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Locked In Segregation

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Introduction

Figuring out why inequality persists is rather an urgent question these days. In *Grutter v. Bollinger*, the Supreme Court announced its expectation that twenty-five years from now, the U.S. will no longer need to use racial preferences in law school admissions to admit a racially diverse class.¹ Will it be possible to get rid of race-based affirmative action in law school admissions by the year 2028? More generally, why is it that the civil rights statutes passed in the 1960s have not eliminated racial inequality? Why do we continue to see racial inequality in measures of residential housing, schooling and employment, to name an important few?² And why does the gap seem to be a relatively stable feature of the American socio-economic landscape?³

¹ *Grutter v. Bollinger*, 123 S. Ct. 2325, 2347 (2003) (“We expect that 25 years from now, the use of racial preferences will no longer be necessary to further the interest approved today.”) *Id.*

² In terms of education, only 50% of blacks and 53% of Latino/as graduate from high school, compared to 74.9% of whites. See Gary Orfield, et. al, *Losing Our Future: How Minority Youth Are Left Behind by the Graduation Rate Crisis*, Civil Rights Project, Harvard Law School (2004). In 1999, 24.9% of blacks and 22.6% of Latino/as lived in poverty, compared to 8.1% of whites. See Alemayhu Bishaw and John Iceland, *Poverty 1999, Census 2000 Brief 5*. By some estimates, Latinos have the highest poverty rates and the lowest income levels, compared with both white and black families. See Clara E. Rodríguez, *Changing Race: Latinos, the Census, and the History of Ethnicity in the United States 23* (2000). In terms of housing, in 2000, the median home value for blacks was \$79,400 and for whites was \$121,600. Robert Bennefield, *Home Values 2000, Census 2000 Brief 3*. In terms of employment, in 1998, Latinos' unemployment rate was 2.1% above Whites', but 1.9% below African Americans. See Kristi Bowman, 50 *DUKE L.J.* 1751, 1762 (2001) (citing to US Bureau of Labor Statistics).

³ Recent research indicates that, contrary to popular perception, these racial gaps are quite persistent and robust. See WILLIAM A. DARTY AND SAMUEL L. MYERS, *PERSISTENT DISPARITY: RACE AND ECONOMIC INEQUALITY SINCE 1945* (2000). For example, a recent study suggests that the diminution of the racial gap in earnings is illusory, and wages between blacks and whites are not converging. This paper argues that earlier literature is flawed because it has excluded non-earners from the calculus. See Amitabh Chandra, *Is The Convergence of the Racial Wage Gap Illusory?* NBER Working Paper No. 9476 (Feb.

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The persistence of residential segregation and neighborhood disparities is particularly puzzling. Although the economy has improved over the last decade, such improvement has not yielded proportionate gains in neighborhood equality for blacks or Latino/as.⁴ Indeed, despite recent prosperity, the “neighborhood gap” for different racial groups has grown during the last decade.⁵ As always, Blacks and Latino/as enjoy

2003). See also DARTY AND MYERS, PERSISTENT DISPARITY, *supra* note 3.

Likewise, recent groundbreaking research confirms a stable and substantial gap in education test scores, and argues that this gap is almost wholly attributable to the quality of schools. See Roland Fryer and Steven D. Levitt, Understanding the Black-White Test Score Gap In the First Two Years of School, NBER Working Paper No. 8975 (June 2002). To be sure, controversy exists over the question of permanence. Some studies indicate that racial gaps are closing, albeit slowly. See *e.g.*, Maury Gittleman and Edward Wolff, Racial Wealth Disparities: Is the Gap Closing? NBER Working Paper No. 311 (2000) at 5 (estimating that it will take another 72 years to close the wealth gap at current rates); CHRISTOPHER JENCKS AND MEREDITH PHILLIPS, THE BLACK-WHITE TEST SCORE GAP 6 (1998) (earnings gap and education gap are narrowing slowly) Even in this literature, however, scholars acknowledge that some aspects of the gap are quite persistent. See *id.* at 154, 167 (documenting that blacks continue to be grossly under-represented in the upper tails of distribution, and gaps in social science achievement are not narrowing at all). In addition, this research confirms that much of contemporary disparity is explained by cumulative disadvantage. See Gittleman and Wolff, Racial Wealth Disparities, *supra* note 3 at 5.

⁴ See John Logan, Separate But Unequal: The Neighborhood Gap For Blacks and Hispanics in Metropolitan America, Lewis Mumford Center for Comparative Urban and Regional Research (October 2002) available at <http://mumford.cas.albany.edu/census/index.asp>. This study compares census data from 1990 to 2000.

⁵ See *id.* at 1, Table 1. For blacks, the neighborhood gap increased in absolute dollar amounts (measured by median income of surrounding neighborhood) in 41 of 50 metropolitan areas, and increased even in percentage terms in 38 of those areas. See *id.* at 8. For Latino/as, the neighborhood gap increased in absolute dollar amount in 45 of 50 major metro areas, and the ratio of Latino/a to white income fell in 36 areas. See *id.* at 11. The Mumford Study examined improvements specifically by race, and thus are not necessarily inconsistent with other reports that the number of people living in high poverty neighborhoods, and the concentration of the poor in these neighborhoods, declined over the last decade. See, *e.g.*, Paul Jargowsky, Stunning Progress, Hidden Problems: The Dramatic Decline of Concentrated Poverty in the 1990, Brookings Institution Living Census Series (May 2003). In addition, recent declines in the economy over the last four years make it more likely that the persistent gaps will abate any time in the near future. See Logan,

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poorer quality housing, education and incomes than do whites, and they are much less able to move into better neighborhoods—to trade up for a better quality of life--than are whites.⁶

How does anti-discrimination jurisprudence address such persistent disparity? The short answer is not very well. The standard theoretical model assumes that racism is primarily a product of individual bias, tastes or preferences. Under this “individual intent” view, racism is rooted in an intentional decision to give some social significance to skin color, and in intentional actions that correspond with that decision.⁷ In the absence of intentional discrimination, the market can distribute goods in a race-neutral way--according to a family’s ability to pay. Law seeks to eliminate the intentional action, if not the intentional stereotype.

Because the intent standard model focuses exclusively on intentional stereotyping, the model is poorly equipped to explain the persistent disparities in housing, schooling, income and employment documented at the beginning of this discussion. Anti-discrimination law classifies these disparities as societal discrimination for which individual defendants cannot be held responsible.⁸ Likewise, the law these days does not permit institutions to adopt explicitly race-conscious affirmative

Separate But Unequal, *supra* note 5 at 1.

⁶ *See id.* at 1. It is important to note that, unlike black segregation, Latino/a segregation has seen no appreciable diminution at any time between 1980 and 2000. *See* John Iceland, Beyond Black & White: Metropolitan Residential Segregation in Multi-Ethnic America, U.S. Census Paper, 3 (2002). Moreover, recent trends suggest that as Hispanic populations grow in a given metropolitan area, Whites become more segregated. *See id.* at 16. This same phenomenon does not correlate to Black population growth. *See id.*

⁷ *See, e.g.,* Peter Schuck, *Judging Remedies: Judicial Approaches to Housing Segregation*, 37 HARV. C.R.-C.L. L. REV. 289, 296 (2002) (arguing that persistent segregation is produced by racial prejudice; individual preferences to cluster together for ethnic, tax, labor and other reasons; individual preferences to be in neighborhoods with a particular ratio of same-race neighbors, and classism); Gary Peller, *Race Consciousness*, 1990 DUKE L. J. 758, 768 (1990) (describing standard integrationist model of racism).

⁸ As Justice Powell put it in *Bakke*, “[T]he purpose of helping certain groups . . . perceived as victims of ‘societal discrimination’ does not justify a classification that imposes disadvantages upon persons like respondent, who bear no responsibility for whatever harm the beneficiaries of the special admissions program are thought to have suffered.” *See Regents of University of California v. Bakke*, 438 U.S. 286, 310.

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action programs to remedy such disparities.⁹ Instead, the individual intent model anticipates that the present effects of past conduct eventually will fade with time, and the market will help to dissipate any residual effects.¹⁰

In contrast to this framework, critical race theory (CRT) scholars have offered a far more expansive account of racial inequality.¹¹ In their view, the problem of race centers not on individuals who intend to discriminate but on the institutional rules that govern how resources and opportunities are distributed.¹² Racial disparities persist because whites have stacked the institutional deck in their favor. More specifically, during Jim Crow and slavery, whites constructed the institutional rules of the game to favor whites, and the game now continues to reproduce that advantage.¹³ To eliminate racism, anti-discrimination law must dismantle those ostensibly race-neutral institutional rules that in fact

⁹ See *id.* See also *Grutter v. Bollinger*, 143 S.Ct. 2327, 2363 (2003) (law school affirmative action program is not justified on the basis of societal discrimination); *Wygant v. Jackson Bd. of Education*, 476 U.S. 267, 274 (1986) (“This Court never has held that societal discrimination alone is sufficient to justify a racial classification. Rather the Court has insisted upon some showing of prior discrimination by the governmental unit involved before allowing limited use of racial classifications in order to remedy such discrimination.”)

¹⁰ Gary Becker argues that under certain conditions, markets naturally should eliminate monopolies over time. See GARY S. BECKER, *THE ECONOMICS OF DISCRIMINATION* 43-45 (2d ed. 1971); see also JOSEPH E. STIGLITZ, *ECONOMICS* 410 (1993). Becker actually hypothesized that market monopolies as a species of market failure would permit individuals to indulge in a “taste” for discrimination. See BECKER, *supra* note 10 at 46-47. See also Daria Roithmayr, *Barriers to Entry: A Market Lock-in Model of Discrimination*, 86 VA. L. REV. 727 (2000) (hereinafter “Barriers to Entry”) (arguing that market lock-in supplies the argument of market failure).

