked by the editor to “tone down” their article, and the magazine—in part because of a recommendation by a member of their board of reviewing directors who also had a licensing relationship with Cellmark, one of the forensic DNA companies—decided to publish a simultaneous “rebuttal” alongside the original article.

In the meantime, the National Research Council (the research arm of the National Academy of Sciences) issued its long-awaited report in 1992. Instead of resolving disputes, the report generated new ones. It had proposed a compromise approach to the issue of population genetics that critics deemed scientifically unjustifiable, viewing it as an overtly political attempt to forge a compromise that lacked scientific foundation. In 1994 (and, not accidentally, just before the O.J. trial was beginning), the growing
scientific consensus on these issues led Eric Lander and FBI DNA expert Bruce Budowle to publish a joint article in Nature entitled “DNA Fingerprinting Dispute Laid to Rest.” While the O.J. Simpson case revealed starkly that DNA evidence was still controversial, the intense battles over admissibility of the technique itself largely came to an end. When the NRC issued a follow-up report in 1996, its recommendations were received with far less controversy.

The significance of the Castro case goes beyond DNA itself in two important respects. First, the sheer detail and length of the hearing, and the tremendous focus on reliability—both of the technique in general and its particular application in the case—revealed a quite different approach to the evaluation of science in court than was typically seen under the Frye standard of general acceptance. Castro was an example of a growing trend by the courts to engage in the substantive assessment of the reliability of expert evidence, a trend that has only grown over the years since Castro was decided. In 1993, the Supreme Court decided in Daubert v. Merrell Dow that the Federal Rules of Evidence did not incorporate the Frye test of general acceptance, but that trial courts nonetheless had an obligation to serve as a gatekeeper with respect to expert evidence, to assure that it was sufficiently valid and reliable. Although many states (including New York) have continued to use the Frye test, there has been an undeniable, though uneven, trend to examine expert evidence with increased scrutiny. Whether courts should be in the business of assessing the substance of scientific evidence—whether they have the know-how or the institutional competence—are certainly fair questions. But Castro is of a piece with this more general trend over the last several decades to examine scientific evidence proffered in court with increasing detail and care.
If Castro stands for anything, it stands for the idea that the standards of research science are highly relevant for evaluating forensic science. Eric Lander’s critique could be boiled down, in significant part, to the concern that Lifecodes was not taking issues of quality control, interpretation, and population genetics as seriously as an academic research laboratory would, and that given the stakes involved, this failure was unjustifiable and inexcusable. To meet the standards of academic scientific laboratories does not require perfection—time and time again, in his testimony, Lander emphasized that no laboratory operates completely without errors. But he saw no reason why commercially-run forensic science laboratories should be given anything approaching a free pass.

The DNA cases like Castro, along with Daubert’s increasing focus on judicial gatekeeping, have in recent years given ammunition to critics of many other forms of forensic science. Although some forensic science techniques have been in use for a century or more, many approaches to identification science, including handwriting identification evidence and fingerprinting, simply do not have the kind of empirical basis for their claims to validity that one would ordinarily associate with research science. These and similar forensic “sciences” may usually provide “right” answers—but because they have been subject to little rigorous validity testing, it is difficult to assess the real-world frequency of error. Of course, in Castro itself, notwithstanding the significant problems with Lifecodes’ procedures, the laboratory’s bottom-line conclusion that the watch stain matched Ponce’s blood was, as far as anyone knows, correct—but Sheindlin’s decision to exclude the evidence was nonetheless indisputably the right answer based on the record before him. Other kinds of forensic science evidence raise problems analogous to those faced in the Castro case. Although fingerprint experts testify that they can identify a match with 100 percent certainty and to the exclusion of all other fingerprints in the world, fingerprinting lacks any kind of statistical foundation. Just as Lifecodes’ technicians’ eyeballed an autorad to determine whether there was a match, fingerprint experts do not have formal standards or protocols for deciding when to declare a match. Nor do we have any real idea of how often, in the real world, fingerprint experts or handwriting identification experts might make honest mistakes in their evaluations. Fingerprint experts’ frequent insistence that the technique is error free is reminiscent of the early—and erroneous—claims with DNA that there was no such thing as a false positive.23
The DNA cases, combined with Daubert, have led a set of defense lawyers to mount in recent years a number of challenges to other forms of forensic science. Some of the challenges to handwriting identification evidence have been successful; the challenges to fingerprinting largely have not. But Castro invites the question: should we evaluate forensic science differently from other kinds of scientific enterprises, and, if so, upon what justification? If not, then should these kinds of evidence be excluded or limited until further research and study validates both the proficiency of the examiners and the scientific bases for their claims? And so, we end with an irony: the technique that drew its earliest authority from a metaphoric association with “fingerprinting” may, in the end, help to reveal the weaknesses of fingerprinting and other forms of forensic science.
†This is an edited version of an essay originally published in Evidence Stories (Richard Lempert ed., 2006). Note that because the audience for the original essays was primarily advanced law students rather than scholars, an editorial decision was made within the volume as a whole to keep footnotes to a minimum, citing only key sources and direct quotations.


3 This account of the first legal use forensic DNA is drawn from Aronson, supra note 2 as well as contemporaneous newspaper articles.