¹¹ See Peller, *Race Consciousness*, *supra* note 7 at 762. See also Alan Freeman, *Anti-Discrimination Law: The View From 1989*, 64 TUL. L. REV. 1407 (1999) (arguing that the focus on intent in conventional law disregards institutional reproduction of disparity); Richard Delgado, *Rodrigo’s Tenth Chronicle: Merit and Affirmative Action*, 83 GEO. L. J. 1711 (1995) (arguing that meritocratic rules favor whites);

¹² See Peller, *Race Consciousness*, *supra* note 7 at 778. See also Neil Gotanda, *A Critique of ‘Our Constitution Is Colorblind*, 44 STAN. L. REV. 1, 7 (1991).

¹³ See Delgado, *Rodrigo’s Tenth Chronicle*, *supra* note 11 at 1728; PATRICIA WILLIAMS, *THE ALCHEMY OF RACE AND RIGHTS* 99 (1996) (arguing that merit standards are funnels that channel only particular conceptions of merit).

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reinforce racial inequality. Only when those institutional processes have been re-structured or dismantled will racial inequality disappear from the landscape.

A number of critical race theory scholars have sketched the broad outlines of this institutional argument in various settings. In the context of residential segregation, for example, Richard Ford has suggested that racial segregation might be reproduced by certain ostensibly race-neutral institutional rules that distribute school funding, employment opportunities and public services.¹⁴ Ford proposes, among other remedies, to restructure the way in which geography, local voting and jurisdictions are arranged.¹⁵

Given his focus on institutions and their role in racial disparities, Ford is not all that out of step with the rest of the legal academy. Currently, the study of institutions is experiencing something of a renaissance. Scholars from a range of disciplines are writing about the various ways that institutions play a central role in explaining the complex patterns of social life.¹⁶ To date, however, no scholar in the legal academy (radical or otherwise) has yet produced a well-developed theoretical model of residential segregation that adequately reflects resurgent thinking on institutions.¹⁷

¹⁴ See Richard Ford, *The Boundaries of Race: Political Geography in Legal Analysis*, 107 HARV. L. REV. 1841 (1994). See also Alex M. Johnson, *How Race and Poverty Intersect to Prevent Integration: Destabilizing Race As A Vehicle to Integrate Neighborhoods*, 143 U. PA. L. REV. 1595 (1995) (arguing, based on Richard McAdams' work, that poor whites protect whiteness as an economically valuable asset).

¹⁵ See Ford, *The Boundaries of Race*, *supra* note 14 at 1906-12.

¹⁶ The study of institutions has been taken up by a number of economists, including economic historians, law and economics scholars, game theorists and organizational economists. See e.g., DOUGLASS NORTH, *INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE* (1990), RICHARD POSNER, *THE ECONOMICS OF JUSTICE* (1981). Institutions are also being discussed by students of globalization and international development. See e.g., Robert Keohane, *International Institutions: Two Research Programs*, 32 INT'L STUDIES QUART. 379 (1988). Likewise, institutionalism has been the subject of debate in organizational analysis and sociology. See WALTER W. POWELL AND PAUL J. DIMAGGIO, *THE NEW INSTITUTIONALISM IN ORGANIZATIONAL ANALYSIS* (1991).

¹⁷ Economist Glen Loury's early work provides a rich theoretical base for a legal model. Loury sketched the early outlines of an economic model that linked neighborhoods to employment, education and other kinds of self-reinforcing processes that affected individuals. See Glen Loury, *A Dynamic Theory of Racial Income Differences*, in WOMEN, MINORITIES AND EMPLOYMENT DISCRIMINATION 153 (Phyllis Wallace and Annette LaMond

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This project seeks to do just that. Drawing from recent work on monopolies, network externalities and complex systems theory, in earlier work I have developed the “lock-in model of racial inequality” to describe the way in which institutional processes can perpetuate racial inequality, even in the absence of intentional discrimination.¹⁸ The lock-in model compares persistent racial disparity to persistent monopoly power that continues long after the original anti-competitive conduct has ceased. Just as a monopoly can become institutionally self-reinforcing over time, so too can racial monopoly reproduce itself over time via institutional processes.

According to market lock-in theory, if a firm engages in anti-competitive conduct early enough in the formation of the industry, that conduct gives the firm an early advantage over its competitors. This “early-mover” advantage, in certain circumstances, can become self-reinforcing over time, and ultimately may become so large that other competitors find it impossible to catch up.¹⁹ When that happens, economists say that the early-mover advantage has now become “locked in.”

Several commentators have argued that the story of Microsoft’s success with the Windows operating systems illustrates the process of

eds. 1977) Richard Ford briefly rehearses Loury’s economic model in an argument to restructure the way the law matches voting power with jurisdictional boundaries. *See* Ford, *supra* note 15. In another direction, Ian Haney Lopez has also developed an institutionalist model of persistent racism that relies on institutionalist theory in sociology, but his descriptions pay more attention to unthinking repetition of institutional scripts, and less attention to historical events and structural constraints that make abandoning the script costly. *See* Ian Haney Lopez, *Institutional Racism: Judicial Conduct and a New Theory of Racial Discrimination*, 109 YALE L. J. 1717 (2000) (discussing the institutional script of grand jury nomination in California).

¹⁸ *See* Daria Roithmayr, *Barriers to Entry*, *supra* note 10. *See also* Daria Roithmayr, *Locked In Inequality: The Persistence of Discrimination*, 9 MICH. J. RACE & L. 31 (2003) (hereinafter “Locked In Inequality”).

¹⁹ *See e.g.*, Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985); W. Brian Arthur, *Increasing Returns and the New World of Business*, 74 HARV. BUS. REV. 100, (1996) (hereinafter “Increasing Returns”); Mark Lemley and David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479 (1998) (hereinafter Lemley and McGowan, *Network Economic Effects*).

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institutional lock-in.²⁰ Early in the history of browsers, Microsoft obtained an initial advantage by engaging in anti-competitive conduct—via tying, bundling and other exclusionary strategies. The company’s early advantage then became self-reinforcing because certain institutional relationships connected the choices of software authors to those of consumers.²¹ Consumers shopping for an operating system wanted a product that gave them the widest selection of software. In turn, software authors wanted to write software for the operating system that gave them access to the greatest number of potential software consumers.²² Accordingly, as Windows became more popular with consumers, more software authors wanted to write for Windows, thereby triggering another increase in consumers, and so on.²³ Over time, Microsoft’s early advantage grew progressively larger, without any further innovation or anti-competitive conduct by Microsoft.²⁴ Ultimately, at a point when competitors were unable to overcome this exponentially increasing advantage, Microsoft’s relative lead became “locked in.”²⁵

Just as Microsoft’s early monopoly advantage became institutionally locked in place, the lock-in model suggests that racial monopolies can become locked into place as well. The lock-in model suggests that racial inequality becomes locked in dynamically in a process similar to market lock-in. During the days of Jim Crow and slavery, whites acted anti-competitively to exclude whites, and thereby

²⁰ See Arthur, *Increasing Returns*, *supra* note 19 at 102; Lemley and McGowan, *Network Economic Effects*, *supra* note 19 at 500-07.

²¹ See Declaration of Franklin Fisher, in *United States v. Microsoft*, 159 F.R.D. 318, 321 (D.D.C. 1995) rev’d 56 F.3d 1448 (D.C. Cir. 1995). See also Lemley and McGowan, *Network Economic Effects*, *supra* note 19 at 501-02.

²² See Lemley and McGowan, *Network Economic Effects*, *supra* note 19, at 501-02.

²³ See *id.*

²⁴ See *id.*

²⁵ See *id.* Recently, the European Union has issued a preliminary opinion that Microsoft has violated European antitrust regulations in connection with its new audio-visual software, Media Player. See *Microsoft Faces Tough Penalties in EU’s Ruling*, Wall St. J. A1 (March 19, 2004). In the absence of any settlement, the commission will issue a ruling finding Microsoft guilty of illegally abusing its near-monopoly position to dominate markets for media software. See *id.*

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gained an unfair “early mover” monopoly advantage.²⁶ This initial early-mover advantage may now have become self-reinforcing, primarily because of the link between early material advantage and future success in employment, housing, schooling and wealth. Indeed, racial disparities in those areas may now have become locked in permanently, in the absence of any radical institutional restructuring to dismantle the self-reinforcing advantage.

In the instant project, I explore the implications of the lock-in model in the context of residential segregation. In this regard, I make two central arguments. First, I argue that persistent segregation in neighborhoods and housing is the classic story of a locked-in monopoly. During the Jim Crow era, white cartel organizations worked together to achieve a monopoly on access to good neighborhoods.²⁷ These organizations used violence, harassment and coercion to monopolize the advantage of a “good neighborhood”—i.e., having neighbors with more wealth, higher property values and a better tax base than in non-white neighborhoods.

That neighborhood advantage now has become self-reinforcing, because of the relationships that link economic well-being with neighborhood racial composition. As the white rich grow relatively richer, the non-white poor grow relatively poorer; at the very least, the disparities remain quite stable. Indeed, neighborhood segregation may now have become locked into place indefinitely because non-whites cannot afford to move into white neighborhoods.

²⁶ For a brief discussion of racial cartels, see Robert Cooter, *Market Affirmative Action*, 31 SAN DIEGO L. REV. 133, 150 (1994) (“Just as producers collude to fix prices and obtain monopoly profits, so [racial cartels] collude to obtain the advantages of a monopoly control over markets”). See also *infra* Section II.B (discussing the concept of racial cartels in more detail).

²⁷ See *infra* Part II.

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Second, I argue for a major shift in thinking about anti-discrimination law, away from the individual intent model and more towards the conceptual metaphor of locked-in monopoly.²⁸ More specifically, I argue for an expanded definition of discrimination that includes disparities that can be traced to the lock-in process. I argue for this shift on several grounds. Initially, because the model better describes the contemporary form of racism, it is more likely to generate better legal and policy alternatives to address persistent inequality. In addition, the model better reflects recent empirical and theoretical research demonstrating the importance of cumulative disadvantage in contemporary disparity, and the central role of institutions in transmitting that cumulative disadvantage.

Perhaps most importantly, the conceptual metaphor of “locked-in monopoly” highlights historical and institutional aspects of modern racism that are now suppressed by the individual intent model. For example, the idea of a locked-in monopoly emphasizes the important role that history plays in explaining contemporary racial disparities, the institutional power of being the racial “first-mover,” and the importance of membership in a neighborhood or racial group. None of these elements are addressed in any meaningful way by the standard individual intent model.

Part I of this article rehearses the lock-in model of inequality, as the model has been developed in my earlier work. This part includes for the first time a general typology of self-reinforcing institutional processes that can produce persistent racial inequality. Parts II and III apply the lock-in model to the problem of residential racial segregation. Part II argues initially that whites engaged in anti-competitive conduct via racial cartels to achieve an advantage in neighborhood assets. This section focuses on cartel-like conduct by three types of organizations—the homeowners’ association, the real estate board and the lending institution—all of which coordinated campaigns to exclude blacks and Mexican-Americans from white neighborhoods. Part II also examines two key historical moments in the lock-in narrative: the

²⁸ See *infra* Part IV.

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publication of the 1924 National Code of Ethics for Realtors (which required realtors to engage in racial steering) and the publication of 1936 FHA Underwriting Manual (which introduced redlining into federal loan programs).

Drawing on research from the field of complex systems theory, Part III then explores the argument that early white advantage has become self-reinforcing. This part looks specifically at research on “network” or “neighborhood effects”—self-reinforcing processes that link a neighborhood’s economic well-being to its earlier economic status. Two kinds of neighborhood effects in particular are examined: (i) the link between neighbor’s employment status and neighborhood job referral networks and (ii) the link between neighbors’ economic status and the quality of neighborhood public education. Not surprisingly, living in neighborhoods with the “right” schools and the “right” job referral networks helps families in the neighborhood, and thus the neighborhood itself, to parlay initial assets into future assets. The section concludes that neighborhood effects may now have locked non-whites out of white neighborhoods indefinitely. Because of the self-reinforcing nature of the early-mover advantage, non-whites are far less likely to be able to purchase a house in a wealthier, asset-rich neighborhood.

Part IV then steps back to argue, more broadly, that U.S. anti-discrimination law should shift from the standard intent framework to an institutional lock-in model. This section suggests that the definition of discrimination be expanded to include disparities that persist because of institutional lock-in. Such a definition better reflects social science research, both empirical and theoretical, on the institutional nature of cumulative advantage and disadvantage.

Perhaps most importantly, both the expanded definition and the conceptual metaphor of “locked-in monopoly” highlight many dimensions of modern racism that the individual intent model marginalizes. These ignored aspects include the role of history, the unfair competitive advantage that whites acquired by becoming “early movers,” and the continuing importance of a person’s membership in a neighborhood or racial group.

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I. A General Introduction to the Lock-In Model of Inequality

A. The Theory of Market Lock-in

In previous work, I have developed the market lock-in model of inequality to explain the dynamics of racial inequality.²⁹ The lock-in model of racial inequality draws from recent work by economics and antitrust scholars on the lock-in model of market monopoly. The lock-in model was designed to explain how market monopolies can become self-reinforcing over time, to become a permanent part of the economic landscape, even in the absence of continuing intentional wrongdoing by a monopoly firm. Locked-in monopolies can be produced in a variety of settings.

For example, in markets that are characterized by “increasing returns,” an early competitive advantage can become self-reinforcing over time, feeding back on itself to produce a perpetually increasing competitive lead. When Microsoft took an anti-competitive early lead in operating systems, its advantage became self-reinforcing because of the relationship between software choice and consumers. Windows’ popularity induced more software authors to write software, which in turn triggered an increase in consumers. The increase in consumers thereby induced even more software authors to write for Windows, and so on.³⁰

In addition, the market might become locked-in when consumers face high costs to switch (“switching costs”) from the market incumbent

²⁹ Roithmayr, *Barriers to Entry*, *supra* note 10 (developing the lock-in model and arguing that the use of conventional law school admissions standards constitutes a locked-in network standard that favors whites). *See also* Roithmayr, *Locked-In Inequality*, *supra* note 18 (2003) (arguing that the South African government chose to retain educational user fees despite their disproportionate racial impact because the government would incur high switching costs to equalize expenditures across racial lines).

³⁰ *See e.g.*, Brian Arthur, *Increasing Returns*, *supra* note 19 at 102 (explaining the self-reinforcing process of increasing returns generally); Lemley and McGowan, *Network Effects*, *supra* note 19 (using the Microsoft example); Steven Durlauf, *A Persistent Theory of Income Inequality*, 1. J. ECON. GROWTH 75 (1996) (explaining how income inequality can become self-reinforcing).

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to a more innovative competitor.³¹ If switching costs are too high to permit consumers to make the switch easily, then such costs may lock in the incumbent's early advantage. For example, when consumers choose to switch from a VCR to a DVD player, they must pay not only the cost of the new product but also the cost to recreate their library in DVD format and the cost of lost access to their video network—the group of friends, family, video stores and other sources of videos who may not yet have made the switch.³² These additional switching costs may prolong the initial competitive advantage that the VCR technology has over the more innovative DVD technology.³³

Finally, and relatedly, markets that demonstrate the quality of “path dependence” can also produce locked-in monopolies.³⁴ In path dependent markets, small historical events that occur early in the formation of the industry have a significant effect on market outcomes.³⁵ In an oft-cited example, Paul David argues that a typing contest held in 1874 ultimately produced the monopoly position of a particular keyboard arrangement in the typewriter market.³⁶ Because the winning typist had used a QWERTY keyboard, the victory produced a small competitive advantage.³⁷ This “early-mover” advantage then became institutionally

³¹ For a discussion of switching costs in the market context, see A. Douglas Melamed, *Network Industries and Antitrust*, 23 HARV. J. L. & PUB. POL'Y 147, 150 (1999). For a discussion of the role of switching costs in the lock-in model of inequality, see Roithmayr, *Locked In Inequality*, *supra* note 18 at 61-65.

³² See Roithmayr, *Locked In Inequality*, *supra* note 18 at 39.

³³ *See id.*

³⁴ For a full discussion of path dependence, see Stan J. Liebowitz and Stephen H. Margolis, *Path Dependence, Lock-In and History*, 11 J. L. ECON & ORG. 205 (1995); BRIAN W. ARTHUR, *INCREASING RETURNS AND PATH DEPENDENCE IN THE ECONOMY* (1994). *See also* Roithmayr, *Barriers to Entry*, *supra* note 10 at 742-49.

³⁵ *See* Stanley M. Bensen & Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*, 8 J. ECON. PERSP. 117, 118 (1994); Nicholas Economides, *The Economics of Networks*, 14 J. INT'L J. INDUS. ORG. 673, 694 (1996).

³⁶ *See* PAUL A. DAVID, *UNDERSTANDING THE ECONOMICS OF QWERTY: THE NECESSITY OF HISTORY IN ECONOMIC HISTORY AND MODERN ECONOMICS* 30-49 (William N. Parker ed. 1986). *See also* Paul David, *Clio and the Economics of QWERTY*, 75 AMER. ECON. REV. 332 (1985); Paul David, *Why Are Institutions the 'Carriers of History'?* Notes on Path-Dependence and the Evolution of Conventions, Organizations and Institutions, Unpublished paper, Stanford University, October 1992.

³⁷ The QWERTY keyboard begins with those letters on the upper row. *See* David, *Clio and the Economics of QWERTY*, *supra* note 36 at 334.

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self-reinforcing because of the “network” relationship between typists, employers and keyboards. Typists wanted to train on the most popular keyboard, and, in turn, employers wanted to adopt the keyboard on which most typists were trained.³⁸ Each increase in typists produced an increase in employers who adopted the keyboard, thereby triggering another increase in typists, and so on.³⁹ Ultimately, QWERTY came to dominate the field based on the self-reinforcing effects of the early victory.⁴⁰

As this example demonstrates, institutionally self-reinforcing processes may become locked in if they create barriers to entry that prevent competitors from catching up. In the QWERTY example, the early winner’s competitive advantage may have become locked in place because an employer who wanted to switch to an alternative faced significant switching costs—namely, the loss of a ready-trained labor pool.⁴¹ Switching costs can create barriers to entry for a competitor, and even for those competitors who offer consumers a more “efficient” product, like a more innovative keyboard arrangement.⁴²

B. The Lock-In Model of Racial Inequality

Drawing from market lock-in and other interdisciplinary work, I have developed the lock-in model of racial inequality to explain how racial monopoly power might persist over time.⁴³ Just as a firm’s early monopoly advantage can become locked into the market over time, so too can a racial cartel’s early monopoly advantage become institutionally

³⁸ *See id.* at 335.