4 For a detailed and novelistic book-length account of this case, upon which this short summary is based, see Joseph Wambaugh, The Blooding (1989).

5 Although a detailed explanation of the differences between Lifecodes and Cellmark’s early techniques is beyond the scope of this essay, here is a quick explanation: Jeffreys and Cellmark’s technique originally used a ‘multi-locus probe’ (MLP) that bound to many loci in a person’s DNA and produced an image that looked like a complex pattern, while Lifecodes approach was to use ‘single locus probes.” Individually, these single locus probes could not provide as much information as a MLP, but they could be aggregated to build up information about an individual’s genetic profile and they could be used on smaller amounts of blood, and were easier to interpret than MLPs. Over time, SLP’s came to be the dominant approach.


7 Aronson, supra note 2 at 128.

8 140 Misc. 2d 306, 308-09 (N.Y. County Ct. 1988).


10 Id. The court did give a certain grudging credence to arguments the defense had made about the inadequate database-size used for the population genetics, and thus required the prosecution to reduce the probabilities by a factor of 10, permitting them at trial to claim identification ability at the level of 1 in 84,000,000 for American Caucasians and 1 in 140,000,000 for American Blacks.

11 Parloff, supra note 1.

12 A copy of the hearing transcript was obtained from the O.J. Simpson Archive at Cornell University. Other important sources on the hearing include Aronson, supra note 2, Parloff, supra note 1, and, the numerous newspaper accounts written during and after the hearing. Quotations in this section come from the trial transcript unless otherwise noted.

13 Michael Baird, interview with Saul Halfon and Arthur Daemmerich, 14 July, 1994 (O.J. Simpson Murder Trial and DNA Typing Archive, Cornell University, #53/12/3037, Box 2, Division of Rare and Manuscripts Collections, Cornell University Library), quoted in Aronson, supra note 2 at 221.
People v. Castro, 144 Misc. 2d 956, 970 (NY 1989). DNA technology has, however, changed since Castro. Techniques for multiplying minute quantities of DNA now allow DNA comparisons that were impossible in 1989.

Michael Baird interview, supra note 13.


Castro, 144 Misc. 2d 956.

Castro, 144 Misc. 2d at 960.

Timothy Clifford, DNA-Test Errors Conceded, Newsday (July 4, 1989 at p. 7) (quoting from memorandum submitted by the prosecution in People v. Castro.)

Lander noted that “at present, forensic science is virtually unregulated—with the paradoxical result that clinical laboratories must meet higher standards to be allowed to diagnose strep throat than forensic labs must meet to put a defendant on death row.” Eric Lander, DNA Fingerprinting on Trial, 339 Nature 501, 505 (1989).


An historian of fingerprinting has recently documented 22 publicly-known instances of fingerprinting identification error, and argues persuasively that these known misattributions probably account for only a small fraction of the mistakes that have actually been made. See Simon Cole, More Than Zero. Accounting for Error in Latent Fingerprint Identification, 95 J. Crim. L. & Criminology 985 (2005).
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The Guantanamo Bay Naval Base (“Guantanamo”) has been under the control of the United States since 1903. Despite its century-long presence, the official position of the U.S. government is that Guantanamo is not American territory. An unusual agreement declares that Cuba retains “ultimate sovereignty” over Guantanamo. The United States, however, exercises “complete jurisdiction and control.” The precise legal status of Guantanamo is no mere historical curiosity. Since the attacks of September 11, 2001, the United States has detained hundreds of foreign nationals at the base. Over the last years, several attempted to challenge their detention via habeas petitions. These petitions, brought by citizens of friendly states, drew support from many quarters. Former U.S. ambassadors argued that the detentions harm U.S. interests abroad; former prisoners of war (“POWs”) stressed the implications for Americans captured abroad; allied governments brought heavy diplomatic pressure to bear and several senators demanded that the President try or release the detainees.

Nonetheless, initially, these habeas petitions all failed. And they failed for a deceptively simple reason. The reason was not that the petitioners are enemy aliens or unlawful combatants. Rather, the reason was their geographic location. Enemy combatants detained on American soil are not per se barred from contesting their detention in American courts. But, federal courts have generally held that foreigners—enemy or otherwise—detained outside the geographic boundaries of the United States lack legal protections. The Supreme Court’s decision last June in Rasul v. Bush surprised many observers by holding that the federal habeas statute encompassed the Guantanamo petitions. But the majority opinion rested on a narrow issue of statutory interpretation: Did the federal habeas statute apply to aliens as well as citizens abroad? The Court held that the statute did so apply. Yet the decision said almost nothing about the constitutional rights of aliens outside U.S. territory. And, of course, Congress can (and may) amend the habeas statute to deny access to the writ to aliens held abroad. The decision in Rasul, while highly significant for the petitioners, did not in any meaningful sense alter the question of the constitutional rights of aliens abroad.
Why is geographic location thought to be determinative of the rights of aliens abroad? The supposition that law and legal remedies are connected to, or limited by, territorial location—a concept I term “legal spatiality”—is commonplace and intuitive. Many Americans have watched footage of Cuban refugees swimming ashore in Florida, desperately trying to reach land before U.S. officials can grasp them. Touching the territory of the United States—the physical soil itself—is critical to the legal determination of their status: the difference between a life of freedom in the United States and forced return to an autocratic Cuba.10 This is a dramatic example of the power of legal spatiality, but not an unusual one. The concept is suffused throughout the law. Yet, perhaps precisely because it so commonplace, the assumptions embedded in legal spatiality are rarely examined and surprisingly ill-defended. ...  