³⁹ *See id.*

⁴⁰ *See id.*

⁴¹ *See id.*

⁴² *See id.* at 332. Developed in the 1920s by August Dvorak, the Dvorak keyboard arrangement is according to some a vastly superior keyboard arrangement when compared to QWERTY. *See* R.C. CASSINGHAM, *THE DVORAK KEYBOARD* 21-16, 41-43 (1986). For an argument that the two keyboards are at best equally efficient, see Stan J. Liebowitz and Steven E. Margolis, *The Fable of the Keys*, 9 *HARV. J. L. & TECH.* 283, 312-14 (1996); STAN J. LIEBOWITZ AND STEVEN E. MARGOLIS, *WINNERS, LOSERS AND MICROSOFT* x (1999).

⁴³ The lock-in model draws from a range of disciplines, including complex systems theory, history, geography, sociology, economics and critical race theory. For a more extended discussion of the model’s origins, see Roithmayr, *Barriers to Entry*, *supra* note 10; Roithmayr, *Locked In Inequality*, *supra* note 18.

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difficult to dismantle, even in the absence of continuing intentional discrimination.

The lock-in model puts forward three central claims about the nature of racial inequality. First, contemporary racial inequality is a path-dependent product of early history. More specifically, persistent racial inequality can be traced to earlier events that have charted a particular course of history for different racial groups.⁴⁴ As is true with the QWERTY example, the effect of early monopoly efforts by white “monopolists” may explain far more about contemporary outcomes than conventional theory would predict.⁴⁵

Second, whites’ early anti-competitive advantage may now have become self-reinforcing.⁴⁶ As with economic markets, in race relations, early anti-competitive conduct can produce increasing returns for the early mover. In the context of residential segregation, for example, early monopoly advantage can reproduce itself through a variety of mechanisms, including schooling and networks of access to employment.

Third, in the absence of some intervening event, racial disparities may persist indefinitely. The lock-in model of inequality suggests that racial inequality may now have become locked in place and prohibitively expensive to eliminate.⁴⁷ In the marketplace, switching costs are those costs that are associated with moving from an incumbent product to a competitor’s product.⁴⁸ Any policy looking to remedy locked-in racial inequality would incur the structural and political switching costs of

⁴⁴ Borrowed from evolutionary theory, the concept of path dependence makes the claim that early events can chart the evolutionary path of subsequent conditions for a long time to come. *See e.g.*, Liebowitz and Margolis, *Path Dependence, Lock-in and History*, *supra* note 34 at x; Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 634-52 (1996). *See also* Roithmayr, *Barriers to Entry*, *supra* note 10 at 752; Roithmayr, *Locked In Inequality*, *supra* note 18 at 66.

⁴⁵ *See id.* In this project, I discussed the self-reinforcing impact of early decisions to exclude people of color from legal education, and to develop admissions standards that disproportionately excluded candidates of color. *See id.*

⁴⁶ *See id.* at 65.

⁴⁷ *See* Roithmayr, *Locked In Inequality*, *supra* note 18 at 61-64.

⁴⁸ For a full discussion of switching costs, see JOE S. BAIN, *BARRIERS TO NEW COMPETITION* 115-117 (1956) . *See also* Roithmayr, *Locked In Inequality*, *supra* note 18 at 38-41.

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restructuring or modifying routine institutional practices.⁴⁹ If switching costs increase as time passes, these costs may help to further cement in racial inequality as part of the U.S. social landscape.⁵⁰

Based on earlier research on racial lock-in, institutional feedback loops might be classified generally into roughly four categories.⁵¹

First, inequality might persist because white monopoly conduct can create an “asset surplus” or “asset advantage” that then gets passed down to the next generation. For example, research indicates that

⁴⁹ For example, to eliminate the use of school fees, the South African government would have to make a difficult choice. Either government would have to pay 2 to 3 percent more in GDP to equalize education at historically white levels, or risk massive white flight to private schools or foreign countries. *See* Roithmayr, *Locked In Inequality*, *supra* note 18 at 36. Likewise, any law school contemplating a move to reduce its reliance on the LSAT (e.g., to shift to a process that focuses on the student’s performance within a band of achievement) must face significant potential switching costs in doing so. In particular, a school risks a potentially significant drop in its rankings (by way of the U.S. News and World Report system, which prioritizes LSAT scores). In addition, a school risks a corresponding loss of reputation, drop in enrollments, reduced employability of graduates and reduced funding from alumni donors. Moreover, a law school choosing to abandon the test altogether would have to incur the cost of developing and administering its own admissions test—the LSAT is currently administered for all law schools by the centralized Law School Admissions Council. *See* Roithmayr, *Barriers to Entry*, *supra* note 10 and accompanying text.

⁵⁰ Charles Tilly describes the concept of switching costs in his discussion of durable inequality.

Existing social arrangements have enduring advantages because their theoretical alternatives always entail the costs of movement away from the present situation; change therefore occurs under conditions that reduce returns from existing arrangements, raise their current operating costs, lower the costs of transition to alternative arrangements or (much more rarely) increase expected returns from alternative sufficiently to overcome the transitions costs.

CHARLES TILLY, *DURABLE INEQUALITY* 192 (1998).

⁵¹ This typology builds on earlier work by Charles Tilly. Tilly briefly sketched four ways in which inequality might become self-reinforcing: (i) exploitation reproduces itself by providing elites with a surplus, which they use part of to reward collaborators and regulate disposition of the resources; (ii) opportunity hoarding feeds rewards selectively into segregated networks, including the transmission of wealth through inheritance; (iii) emulation lowers the costs of organization and provides the illusion of ubiquity; (iv) adaptation articulates unequal organizational arrangements with social routines so that the costs of moving to alternatives rises prohibitively. *See* TILLY, *DURABLE INEQUALITY*, *supra* note 50 at 191.

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discrimination in housing earlier in the century produced a surplus in property value for white homes. White families then were able to pass down the value of that surplus property value to their children, in the form of down payments for homes and financing for a college education.⁵²

Second, inequality might persist because routine institutional practices have “grown up” around racial inequality, and switching to more inclusive practices may become too expensive as more time passes.⁵³ So for example, predominantly white judges, who nominate their acquaintances and business leaders in the community for participation in a grand jury may, have relied for years on this network of people for their financing in election campaigns.⁵⁴ Moving to an alternative nomination system might incur significant switching costs over time, as judges lost their nomination network of donors (or the nominations as a reward for their financing networks).⁵⁵

Third, inequality might reproduce itself over time because white monopolists are able to set the rules for future distribution of resources to continue to favor themselves. Early monopoly efforts by whites pay

⁵² See generally MELVIN OLIVER AND THOMAS SHAPIRO, *BLACK WEALTH/WHITE WEALTH: A NEW PERSPECTIVE ON RACIAL EQUALITY* (1997), DALTON CONLEY, *BEING BLACK, LIVING IN THE RED: RACE, WEALTH AND SOCIAL POLICY IN AMERICA* (1999). Likewise, white families were able to transfer the wealth and benefits from using slave labor to their heirs, directly through family conveyances and indirectly via social networks. Whites were able to pass along quite a bit in the way of property and wealth, professional status, cultural capital and economic mobility. See generally OLIVER AND SHAPIRO, *BLACK WEALTH/WHITE WEALTH*, supra note 52 (1995) (discussing differential wealth transmission via capital gains tax, inheritance tax, cultural capital, occupational status, and intergenerational economic mobility).

⁵³ In previous work, I have written about the institutional practices that have grown up around racial inequalities in South African public school finance. In that work, I argue that high switching costs make dismantling the school fee system prohibitively expensive. See Roithmayr, *Locked In Inequality*, supra note 18 at 55-60.

⁵⁴ In studies of campaign donors, scholars have noted that candidates often rely on personal contacts and on business networks for large contributions. See *THE FINANCIERS OF CONGRESSIONAL ELECTIONS: INVESTORS, IDEOLOGUES AND INTIMATES* (Peter L. Francia, Paul S. Herrnson, John C. Green, Lynda W. Powell and Clyde Wilcox eds.) x (2003)

⁵⁵ See Haney-Lopez, *Institutional Racism*, supra note 17 at 1730-39 (discussing the institutional script of grand jury nomination in California, and its disproportionate exclusion of Latino and black candidates). I have taken some liberty with this example—Haney-Lopez does not describe the structural constraints of this process, nor does he discuss the potential connection to election financing. See *id.* at 1723.

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off because whites can structure the rules for future distribution in a way that favors the incumbents.⁵⁶ In the area of legal education, for example, Duncan Kennedy has argued that white male dominance in law teaching persists because white males have monopolized both access to teaching positions and the power to create the ideologically- and culturally-specific traditions or projects within which faculty candidates are assessed. Kennedy argues that such a monopoly suppresses both the alternative traditions which might produce valuable work, and the scholars that work within such traditions.⁵⁷

Fourth and finally, inequality might persist because white monopolists were able early on to create geographically segregated spaces that now have become associated with self-reinforcing advantage or disadvantage.⁵⁸ Because geographic space can bring people together to form various kinds of networks, such space is often associated with network-like effects. This article explores the way in which the geography of local public school financing and job referral networks reproduces racial inequality.

By way of these feedback loops, historical racial advantage can become self-reinforcing, even in the absence of intentional discrimination. Parents who pass on a down payment for a house purchase, judges who nominate grand jurors whom they know, faculty members who assess scholarship according to merit criteria—all may be part of a dynamic process that locks racial inequality into institutional

⁵⁶ In high technology network industries, the “first mover” monopolist can sometimes reproduce its early advantage by setting a standard that favors its product. *See* Roithmayr, *Barriers to Entry*, *supra* note 10 at 753. For example, after Microsoft engaged in early anti-competitive conduct via illegal bundling and tying, it was then able to reproduce its early advantage because it controlled the “network standard” through which all nodes of the PC network of software and hardware had to interface. *See* Sean P. Gates, *Standards, Innovation and Antitrust: Integrating Innovation Concerns Into the Analysis of Collaborative Standard Setting*, 47 *EMORY L.J.* 583, 597-98 (discussing Windows as the network standard for the PC industry), 600 (discussing the anti-competitive manipulation of standards to exclude via patents or other forms of intellectual property protection) (1998).

⁵⁷ *See* Duncan Kennedy, *A Cultural Pluralist Case for Affirmative Action in Legal Academia*, 1990 *DUKE L. REV.* 705, 733 (1990) (arguing that scholars of color have brought innovative and fresh scholarship to the legal academy, and that barriers to entry for such scholars should be lowered).

⁵⁸ *See* Paul Krugman, *Increasing Returns and Economic Geography*, 99 *J. OF POL. ECON.* 483 (1991). For a full discussion of racialized space, see generally, Ford, *The Boundaries of Race*, *supra* note 14.

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structures and practices. The next section of this Article uses the lock-in model to explain the problem of persistent residential segregation by race.

II. Early Anti-Competitive Behavior By Racial Cartels (or ‘It’s History, Stupid!’)

The concept of path-dependence suggests that even small historical anti-competitive acts, much less large ones, can have a significant impact on future outcomes. The following section traces the history of segregated neighborhoods, back to the turn of the century and the era of Jim Crow, and further back, to slavery. More specifically, the section discusses anti-competitive efforts by white racial cartels to exclude blacks and Mexican-Americans from white neighborhoods.

A. A Preliminary Note: The Role of Slavery in Constructing the Ghetto

At first glance, slavery might appear to play a relatively minor role in the evolution of the modern ghetto. Most scholars trace the beginning of residential segregation to the beginning of black migration into industrialized cities in the North, but do not go much further back.⁵⁹ Indeed, after slavery, the intervening war and period of Reconstruction seemed at least for a time to reverse the dramatic disparities that slavery had produced. At the end of the century, the war appeared to have opened some significant institutional doors that slavery had closed. But even though during Reconstruction, blacks made significant gains--in professional employment, higher education, voting, and participation in

⁵⁹ See, e.g., DOUGLAS S. MASSEY AND NANCY A. DENTON, *AMERICAN APARTHEID: SEGREGATION AND THE MAKING OF AN UNDERCLASS* 18 (1993). Indeed, one might argue that whites engaged in two distinct periods of anti-competitive conduct: exclusionary conduct undertaken during slavery, and then (after the intervention of war and Reconstruction), the exclusionary efforts that characterized segregation. In complex systems terminology, both the Civil War and Reconstruction can be understood as a significant “exogenous” shock to the system that disrupted the long-running racist institutional processes put in place during slavery. [Get Footnote]

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juries—those gains ended with Redemption and the beginning of Jim Crow.⁶⁰

Although residential segregation does not appear to have “naturally” evolved from slavery in a continuous line, one can argue that slavery nevertheless played a very important role in the lock-in process in one significant respect. Namely, two hundred years of slavery created dramatic asset disparities between blacks and whites, particularly in terms of wealth and property ownership. Perhaps as importantly, whites’ failure to come through on promised redistribution of land, the promise of “forty acres and a mule,” meant that asset disparities would essentially remain in place after the war.⁶¹

B. Racial Cartels and Their Anti-Competitive Activities

This section argues that whites engaged in anti-competitive activities to secure a neighborhood advantage in housing and other neighborhood-based assets. Other scholars have extensively documented the creation of the modern ghetto, a phenomenon which began at the turn of the century and extended into the era of Jim Crow

⁶⁰ See C. VANN WOODWARD, *THE STRANGE CAREER OF JIM CROW* 25-27 (1974). Although segregation would soon erase those gains, black advancement (particularly in wealth) cannot be discounted in tracing the evolutionary history from slavery to segregation.

⁶¹ During his march to the sea, General William T. Sherman and Secretary of War Edwin M. Stanton met with 20 black community leaders of Savannah, Georgia. In response to that meeting, Sherman issued Special Field Order #15 on January 16, 1865, setting aside the Sea Islands and a 30-mile inland tract of land along the southern coast of Charleston for the exclusive settlement of freed slaves. Each family would receive 40 acres of land and an army mule to work the land. CLAUDE OBRE, *FORTY ACRES AND A MULE: THE FREEDMEN’S BUREAU AND BLACK LANDOWNERSHIP* 18-21 (1978). Although it initially appeared that land redistribution would actually aid in social and economic transformation, the transformation never occurred. First, the homestead act legislation opened up the criteria for white applicants as well as blacks. Second, criteria for homesteading disproportionately excluded black applicants, who faced illegal fees, discriminatory court challenges and land speculators. For extended discussions of the failure of transformation, see MICHAEL LANZA, *AGRARIANISM AND RECONSTRUCTION POLITICS: THE SOUTHERN HOMESTEAD ACT* (1990); For the long-term effects of this failure on racial differences in wealth, see CONLEY, *BEING BLACK*, *supra* note 52 at 33; MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59. Other anti-competitive efforts amplified these initial asset differences. For example, whites lobbied to have various social security programs established in the early 1930s exclude domestic and agricultural workers from old-age pension and unemployment compensation. See CONLEY, *BEING BLACK*, *supra* note 52 at 36.

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segregation.⁶² By comparison, the following discussion focuses on a relatively narrow set of cartel-like activities by a particular set of institutional organizations during the period from 1920 to 1950.

Economists use the concept of cartels to explain how groups of people who ordinarily act to pursue their own self-interest might nevertheless collaborate to exclude others from competition.⁶³ Robert Cooter and others have described how racial cartels might have worked to create and maintain racial and economic exclusion, by: (i) agreeing on a collective purpose to drive out competitors, (ii) constructing a complex set of informal and formal norms to coordinate collective conduct, and (iii) imposing measures to punish members who defect and/or violate collective norms.⁶⁴ This section argues that real estate boards, neighborhood associations and lending institutions effectively functioned as racial cartels during Jim Crow to monopolize access to “the best” neighborhoods.

By 1920, whites had begun to perceive black migration into the cities as a significant threat to their way of life, and they responded accordingly. White families refused to sell their homes to blacks, and established racially restrictive covenants to bind successive sellers (and buyers) of property in white neighborhoods.⁶⁵ White neighbors went to great lengths to restrict black access to the credit needed to buy a home in a more affluent, white neighborhood.⁶⁶ Finally, whites also continued to engage in systematic harassment and violence when other options were no longer available. Working collectively, whites developed multiple strategies to prevent in-migration: they wrote threatening letters, offered to buy out the black homeowner and personally harassed

⁶² See e.g., CONLEY, BEING BLACK, *supra* note 52 at 35-37.

⁶³ See e.g., GEORGE W. STOCKING & MYRON W. WATKINS, CARTELS IN ACTION 167 (1946). For an excellent discussion of cartels in game theory and complex systems theory, see Chris Leslie, *Trust, Distrust and Antitrust*, 82 TEX. L. REV. 515 (2004).

⁶⁴ See Cooter, Market Affirmative Action, *supra* note 26 at 156 (arguing that Jim Crow laws effectively prevented institutions from breaking ranks by hiring people of color); Jennifer Roback, *Southern Labor Laws in the Jim Crow Era: Exploitative or Competitive?* 51 U. CHIC. L. REV. 1161, 1163 (1984); Richard McAdams, *Cooperation and Conflict: The Economics of Group Status Production and Race Discrimination*, 108 HARV. L. REV. 1003, 1046-48 (1995) (arguing that coercive social norms served to suppress defection and free-riders).

⁶⁵ See MASSEY AND DENTON, AMERICAN APARTHEID, *supra* note 59 at 34-35.

⁶⁶ See *id.*

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resistant homeowners.⁶⁷ These groups also engaged in violence to encourage blacks to flee. At the height of violence, organized mobs fired gunshots into residents' homes, burned crosses on their lawns, physically attacked them, and stormed their homes to ransack them.⁶⁸

By forming cartel-like organizations, whites were able to coordinate their "anti-competitive" behavior more efficiently. Cartels to promote residential segregation came in three basic organizational forms: the homeowners' association, the real estate association board, and the lending institution. These organizations worked independently and together to exclude non-whites from white neighborhoods.

1. Homeowners' Associations

The homeowners' association provided a central base in white neighborhoods neighborhood from which to coordinate cartel strategies.⁶⁹ As blacks continued to migrate into the city, native whites formed coalitions with ethnic immigrant groups from eastern and southern Europe. These immigrants had moved from ethnic enclaves into more dispersed and heterogenous white neighborhoods, and now identified themselves as white.⁷⁰ Indeed, membership in an association helped immigrants to construct their identity as white American middle-class homeowners.⁷¹ Home ownership constituted the symbol of racial, national, community and family value--hard work, thriftiness, upward

⁶⁷ *See id.*

⁶⁸ *See id.*

⁶⁹ In Chicago's South Side, such associations included the Hyde Park Improvement and Protective Club and the Woodlawn Society. In New York, the Harlem's Property Owners' Improvement Corporation and Brooklyn's Gates Avenue Association. *See* MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 35. In Detroit, key organizations included the Northwest Civic Association and the Federated Property Owners' Association. *See* THOMAS SUGRUE, *ORIGINS OF THE URBAN CRISIS: RACE AND INEQUALITY IN POSTWAR DETROIT* 21 (1996).