In several recent cases, federal courts have faced the question of whether noncitizen detainees held outside U.S. territory by the U.S. government could challenge their detention via the writ of habeas corpus.12 In Al Odah v. United States, the predicate case to Rasul, the D.C. Circuit ruled the Guantanamo detainees could not.13 In January of this year, Judge Leon of the D.C. District Court similarly ruled that the petitioners “lack any viable theory under the United States Constitution to challenge the lawfulness of their continued detention at Guantanamo.”14 The reason, in short, is that “[n]on-[r]esident [a]liens [c]aptured and [d]etained [o]utside the United States [h]ave [n]o [c]ognizable [c]onstitutional [r]ights.” 15 The decisions to deny these habeas petitions reflect fundamental ideas about territory, sovereignty and constitutionalism. It is critical at the outset to underscore a fundamental idea not implicated: that wartime itself blocks enemy aliens’ access to U.S. courts.

Wartime plainly provides a very important context to any case involving aliens, friendly or otherwise. The President wields extraordinary powers during war.16 But whatever the nature of the current conflict, the Supreme Court has previously made clear that enemy aliens detained by the United States within American territory may, in fact, avail themselves of the judicial process.17 That the petitioners in the Guantanamo cases are enemy aliens is itself unclear. Defining the category of enemy alien in the age of al-Qaeda is undoubtedly complex. But the petitioners in Rasul, for example, were not enemy aliens as that term is traditionally understood. They are citizens of Australia, the United Kingdom and Kuwait—all close allies of the United States.18 (The United States argues that the Guantanamo detainees nonetheless qualify as enemy aliens “because they were seized in the course of active and ongoing hostilities against United States and coalition forces.”)19 Most significantly, however, the precedents upon which the
D.C. Circuit rested its decision in Al Odah make clear that the enemy alien designation
is unnecessary. The holding in Johnson v. Eisentrager,\textsuperscript{20} a World War II era case
heavily relied upon by the Bush Administration in the Guantanamo litigation, “was not
dependent on the aliens’ status as enemies, but rather on the aliens’ lack of presence
inside the sovereign territory of the United States.”\textsuperscript{21} Consequently, while the nature
of the current struggle against al-Qaeda and in Afghanistan and Iraq provides a very
important milieu for these cases, the resolution of the question of habeas corpus—and
of the broader question of constitutional rights—does not wholly or even primarily rest
on the exigencies of wartime.

These decisions instead rest on a specific conception of territoriality. This conception
can be stated as follows: The physical location of a individual determines the legal rules
applicable and the legal rights that individual possesses. In this Article, I refer to this
concept as “legal spatiality.” The concept of legal spatiality can readily be generalized:
The scope and reach of the law is connected to territory, and therefore, spatial location
determines the operative legal regime. More plainly, where you sit determines what
rules you sit under.

Assumptions of legal spatiality suffuse our legal system. The D.C. Circuit stated, for
example:

\begin{quote}
We cannot see why, or how, the writ [of habeas corpus] may be made
available to aliens abroad when basic constitutional protections are not.
\ldots If the Constitution does not entitle the detainees to due process, and
it does not, they cannot invoke the jurisdiction of our courts to test the
constitutionality or the legality of restraints on their liberty.\textsuperscript{22}
\end{quote}

According to this view, the protections of the Bill of Rights are not untethered from the
territory of the United States. Rather, they are spatially bound: operative only within the
50 states and other territories unequivocally possessed by the United States. Since
the petitioners are aliens outside the territorial borders of the United States,\textsuperscript{23} they
lack the constitutional protections they uncontestedly would enjoy were they within
our borders.\textsuperscript{24} In deciding in favor of the detainees in Rasul, the Supreme Court did not
so much as challenge this set of assumptions as sidestep them. The Court’s holding
rested on the particular language of the federal habeas statute, which, said the majority,
does not distinguish between citizens and aliens. Since citizens can clearly petition for
habeas relief from Guantanamo, so—as a matter of statutory right—can aliens.\textsuperscript{25} In so
ruling, the Rasul Court distinguished earlier and arguably contrary precedents on the
ground that underlying understandings of the reach of the habeas statute had changed.
in recent years. The result was a victory for the Rasul detainees, but one that does not challenge in any fundamental way prevailing conceptions of legal spatiality.

Legal spatiality has received little systematic scholarly attention. The connection between law and land has come into sharp focus, however, over the issue of the detention of suspected al-Qaeda and Taliban members in Guantanamo as well as in other, less well-known facilities in Afghanistan and other foreign locations...

A. Leases and Litigation

Given a century of control by the United States, it is not surprising that litigation over the status of Guantanamo has arisen before. Federal courts have previously been asked to determine whether the 45-square-mile base is foreign territory for statutory and constitutional purposes. The Haitian refugee litigation of the 1990s raised this issue squarely—with mixed results—and a raft of other cases have likewise considered Guantanamo’s legal status. Relying on language in the lease purporting to retain ultimate sovereignty in Cuba, the majority of these cases have maintained that the base is Cuban, not American, soil.