⁷⁰ *See id.* at 211-13. *See also* STEPHEN GRANT MEYER, *AS LONG AS THEY DON'T MOVE NEXT DOOR: SEGREGATION AND RACIAL CONFLICT IN AMERICAN NEIGHBORHOODS* 191 (2000) (describing ethnic solidarity in exclusion).

⁷¹ *See* SUGRUE, *ORIGINS OF URBAN CRISIS*, *supra* note 69 at 213.

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mobility and middle-class status.⁷² In the eyes of immigrant association members, black in-migration constituted a threat to the racial, national and class status that this group had worked so hard to acquire.⁷³

In Detroit, white homeowners' associations were organized very much like paramilitary organizations.⁷⁴ Groups demarcated their separate turfs, and created city-wide networks to monitor buying and selling.⁷⁵ To increase their power in negotiating with city government, individual homeowners' groups organized themselves into regional and citywide associations.⁷⁶ Associations deployed a number of strategies to police racial boundaries. Members often approached offending sellers or black buyers with diplomatic alternatives, like an offer to buy the property in question. If more peaceful tactics failed, association members threatened to inflict, and in many cases did inflict, physical violence, property damage or workplace reprisals.⁷⁷ In addition to targeting buyers and sellers, members threatened, harassed and boycotted defecting real estate brokers who sold homes to blacks.⁷⁸ The associations also exercised a fair amount of political power, organizing against public housing projects and in favor of restrictive zoning ordinances.⁷⁹

⁷² *See id.* *See also* ROSE HELPER, RACIAL POLICIES AND PRACTICES OF REAL ESTATE BROKERS 194-95, 223 (1969) (describing the symbolic and economic value of home ownership).

⁷³ *See* SUGRUE, ORIGINS OF URBAN CRISIS, *supra* note 69 at 215. *See also* CHARLES ABRAMS, FORBIDDEN NEIGHBORS: A STUDY OF PREJUDICE IN HOUSING (1955) (describing move to organize by whites in response to fear of black entry).

⁷⁴ *See* SUGRUE, ORIGINS OF URBAN CRISIS, *supra* note 69 at 246.

⁷⁵ *See id.* at 221. Associations deployed captains and supervisors, who were in charge of sections, and block wardens who were responsible for individual streets. *See id.* at 246-47.

⁷⁶ In Detroit, such umbrella organizations included the Michigan Council of Civic Associations (with eleven organizations), the North East Council of Home Owners' Associations (twelve groups) and the Federated Civic Associations of Northwest Detroit (which included over fifty groups). *See id.* at 221.

⁷⁷ *See id.* at 249. Associations also engaged in protesting, picketing, harassment, arson, and mob violence. *See id.* at 250-53.

⁷⁸ *See id.* at 221; *see also* MASSEY AND DENTON, AMERICAN APARTHEID, *supra* note 59 at 36.

⁷⁹ These zoning standards imposed onerous income-based requirements with regard to architectural standards, lot sizes and the ability to construct multi-family housing on property. *See* SUGRUE, ORIGINS OF URBAN CRISIS, *supra* note 69 at 45, 223-24; MASSEY AND DENTON, AMERICAN APARTHEID, *supra* note 59 at 36 (describing organization to lobby city

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Perhaps most importantly, the neighborhood homeowners' association operated to construct, monitor and enforce racially restrictive covenants. The restrictive covenant contractually obligated white property owners in the same neighborhood not to permit blacks to own, occupy or lease the relevant property for a specific period of time. Typical covenants ran as long as twenty years, and required the assent of 75% of property owners in a given area.⁸⁰ The success of racially restrictive covenants depended in large part on associations—they hired lawyers to draft the covenants, organized homeowners to agree to them, monitored them and provided the legal back-up to enforce them.⁸¹

Restrictive covenants, which had not even been in existence before 1900, spread widely throughout the country after 1910.⁸² In 1948, however, the Supreme Court struck covenants down as illegal, and homeowners' associations thereafter played a central role in maintaining restrictions more informally.⁸³ Seeking to circumvent the Court's decision, some associations focused on ostensibly race-neutral means of exclusion, like lobbying for zoning ordinances to fight against multiple family housing.⁸⁴ Other neighborhood associations replaced restrictive covenants with "mutual reciprocal agreements" that made vague references to "undesirable peoples."⁸⁵ Still other associations included certain provisions that required residents to sell only through approved brokers, and to give the association the right of first refusal.⁸⁶ Courts often enforced these agreements, and associations also depended on the

councils for zoning restrictions).

⁸⁰ *See id.* Indeed, according to some commentators, racial covenant (and not real estate boards) were considered to be the most effective means of restricting non-white entry into white neighborhoods. *See* Joshua L. Farrell, *The FHA's Origins: How Its Valuation Method Fostered Racial Segregation and Suburban Sprawl*, 11 J. AFFORDABLE HOUSING & COMM. DEV. L. 374, 381 (2002).

⁸¹ *See id.* at 45.

⁸² *See id.*

⁸³ Associations on Detroit's Northwest side organized to create "mutually reciprocal agreements" that excluded "undesirable" people. *See* SUGRUE, ORIGINS OF URBAN CRISIS, *supra* note 69 at 221.

⁸⁴ *See id.* at 221.

⁸⁵ *See id.* at 222.

⁸⁶ *See id.* at 221-222.

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likelihood that such covenants would not be challenged.⁸⁷

2. Real Estate Boards

Like the homeowners' association, the real estate board operated both independently and together with lenders and builders to exclude non-whites.⁸⁸ According to historians on the subject, the real estate industry "brotherhood" proved even more influential than the racially restrictive covenant in maintaining neighborhood racial boundaries.⁸⁹ To enforce cartel norms, real estate boards punished defecting realtors by expelling them from the board, denying them access to circulating cross-listings, encouraging other agents to shun them, and encouraging offended white customers to harass and boycott them.⁹⁰

Real estate boards often worked in tandem with homeowners' associations, to encourage whites to form homeowners' associations.⁹¹ In deciding where to encourage such organizations, realtors often targeted communities in which blacks were likely to try to move or had already successfully entered.⁹² For example, in Detroit, the Northwest Civic Association worked closely together with the Northwest Detroit Realty Association to target particular neighborhoods that had begun to admit blacks.⁹³ The real estate board also played a key role in the spread of racially restrictive covenants. Many real estate boards hired lawyers to draft a model covenant to serve as a template for local associations,

⁸⁷ *See id.*

⁸⁸ For a detailed discussion of real estate board practices in relation to segregation, see HELPER, RACIAL POLICIES AND PRACTICES, *supra* note 72.

⁸⁹ *See* SUGRUE, ORIGINS OF URBAN CRISIS, *supra* note 69 at 46.

⁹⁰ *See id.* at 46; MASSEY AND DENTON, AMERICAN APARTHEID, *supra* note 59 at 37. Discipline proved particularly necessary for real estate brokers, because high profits were available to realtors who engaged in blockbusting, the practice of selling to a few "select" black families and then inducing panic selling whites on the block by warning them of an impending invasion. Realtors often targeted neighborhoods that were on the edges of an expanding ghetto. Because of pent-up black demand, blacks were often required to pay much higher prices than those that had been paid by departing whites. Realtors also profited by extending credit to blacks, who were shunned by traditional lending institutions. MASSEY AND DENTON, AMERICAN APARTHEID, *supra* note 59 at 38.

⁹¹ *See* SUGRUE, ORIGINS OF URBAN CRISIS, *supra* note 69 at 44.

⁹² *See id.*

⁹³ *See id.* at 45.

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and then pressured homeowners' associations to adopt the model covenant.

More significantly, real estate boards adopted codes of conduct and ethics codes in order to police the conduct of realtors at the local and national level. In a key historical moment, the National Association of Real Estate Boards adopted a National Code of Ethics in 1924 that required realtors to steer blacks, Jews and other "non-whites" away from white neighborhoods.⁹⁴ In Article 34 of the Code, realtors pledged that they would "never be instrumental in introducing into a neighborhood... members of any race or nationality...whose presence will clearly be detrimental to property values in that neighborhood."⁹⁵ The National Association did not remove that provision until 1950.⁹⁶ The code of ethics served not only as a business code but also as a sort of moral code, which gave it more weight as a mechanism for cartel regulation. Indeed, as of 1924, all realtors were ethically required to engage in racial exclusion.⁹⁷

3. Lending Institutions

In conjunction with the federal government, the lending institution worked to exclude blacks from white housing markets by refusing to extend them credit, regardless of their economic circumstances. Similarly, lenders refused to extend loans to purchase or build in black neighborhoods.⁹⁸ As with the homeowners and real estate agents, defecting lenders risked incurring the wrath of their white depositors, other investors, realtors and builders.

Scholars have extensively documented the extent to which the federal government participated in the lending institution "racial

⁹⁴ See MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 37, SUGRUE, *ORIGINS OF URBAN CRISIS*, *supra* note 69 at 46.

⁹⁵ HELPER, *RACIAL POLICIES AND PRACTICES*, *supra* note 72 at 201. The official text of the American Institute of Real Estate Appraisers also specified that the value of the neighborhoods would diminish "when a new class of people of different race, color, nationality and culture moves into the neighborhood." *See id.*

⁹⁶ See MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 37.

⁹⁷ See HELPER, *RACIAL POLICIES AND PRACTICES*, *supra* note 72 at 221, 259.

⁹⁸ See SUGRUE, *ORIGINS OF URBAN CRISIS*, *supra* note 69 at 46.

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cartel.”⁹⁹ Two federal loan programs created in the 1930s bear special mention: (i) the Home Owners’ Loan Corporation (HOLC) program and (ii) the Federal Housing Administration (FHA) program. In 1933, the federal government created the HOLC program to provide low-cost, long-term, self-amortizing mortgages with uniform rates.¹⁰⁰ The program was designed to prevent default on urban mortgages and to permit defaulters to repurchase their properties.¹⁰¹

The government formally institutionalized the discriminatory practice of “redlining” for the first time as part of the HOLC program. When assessing the creditworthiness of particular areas, HOLC’s rating system automatically coded all black neighborhoods as “red,” a color code that signified that the property was undesirable and not to be extended credit.¹⁰² In addition to government lenders, banks and other private institutions also relied on the HOLC rating systems and maps in their making their own lending decisions.¹⁰³

Redlining soon became pervasive, and non-whites struggled to obtain access to credit. In contrast to the HOLC program, the FHA loan program reinforced segregation in a slightly different way--by financing white migration to the suburbs. Created in the 1930s, the FHA program reduced the risk to private banks for mortgage loans by guaranteeing the value of collateral.¹⁰⁴ Down payments were significantly reduced, and monthly payments also, as the repayment periods were extended to twenty-five or thirty years.¹⁰⁵ Taking their lead from HOLC criteria, the FHA programs established underwriting requirements that virtually foreclosed any lending to inner-city, multiple-family homes or to black families.¹⁰⁶ In another key historical moment, in 1939, the FHA issued

⁹⁹ See e.g., KENNETH JACKSON, *CRABGRASS FRONTIER: THE SUBURBANIZATION OF THE UNITED STATES 197-201* (1987) (discussing the HOLC program); MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 51-54; OLIVER AND SHAPIRO, *BLACK WEALTH/WHITE WEALTH*, *supra* note 52 at 16-18.

¹⁰⁰ See JACKSON, *CRABGRASS FRONTIER*, *supra* note 99 at 197-201.

¹⁰¹ See MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 51.

¹⁰² See *id.*

¹⁰³ See *id.* at 52.

¹⁰⁴ See *id.* at 54.

¹⁰⁵ See *id.*

¹⁰⁶ See *id.*

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an underwriting manual that directed underwriters to consider race and class in deciding whether to extend credit. “[I]f a neighborhood is to retain stability, it is necessary that properties shall continue to be occupied by the same social and racial classes.”¹⁰⁷ In rating neighborhoods, the FHA underwriting manual also focused on “inharmonious racial or nationality groups,” and recommended the use of racially restrictive covenants.¹⁰⁸ Accordingly, most FHA-insured and HOLC loans went to white purchasers in white neighborhoods.¹⁰⁹

C. Residential Segregation of Blacks From 1940 to 1950

By 1940, white anti-competitive conduct had firmly established the basic structures of residential segregation.¹¹⁰ Neighborhood racial boundaries had stabilized, and the statistical measures of racial dissimilarity had peaked at very high levels.¹¹¹ In 1940, the average index of dissimilarity for selected major cities in both the North and South was 81.¹¹² Chicago displayed the highest index of these cities, at 95.¹¹³

¹⁰⁷ See Underwriting Manual, Federal Housing Admin., Washington, D.C. (1939). See MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 54.

¹⁰⁸ See *id.*

¹⁰⁹ Cartel activities were also important in the South, particularly after the end of segregation codes, particularly those that had engaged in violence. Although southern cities did experience a rise in their populations via black migration from rural areas, whites in these cities never experienced the level of panic that Northern whites did. Because whites in the South had used law to enforce traditional segregation in public accommodations and other public spaces, it seemed natural for them to turn to law to enforce residential segregation in housing. Segregation codes did not last for long. The U.S. Supreme Court declared Louisville’s code unconstitutional in 1917. Thereafter, southern whites employed many of the same cartel tactics used by their counterparts to the North. Beyond associations, boards and lending institutions, white cartels engaged in a wide range of other anti-competitive conduct, including violence, harassment, and property destruction to create and then enforce stratification. Perhaps the most well-known cartel engaged in orchestrated violence is the Ku Klux Klan. See generally GLEN FELDMAN, *POLITICS, SOCIETY AND THE KLAN IN ALABAMA, 1915-1949* (1999).

¹¹⁰ See MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 43.

¹¹¹ See *id.* at 42. Dissimilarity indices measure the percent of one race that would have to move in order to evenly integrate an area. An index of zero means perfectly integrated, and an index of 100 indicates complete segregation. See *id.*

¹¹² See *id.* at 21, Table 2.1.

¹¹³ See *id.*

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Thereafter, any demographic changes served merely to reinforce earlier patterns.¹¹⁴ Between 1930 and 1940, over 400,000 blacks had migrated to the North, an exodus triggered by the Great Depression and the entrance of the U.S. into World War II. Because homebuilding had come to a halt, however, any newly-arrived migrants were accommodated into the existing racially identified space. Developers subdivided their properties, and families often doubled up in space meant only for a single family.¹¹⁵ This massive “piling up” in pre-existing communities accelerate the rise of poverty and contributed significantly to the deterioration of black neighborhoods.¹¹⁶ Thus, even the massive population shifts triggered by war and economic depression did not disturb existing racial neighborhood boundaries.

Even as blacks were migrating inwards, whites began a reverse migration to the suburbs. Aided by the federal government, whites moved to more open areas outside the cities, where bigger houses were constructed on bigger lots of inexpensive land.¹¹⁷ Again, these demographic shifts were racialized—financing programs selectively targeted whites who were fleeing to the suburbs, and prohibited blacks from taking advantage of the same opportunities.¹¹⁸

D. The Story of Mexican Segregation in the Southwest

Although the story of segregation is framed primarily as a story of black and white, residential segregation very much plagued non-whites in the Southwest, particularly Mexican-Americans. As was true for black segregation, the story of segregation in the Southwest also looks very much like a story of anti-competitive activity by cartels. Here, however, whites perceived the threat from Mexican-Americans more in terms of livelihood than in terms of residential location. Whites who had moved into sharecropping in cotton and other crops blamed

¹¹⁴ See *id.* at 42.

¹¹⁵ See *id.* at 43.

¹¹⁶ OTIS DUNCAN AND BEVERLY DUNCAN, *THE NEGRO POPULATION OF CHICAGO* 142-55 (1957).

¹¹⁷ See MASSEY AND DENTON, *AMERICAN APARTHEID*, *supra* note 59 at 44.

¹¹⁸ For a brilliant and well-documented discussion of white suburbanization, see JACKSON, *CRABGRASS FRONTIER*, *supra* note 99 (1985).

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their relatively diminished economic status on the influx of Mexican-American sharecroppers and on unskilled black and Mexican-American laborers.¹¹⁹

Mexican-Americans who worked in farming were subject to residential segregation as part of the broad effort by whites to monopolize sharecropping and unskilled labor.¹²⁰ In both California and Texas, industrial farming monopolies for both the cotton and citrus industries created corporate ranches, to control everything related to farming production, including the Mexican-American worker.¹²¹ Farming corporations built “company towns,” in which Mexican-Americans were housed and schooled. These towns controlled all consumption—groceries, schooling, housing, etc.¹²² In those towns and cities that were not controlled by the farming industry, whites created segregated neighborhoods using many of the strategies described above. White real estate brokers and residents refused to sell to Mexicans, fueling the creation of a separate barrio for Mexican-Americans, often in the center of the town, with miserably small houses and few of the amenities of residential white neighborhoods.¹²³

Even after Mexican-Americans dispersed into residential communities, informal and formal practices of school segregation separated Mexican children from whites. Although Mexican-Americans were legally classified as white, some states like Texas interpreted segregation codes to apply to Mexican-Americans as well as blacks.¹²⁴ In other states like California, school administrators separated Mexican

¹¹⁹ See NEIL FOLEY, *THE WHITE SCOURGE: MEXICANS, BLACKS AND POOR WHITES IN TEXAS COTTON CULTURE* 35, 37 (1997).

¹²⁰ See *id.*

¹²¹ See *id.* at 122. See also CAREY MCWILLIAMS, *FACTORIES IN THE FIELD* x (1969).

¹²² See FOLEY, *THE WHITE SCOURGE*, *supra* note 119 at 122, 128; MATT MEIER AND FELECIANO RIVERA, *THE CHICANOS: A HISTORY OF MEXICAN-AMERICANS* (1972).

¹²³ See CHARLES WOLLENBERG, *ALL DELIBERATE SPEED: SEGREGATION AND EXCLUSION IN CALIFORNIA SCHOOLS, 1855-1975* 118 (1976); Chris Arriola, *Knocking on the Schoolhouse Door: Mendez v. Westminster, Equal Protection, Public Education and Mexican Americans in the 1940s*, 8 *LA RAZA L. J.* 166, 171-72 (1995) (describing conditions in El Modena, California).

¹²⁴ See Jorge C. Rangel & Carlos M. Alcalá, *Project Report: De Jure Segregation of Chicanos in Texas Schools*, 7 *HARV. C.R. - C.L. L. REV.* 307, 342 (1972).

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students even when segregation codes did not require them to do so.¹²⁵ Segregation of Mexican-Americans in the school system remained legal until 1947, when the Ninth Circuit declared such segregation invalid in *Westminster v. Mendez*.¹²⁶

For both Mexican-Americans and blacks, white cartel efforts produced meaningful results. Coordinated activities created racially and economically defined spaces—neighborhoods and company towns—that concentrated residents with relatively lower levels of wealth and income, property value, education and employment. Segregation also created white neighborhoods that enjoyed a significant relative advantage in all of these areas. The next section discusses how these racial differences became self-reinforcing.