Bird v. United States, for example, involved a Navy physician at the base who allegedly misdiagnosed a civilian’s cancer. The patient sued the United States for medical malpractice under the Federal Tort Claims Act. Since the Claims Act has a spatial limitation built in—it bars claims arising from a “foreign country”—the issue was whether Guantanamo was U.S. territory or rather, part of a “foreign country.” The Supreme Court held that Cuba retained ultimate sovereignty and thus, Guantanamo was a foreign country for purposes of the statute. In Colon v. United States, a federal district court faced a similar claim arising from a personal injury on Guantanamo. The Court likewise concluded that Cuba retained sovereignty, making the base a foreign country for purposes of the Federal Tort Claims Act. And in Cuban American Bar Association v. Christopher, the Eleventh Circuit had to determine whether aliens detained in Guantanamo could assert various statutory and constitutional rights. It held that jurisdiction and control were not equivalent to sovereignty, and that military bases abroad therefore remain under the sovereignty of the host state.

Guantanamo is nonetheless an unusual place. For several reasons, it strains credulity to argue that Guantanamo is foreign soil, no different than Al Udeid Air Base in Qatar or Ramstein Air Base in Germany. For every American military base abroad, there is an international legal agreement governing the relationship with the host state, known as a “Status of Forces Agreement.” Uniquely, there is no such agreement with Cuba.
Moreover, the circumstances of the Guantanamo lease’s genesis, as well as the precise provisions, are quite unusual. Most strikingly, the “lease” is effectively permanent, since Cuba cannot unilaterally terminate it.

B. Sovereignty and Spatiality in Cuba

The U.S. government’s claim of exclusive Cuban sovereignty raises several difficult questions. Can Guantanamo reasonably be analogized to ordinary military bases and thus treated legally as foreign territory? Is Cuban sovereignty necessarily exclusive of U.S. sovereignty? Is the lease valid under international law? Even if, as a formal matter, the base is clearly Cuban territory, what bearing ought this have on the constitutional rights of individuals detained there by the U.S. government? ...

1. Validity

The Guantanamo lease is not a reciprocal agreement between sovereigns. It is a direct legacy of a colonial relationship. Guantanamo Bay fell into U.S. hands as a spoil of war. Then, as a condition of Cuban independence, the United States leased the base in perpetuity. Previous cases regarding Guantanamo have relied heavily on the literal text of the lease and its language concerning sovereignty. But given its history and structure, the lease’s continuing validity is not above question. International legal doctrine presents at least two arguments that the lease may no longer be valid. While both are tenable, neither is especially strong.

The first argument turns on the origins of the lease. Does the lease’s genesis in a colonial relationship somehow vitiate its legality? The Vienna Convention on the Law of Treaties, which codifies the customary international law of treaties, holds that if a new peremptory norm of international law emerges, any existing treaty in conflict with that norm is void. Peremptory or jus cogens norms are legal norms that are so significant that they cannot be altered or contradicted by international agreement. If the lease violates such a norm, it is no longer valid under international law. The problem with this argument is that the content of the category of peremptory norms is highly disputed. Aside from a few very well-established norms, such as genocide, there is little agreement among states or jurists on what falls within the bounds of jus cogens. Consequently, it is hard to see precisely what norm the Guantanamo lease violates that reasonably has the status of jus cogens. The lease is undoubtedly in deep tension with certain structural principles of the international order—sovereign equality, disfavor for colonialism and nonintervention in the domestic affairs of sovereign states, among others. Yet these are not generally thought to be jus cogens norms, and so this argument is unpersuasive.
A second possible doctrinal argument rests on the concept of rebus sic stantibus. Under the customary international law of treaties, as well as the Vienna Convention on the Law of Treaties, an agreement may be terminated if a fundamental change of circumstances occurs which (1) was an essential basis of the consent of the parties to the treaty and (2) radically transforms the extent of the obligations to be performed. A change in government is not sufficient in and of itself to terminate a treaty under this doctrine. But the shift in Cuba after Castro took power is not mere change of government; rather, Cuba became a state with an ideology and political system completely oppositional to that of the United States. This hostility is manifested in the landmines that ring the base. With such outward hostility, the continued existence of a foreign military base is unusual indeed. Like the jus cogens argument, however, this argument ultimately lacks force. Whether the dramatic shift in Cuban-American relations after the revolution is sufficient to meet the test of the Vienna Convention for treaty termination is unclear. Previous cases have set quite a high bar for invoking the doctrine of rebus sic stantibus. In a recent International Court of Justice case involving a treaty between two Warsaw Pact states (relating to the construction of a dam), the momentous fall of communism in Eastern Europe was held insufficient to justify the invocation of rebus sic stantibus. While the change at stake in the Guantanamo case is clearly quite significant, it by no means is plainly sufficient to meet the doctrinal standard. Even if it were, moreover, the political significance of such a ruling is highly uncertain.

2. Interpretation

A more compelling argument does not involve any challenge to the lease’s validity per se but rather, the interpretation of it. The critical language of the lease states that Cuba retains “ultimate sovereignty,” whereas the United States exercises “complete jurisdiction and control.” Most federal courts have interpreted this language to mean that Cuba is the sole sovereign in Guantanamo and have held that sovereignty was the touchstone under prior precedents such as Eisentrager. The Bush Administration argued that jurisdiction is distinct from sovereignty—an accurate statement—but that sovereignty is the key to habeas jurisdiction. It was this latter claim that the Supreme Court rejected as a statutory matter in Rasul. Since the Guantanamo lease specifies that Cuba retains “ultimate sovereignty,” the U.S. position was and remains that this fact disposes of any constitutional claims of the detainees.

Yet traditional canons of construction suggest a different reading of the lease, one more faithful to the history of the base and to the realities of the American presence in Guantanamo. This reading turns on the meaning of the phrase “ultimate sovereignty.”
Under the Bush Administration’s interpretation, the word “ultimate” in the lease is surplusage. The lease could simply read “Cuba remains sovereign” with no change in the legal outcome. “Ultimate sovereignty” can alternatively, and more reasonably, be interpreted to refer to reversion. Cuba retains a reversionary right over Guantanamo if and when the lease is terminated by mutual assent of the parties. In this reading, Cuba is the reversionary sovereign and the United States the temporary sovereign. The United States cannot cede Guantanamo to any state other than Cuba, and if the United States exits Guantanamo, the base reverts completely to Cuba.

In this alternative reading, the word “ultimate” actually performs interpretive work. It refers to residual sovereignty, a concept well known in international law. This reversionary reading is consistent with both the plain meaning of the text and with the realities of the subsequent behavior of the parties—two central considerations when interpreting the texts of international agreements. This interpretation is strengthened further by consideration of the language of “complete control and jurisdiction,” rather than merely “control and jurisdiction.” Why did the drafters add the term “complete”? The use of the modifier “complete” suggests that the United States is exercising a special sort of control and jurisdiction, a view consistent with the preceding interpretation that the United States is a temporary sovereign for the duration of the lease. This reversionary theory suggests that Guantanamo is broadly analogous to U.S. insular possessions such as Guam. An even closer parallel is the former Canal Zone in Panama. The Canal Zone was carved out of Panamanian territory via a treaty with the United States, also dating from 1903. That treaty grants to the United States “all the rights, power and authority . . . which the United States would possess and exercise if it were the sovereign.”

This reading is bolstered by consideration of the factual circumstances of the base. Since negotiating the extraordinary lease terms with the newly independent but thoroughly subservient Cuban government, the United States has never relinquished its occupation of Guantanamo. Guantanamo was in U.S. hands after the Spanish-American War, and the base remains in American hands today. This unusual history accords well with a revised interpretation of the phrase “ultimate sovereignty.” And it accords well with the realities of U.S. power in Guantanamo, which is, in practical terms, total. Cuba, whatever the lease may say as a formal matter, is a wholly ineffective “lessor” and poses no threat to the U.S. base whatsoever. Cuban law is uncontestedly unavailable to the detainees, and Cuban courts play no part in this—or any previous—litigation. U.S. jurisdiction over both American civilians and foreign nationals present in Guantanamo is total. In sum, for all intents and purposes, the reality is that Guantanamo is as American a territory as Puerto Rico.
3. The Atom of Sovereignty

Whether one agrees or disagrees with this reading of the lease is perhaps not dispositive of the question of whether the Constitution somehow applies to aliens in Guantanamo. The question of who—the United States or Cuba—has sovereignty over Guantanamo presupposes that sovereignty is indivisible and cannot be concurrently held. If it is Cuba that is sovereign, the Bush Administration asserts, then the United States ipso facto is not sovereign. Yet this is not at all clear as a conceptual matter. Indeed, “the American experience belies the notion that the atom of sovereignty cannot be split.” 53 The crux of the lower court decisions in Al Odah and Khalid was the contention that the naval base is “outside the sovereignty of the United States.”54 Implicit in this is the idea that sovereignty is absolute, bounded, and exclusive....

More significantly, sovereignty need not, and has frequently not been, conceptualized as mutually exclusive—as the history of the United States and other federal states make clear. Federalism is a system of shared sovereignty in which territory is divided for some purposes but not for others. American federalism is one of dual, or triple sovereignties: Federal, state and tribal sovereignty all co-exist in a complex system, though the last is more vestigial than vital.55 As the Supreme Court stated in Alden v. Maine, the Constitution “preserves the sovereign status of the States” and “reserves to them a substantial portion of the Nation’s primary sovereignty, together with the dignity and essential attributes inhering in that status.”56 The states thus retain, in the words of James Madison, “a residuary and inviolable sovereignty,” a sovereignty that co-exists with that possessed by the federal government.57 Thus our own federal structure is one of “dueling sovereignties,”58 in which the states and the federal government (and occasionally the tribes) battle over power and control. As the Ninth Circuit recognized in United States v. Corey, two sovereignties may, as in our federal system, exercise concurrent jurisdiction, and this “principle applies no less in the international domain.”59

Sovereignty is hence not an all-or-nothing proposition. Consequently, there is no necessary conceptual, constitutional or practical reason to believe that whatever sovereignty Cuba enjoys in Guantanamo necessarily strips the United States of sovereignty. In other words, one need not accept the lease-based idea that Cuba retains only a reversionary sovereignty in Guantanamo to conclude that the United States is partially sovereign in Guantanamo. Both states may be sovereign concurrently, with the particular sovereignty of each dependent on the precise issue at hand. This view tracks our own theories of sovereignty as embodied in federalism, while also yielding a result—constitutional application to Guantanamo—that fits with the best tradition of American constitutionalism.
Finally, even if concurrent or reversionary notions of sovereignty are rejected, sovereignty and jurisdiction are distinct concepts and one need not entail the other—as Rasul made plain, and as a host of extraterritoriality cases over the last sixty years demonstrate. As the historical practice of habeas corpus shows, courts may have jurisdiction to hear habeas petitions even if the petitioners are held outside the sovereign territory of the government. Clearly, American citizens can bring habeas petitions if detained in Guantanamo. Sovereign control of the territory upon which they sit is not necessary for the federal courts to have jurisdiction. Why then should sovereign control be necessary—as the Bush Administration argues—for jurisdiction over non-citizens? In Rasul, and in the current post-Rasul litigation, the United States rested their claim of the necessity of sovereign power upon Eisentrager. Yet Eisentrager did not expressly hold that all non-citizen detainees held outside the territory of the United States cannot bring petitions of habeas corpus. Rather, it more narrowly held that enemy aliens, tried and convicted abroad by military tribunal, cannot review their convictions in U.S. civil courts.

In sum, I have critiqued the prevailing interpretation of the Guantanamo lease agreement for failing to read meaning into all the key terms in the text, and have argued that a better reading is that Cuba is the reversionary sovereign in Guantanamo, whereas the United States is de jure sovereign—as it unequivocably is sovereign in a de facto sense. Moreover, I have argued, our own federal structure demonstrates that there is no necessary barrier to American sovereignty in Guantanamo co-existing with Cuban sovereignty, with each sovereign authoritatively controlling a delimited set of powers and issues. Even if, in other words, one rejects the concept of reversionary Cuban sovereignty, it does not follow that the U.S. wields no sovereign powers at the base. Thus, between the two diametrically-opposed positions taken in the D.C. District Court decisions of January 2005—by Judge Green and by Judge Leon—my argument unequivocably supports Judge Green’s statement that “Guantanamo Bay must be considered the equivalent of a U.S. territory in which fundamental constitutional rights apply.”

Guantanamo and the terms of the lease granting the United States control over it are vestigial remnants of the age of empire. Throwbacks to an earlier and quite different time, they are difficult to defend on any principled basis. The only reason the 45-square-miles of Guantanamo remain in U.S. hands is America’s “full spectrum dominance” over Cuba. Distinguishing Guantanamo from other American military bases is not difficult. A more profound critique of the legal treatment of Guantanamo focuses on the concept of legal spatiality itself, however. Why does moving individuals
from one geographic location to another fundamentally alter the scope of their constitutional and statutory rights vis-a-vis the U.S. government? What is the legal magic of American soil?

In this regard, it is instructive to compare the decision in Al Odah to that of the Supreme Court in In re Ross in the late nineteenth century. Ross involved an enclave of overseas American power—the consular court system in Japan—that, like Guantanamo, grew out of the fundamental inequalities of the time. Like the Guantanamo base, it too was sanctioned by treaty. Ross held that the Constitution could not apply to U.S. government actions within the territory of another sovereign because sovereignty was exclusive; hence, the defendant possessed no constitutional rights that could be violated by the U.S. government. The logic of Al Odah is strikingly similar. Because Cuba is sovereign, the United States is not sovereign and therefore, the detainees lack any constitutional rights against the U.S. government. Just as the consular courts of the imperial era were untrammeled by either U.S. constitutional or local municipal law, so is Guantanamo unaffected and indeed unreachable—as far as foreigners are concerned—by our fundamental law and by Cuban law. A more pure—and anachronistic—statement of legal spatiality can hardly be imagined.
†Excerpt from the full article “The Geography of Justice,” 73 Fordham L. Rev. 2501 (2005).


2 See, e.g., Gharebi v. Bush, 352 F.3d 1278 (9th Cir. 2003); Al Odah v. United States, 321 F.3d 1134 (D.C. Cir. 2003).


4 See Brief of Former American Prisoners of War as Amici Curiae in Support of Petitioners, Rasul (Nos. 03-334, 03-343).

5 See Neil A. Lewis, Try Detainees or Free Them, 3 Senators Urge, N.Y. TImes, Dec. 13, 2003, at A14 (quoting Senator John McCain, a former POW during the Vietnam War, as stating that “[t]hey may not have any rights under the Geneva Conventions as far as I’m concerned . . . but they have rights under various human rights declarations. And one of them is the right not to be detained indefinitely“). Several American officials reportedly doubt the utility of the detention strategy in Guantanamo, in particular in light of the adverse public response around the globe. See David Rose, Operation Take Away My Freedom: Inside Guantanamo Bay on Trial, Vanity Fair, Jan. 2004, at 88, 136 (discussing the debate).

6 See Ex parte Quirin, 317 U.S. 1 (1942).


9 Footnote fifteen of Rasul, while dicta, implicitly claims that the Constitution applies to aspects of the detention of aliens in Guantanamo (and, again implicitly, other analogous U.S.-controlled territory). See id. at 2698 n.15.


12 Al Odah involved twelve Kuwaiti nationals detained in Guantanamo. Al Odah, 321 F.3d at 1136. Rasul involved two British and one Australian detained in Guantanamo. Id. at 1136-37. The D.C. Circuit Court of Appeals consolidated the two in 321 F.3d 1134. See Diane Marie Amann, Guantánamo, 42 COLUM. J. TRANSNAT’L L. 263 (2004) (discussing constitutional as well as international law arguments). One of the more interesting aspects of the Supreme Court litigation is the amicus brief filed by the military lawyers charged with the defense of Guantanamo detainees before American military tribunals. See Jeffrey Toobin, Inside the Wire: Can an Air Force Colonel Help the Detainees at Guantanamo?, NEW YORKER, Feb. 9, 2004, at 36, 39.

13 Al Odah, 321 F.3d at 1145.


15 Id. at *21.


17 Ex parte Quirin, 317 U.S. 1, 25-26 (1942); see also Brief Amici Curiae of Legal Historians Listed Herein in Support of the Petitioners at 20-26, Rasul v. Bush, 124 S. Ct. 2686 (2004) (Nos. 03-334, 03-343) (arguing that traditional practice both in England and in the early American republic permitted aliens, enemy or friendly, access to the writ of habeas corpus).


21 Brief for the Respondents in Opposition at 13, Rasul (Nos. 03-334, 03-343). Judge Leon’s decision in Khalid echoes this, stating that “nothing in Rasul alters the holding articulated in Eisentrager and its progeny.” Khalid, 2005 U.S. Dist. LEXIS 749, at *27. See also the Ninth Circuit’s statement in Gherebi:

The dispositive issue, for purposes of this appeal, as the government acknowledges, relates to the legal status of Guantánamo, the site of petitioner’s detention. . . .

. . . [T]he government does not dispute that if Gherebi is being detained on U.S. territory, jurisdiction over his habeas petition will lie, whether or not he is an “enemy alien.”

Gherebi v. Bush, 352 F.3d 1278, 1285 (9th Cir. 2003).


23 As I describe below, while territoriality is critical to the D.C. Circuit’s decision in Al Odah, so is alienage. See infra Part III.A. As even the dissent in Rasul notes, federal courts would have habeas jurisdiction over an American citizen imprisoned in Guantánamo as a constitutional as well as a statutory matter. See Rasul v. Bush, 124 S. Ct. 2686, 2708 (2004) (Scalia, J., dissenting).

Possessions—A Third View, 13 Harv. L. Rev. 155 (1899); see also infra Part II.B (discussing the Constitution’s territorial reach). The question popped up throughout the twentieth century in the law reviews. See, e.g., Charles Fairman, Some New Problems of the Constitution Following the Flag, 1 Stan. L. Rev. 587 (1949); Sedgwick W. Green, Applicability of American Laws to Overseas Areas Controlled by the United States, 68 Harv. L. Rev. 781 (1955). There is an extensive literature devoted to Puerto Rico’s status in particular. See, e.g., Foreign in a Domestic Sense: Puerto Rico, American Expansion, and the Constitution (Christina Duffy Burnett & Burke Marshall eds., 2001) [hereinafter Foreign in a Domestic Sense].

Implicit in this is the notion that the default assumption in interpreting a statute silent on the distinction between citizens and aliens is to assume no distinction.

Specifically, the majority argued that despite the language of the statute suggesting that a detainee must be within the territorial jurisdiction of the district court receiving the petition, in fact, if the custodian is within that district, that is sufficient. Rasul, 124 S. Ct. at 2695.

This is evidenced by the flat assertion in Khalid that “[n]on-[r]esident [a]liens [c]aptured and [d]etained [o]utside the United States [h]ave [n]o [c]ognizable [c]onstitutional [r]ights.” Khalid v. Bush, Nos. 1:04-1142, 1:04-1166, 2005 U.S. Dist. LEXIS 749, at *21 (D.D.C.) (Jan. 19, 2005). The Supreme Court has left the door open for the claim that some constitutional rights may be available to aliens outside the United States, though it has not clarified the issue. In Zadvydas v. Davis, for example, the Court stated: “It is well established that certain constitutional protections available to persons inside the United States are unavailable to aliens outside of our geographic borders. But once an alien enters the country, the legal circumstance changes, for the Due Process Clause applies to all ‘persons’ within the United States . . . .” Zadvydas v. Davis, 533 U.S. 678, 693 (2001) (citations omitted). The Court’s invocation of “certain constitutional protections” at least suggests that other such rights may be available to aliens outside the borders of the United States. For example, in the area of personal jurisdiction, extraterritorial rights exist for foreign nationals. Asahi Metal Industry Co. v. Superior Court, for example, awards some level of due process rights to non-citizens abroad. Asahi Metal Indus. Co. v. Superior Court, 480 U.S. 102 (1987). Consider also the holding of the Ninth Circuit in United States v. Davis: “In order to apply extraterritorially a federal criminal statute to a defendant consistently with due process, there must be a sufficient nexus between the defendant and the United States, so that such application would not be arbitrary or fundamentally unfair.” United States v. Davis, 905 F.2d 245, 248-49 (9th Cir. 1990) (citation omitted).


It does not appear to us to be incongruous or overreaching to conclude that the United States Constitution limits the conduct of United States personnel with respect to officially authorized interactions with aliens brought to and detained by such personnel on a land mass exclusively controlled by the United States.

Haitian Ctrs. Council, Inc. v. McNary, 969 F.2d 1326, 1343 (2d Cir. 1992); see also Cuban Am. Bar Ass’n v. Christopher, 43 F.3d 1412, 1425 (11th Cir. 1995) (“The district court here erred in concluding that Guantanamo Bay was a ‘United States territory.’ . . . We disagree that ‘control and jurisdiction’ is equivalent to sovereignty.”).

32 No. 82 Civ. 34-CSH, 1982 U.S. Dist. LEXIS 16071 (S.D.N.Y. Nov. 24, 1982
33 Cuban Am. Bar Ass’n, Inc. v. Christopher, 43 F.3d 1412, 1417 (11th Cir. 1995).
34 Id. at 1425.
37 There are, of course, other such leases—most prominently, the now-historical lease between China and Great Britain extending control to the United Kingdom over the Hong Kong territory. That lease expired in 1997 and was not renewed. The Hong Kong lease is terse and simply states that “Great Britain shall have sole jurisdiction” in the new area and makes no express mention of sovereignty. Convention Between China and Great Britain Respecting an Extension of Hong Kong Territory, June 9, 1898, P.R.C.-Gr. Brit., 186 Consol. TS. 310. The U.K. Foreign Office nonetheless treated the lease as granting the United Kingdom sovereignty for ninety-nine years. This fact is derived from an email correspondence between the author and Anthony Aust, former Deputy Legal Advisor in the United Kingdom’s Foreign Office.
39 RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 102 n.6 (1987) (‘Although the concept of jus cogens is now accepted, its content is not agreed.”); see also IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 514-17 (5th ed. 1998).
42 See Al Odah v. United States, 321 F.3d 1134, 1142-43 (D.C. Cir. 2003). Eisentrager, in fact, is inconsistent on this point, referring at times to territorial jurisdiction and at times to sovereignty. The Ninth Circuit seized on this in its decision in Gherebi. Gherebi v. Bush, 352 F.3d 1278, 1287 (9th Cir. 2003).
44 See also Gherebi, 352 F.3d at 1286 (“In other words, in the government’s view, whatever the Lease and continuing Treaty say about the United States’ complete territorial jurisdiction, Guantanamo falls outside U.S. sovereign territory—a distinction it asserts is controlling under Johnson.”).
45 In Gherebi, the Ninth Circuit argued similarly, concluding that the 1903 lease’s use of “ultimate sovereignty” means that during the unlimited and potentially permanent period of U.S. possession and control over Guantanamo, the United States possesses and exercises all of the attributes of sovereignty, while Cuba retains only a residual or reversionary sovereignty interest, contingent on a possible future United States’ decision to surrender its complete jurisdiction and control. Gherebi, 352 F.3d at 1291.
46 See, e.g., BROWNLIE, supra note 39, at 110-11.
47 The Vienna Convention on the Law of Treaties codifies the customary law of treaty interpretation. The Convention declares that “[a] treaty shall be interpreted in good
faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.” Vienna Convention on the Law of Treaties, supra note 38, 1155 U.N.T.S. at 340. Context is to be derived from further agreements between the parties and “subsequent practice” of the parties. Id. The object and purpose, particularly when read in light of the contemporaneous Platt Amendment to the Cuban Constitution, is relatively clear: to ensure that the United States maintained control over Guantanamo as a coaling station and to keep U.S. forces within Cuba as a means of asserting hegemony. The subsequent practice of the United States includes extensive use of Guantanamo for a host of commercial activities and the creation of a self-sustaining city there. Cuba has renounced the agreement and cut off the water and other supplies in retaliation for what, in Cuban eyes, is the manifest unfairness of the lease. See Neuman, Anomalous Zones, supra note 11 (discussing these facts).


49 Id. at 2235. A later treaty reduced these rights and powers. See Green, supra note 24, at 789-93.

50 Indeed, it would not be surprising if the United States negotiated favorable military base lease terms with the newly independent but quite subservient Iraqi government. Even then, however, a lease in perpetuity is highly unlikely—a sign both of how views about intervention have changed and how extraordinary the Guantanamo lease is.

51 This view is not wholly novel. For example, Joseph Lazar has stated:

The international legal record thus speaks for itself as to the occupation rights of the United States over the territory of the Guantanamo Naval Station. This record also clarifies the meaning of “ultimate sovereignty.” . . . Thus, when [the lease] provided that “the United States recognizes the continuance of the ultimate sovereignty of the Republic of Cuba over the described areas of land and water,” it presumably was understood that the cession in lease over the territory either recognized the sovereignty over the territory to be in the United States for the duration of the period of occupation, or simply recognized the suspension of sovereignty pending the vesting of ultimate sovereignty on conclusion of the period of occupation.


54 Al Odah v. United States, 321 F.3d 1134, 1144 (D.C. Cir. 2003).


56 Alden, 527 U.S. at 714.


59 United States v. Corey, 232 F.3d 1166, 1180 (9th Cir. 2000). The decision in Corey goes on to note that this is true for lease agreements with foreign sovereigns as well, with the terms of the lease governing the concurrent authority.


61 Rasul, 124 S. Ct. at 2700 (Kennedy, J., concurring).


63 This is not to deny that all these practices seem to be enjoying a resurgence.


65 140 U.S. 453 (1891).

66 Id. at 464.