III. The Self-Reinforcing Nature of Racial Monopoly in Neighborhoods

In work on the jurisprudence of jurisdictional boundaries, Richard Ford has suggested that residential segregation might have become self-reinforcing by way of feedback loops connected with education, employment and the availability of credit.¹²⁷ Even earlier, Glen Loury's work on the inter-generational dynamics of inequality suggested a similar, self-reinforcing relationship between human capital (education and employment) and income.¹²⁸ Both Ford and Loury's theoretical work lay the foundation for the central argument behind the lock-in model of inequality: that historically racially stratified patterns have become self-reinforcing, and continue to determine the distribution of assets for future generations.¹²⁹

¹²⁵ See Bowman, *The New Face of Segregation*, *supra* note 2 at 1770.

¹²⁶ 161 F.2d 774 (9th Cir. 1947).

¹²⁷ See Ford, *Racial Boundaries*, *supra* note 15.

¹²⁸ See Loury, *A Dynamic Theory of Racial Income Differences*, *supra* note 17. See also Glen Loury, *Why We Should Care About Group Inequality*, 5 *PHIL. AND POLICY* 249 (1987).

¹²⁹ See *id.* at 156, 175-76. See also Steven Durlauf, *Neighborhood Feedbacks, Stratification, and Income Inequality*, in *DYNAMIC DISEQUILIBRIUM MODELING* 505 (William Barnett, Giancarlo Gandolfo and Claude Hillinger eds 1996) (examining the effect of a constant returns to public school finance/labor market connections effect/role model effect on sustaining inequality);

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A. The Networks of Neighborhoods (or “I Have Always Wanted to Have a Neighbor Just Like Me”)

According to recent research in complex systems theory and economics, persistent residential segregation can be explained by the existence of something called “neighborhood effects” or “network effects.” Simply defined, neighborhood effects are self-reinforcing institutional relationships that link a family’s well-being to that of its neighborhood, and the neighborhood’s status, in turn, to that of the resident neighbor families.¹³⁰ Neighborhood effects explain why neighborhood characteristics can become persistent and self-reinforcing: the family affects the collective assets or characteristics of the neighborhood, and those in turn feed back to affect the family. Leonard Rubinowitz and James Rosenbaum have coined the phrase “geography of opportunity” to explain the idea that social capital is derived from living in particular neighborhoods, and that neighborhoods in turn benefit from particular kinds of people.¹³¹

Over the last decade, economics, social science and complex systems scholars have displayed a renewed interest in studying

¹³⁰ See Mayer and Jencks [get footnote].

¹³¹ Rubinowitz and Rosenbaum documented the results from the Gautreaux Assisted Housing Program, a program that moved over 7100 black families to the Chicago suburbs as part of a consent decree. These scholars found that for those families who moved to the suburbs, 54% of children from those families enrolled in college, versus 21% of a control group who used their Section 8 benefits to move within the city. Of the mothers who moved to the suburbs, 75% were working versus 41% of those who moved to the city. Recent follow-up research has confirmed that these differences have persisted over time. LEONARD RUBINOWITZ AND JAMES ROSENBAUM, *CROSSING THE CLASS AND COLOR LINES: FROM PUBLIC HOUSING TO WHITE SUBURBIA* (2000). To be sure, there are difficulties with this data. Researchers could not disentangle the effects of self-selection—the families who chose to use their Section 8 certificates to move to white suburbs may have already represented a particular cross-section of the population. Relatedly, the comparison reference group (families who had not participated in the MTO program counseling, and who used their Section 8 certificates to move to black neighborhoods) may not have represented a true control group because they also represent a particular cross-section of the population. *See id.*

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neighborhood effects.¹³² The existence of neighborhood effects is documented by a growing body of research on the economic benefits that neighborhoods can confer on individuals and families and vice-versa.¹³³ The following sections discuss empirical and theoretical evidence for two effects that are most relevant to racial inequality in neighborhoods: the self-reinforcing effects of public school finance and job referral networks.¹³⁴

1. The Public School Finance Feedback Loop

Public school finance constitutes a neighborhood effect that structures neighborhood and family wealth and income. The positive feedback loop linking neighborhood and family consists of two parts: (i) the way in which local property tax base of the neighborhood feeds forward to affect family educational opportunity; and (ii) the way in which family educational opportunity feeds back to affect the neighborhood property tax base. This feedback loop is not inherently racial in nature. But the history of white anti-competitive efforts explains why both property tax revenues and educational opportunity now differ by race. As detailed in Section I, historical residential segregation created racially defined pockets of people, concentrated in a geographic space, with lower property values, lower wealth and a poorer

¹³² Steven Durlauf, *Neighborhood Effects*, 4 HANDBOOK OF REGIONAL AND URBAN ECONOMICS 2 (J.V. Henderson and J.F. Thisse eds. 2003). Durlauf traces this renewed interest to several parallel academic developments in a range of disciplines: (i) in sociology, a set of studies arguing that neighborhood influences explain the persistence of inner-city poverty (most notably William Julius Wilson’s work); (ii) in economics, the development of endogenous growth theory, which focuses in part on the way the economy grows in particular geographic regions and the “spillover” effects within those particular geographic regions; (iii) also in economics, the analysis of neighborhood effects (or “local interactions” between “agents”) in game theory. *See id.* at 2-3.

¹³³ *See* Durlauf, *Neighborhood Effects*, *supra* note 132 at x.

¹³⁴ Much of this work on neighborhood effects and racial inequality focuses on the self-reinforcing effects of “culture.” *See id.* In contrast, this project focuses more on resource effects—the relatively more hard-edged constraints created by collective resources family and individual outcomes. Although psycho-social behaviors in neighborhoods may have important self-reinforcing effects via collective socialization, contagion or relative deprivation, the research indicates that these behaviors ultimately are connected to the availability or lack of resources within a neighborhood. *See e.g.*, CONLEY, BEING BLACK, *supra* note 52 at 23 (“[c]ultural practices constitute the manifestation of and reaction to economic class conditions in which blacks and whites tend to find themselves”).

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tax base.¹³⁵ In the public school finance feedback loop, non-white neighborhoods with poor tax bases produce under-funded schools, and in turn, underfunded schools produce non-white neighborhoods with poor tax bases.

A number of scholars have modeled public school finance neighborhood effect, and its connection to residential segregation.¹³⁶ Indeed, the “neighborhood effects” of public school finance appear sufficiently strong that, in otherwise economically mixed neighborhoods, small differences in public school financing will cause the neighborhoods to become segregated by income, even in the absence of previous segregation.¹³⁷

Economist Roland Benabou’s theoretical work illustrates the dynamics of this process.¹³⁸ Benabou’s model begins with two neighborhoods that contain an equal mix of rich and poor families. If education spending per pupil in one neighborhood becomes slightly higher than the other, the land in that neighborhood becomes more valuable, and rich families are more able to purchase the property. In turn, families in neighborhoods with higher education spending become even wealthier, and accordingly are able to devote even more of their income to school finance (which in turn makes the property even more expensive). Because the improvement in income becomes self reinforcing by way of school funding, even minor differences in

¹³⁵ See *supra* Part II.

¹³⁶ Roland Benabou, *Equity and Efficiency in Human Capital Investment: The Local Connection*, 63 REV. OF ECON. STUDIES 237, 238 (1996); see also Durlauf, *Neighborhood Effects*, *supra* note 132 at 505 (constructing a feedback model on the basis of public school finance, role models and neighborhood social capital in employment); Shelley Lundberg and Richard Startz, *On the Persistence of Racial Inequality*, 16 J. LABOR ECON. 292 (1998).

¹³⁷ See *id.*

¹³⁸ See Benabou, *Local Connection*, *supra* note 136. See also Roland Benabou, *Human Capital, Inequality and Growth: A Local Perspective*, 38 EUR. ECON. REV. 817 (1994).

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education spending can cause neighborhoods to segregate by income.¹³⁹ This is true even when the incomes for both groups are growing.¹⁴⁰

Benabou's model demonstrates that the public school finance loop can transmit inequality indefinitely over many generations.¹⁴¹ Because of relative advantages in the tax base and per pupil expenditures, wealthy neighborhoods are more likely to sustain their affluence over time. Moreover, the gap between rich and poor can grow infinitely large, at least in theory.¹⁴² At some point, if the gap between the two is large enough, the inequality becomes permanent, or "locked in."¹⁴³ Benabou concludes that contemporary inequality very much depends on the initial differences between rich and poor, and that the results are therefore "path-dependent."¹⁴⁴

Most importantly for this project, Benabou concludes that, because of the self-reinforcing effects of historical segregation, racial disparities in the ability to buy housing may now be too great to overcome.¹⁴⁵ According to Benabou, historical segregation accomplished two important goals. First, segregation created a white neighborhood surplus by increasing the spending per pupil (and/or lowering tax rates), and thereby increasing the value of property in the neighborhood (which now reflected the availability of well-funded schools).¹⁴⁶ More importantly, segregation allowed whites to

¹³⁹ In Benabou's model, the wealthy are more willing or more able to pay higher housing costs for three reasons. First, wealthy families as a matter of preference may be more sensitive to neighborhood quality. Second, capital market imperfections may disable the poor from borrowing to be able to move into the wealthier neighborhoods. Finally, differences in lifetime wealth can also explain the relatively greater ability of the wealthy to pay. See Benabou, *Local Connection*, *supra* note 136 at 233-43.

¹⁴⁰ See *id.* Although some evidence exists that segregation is not explainable by income, more recent research indicates that disparities in wealth very strongly correlate to segregation. See OLIVER AND SHAPIRO, *BLACK WEALTH/WHITE WEALTH*, *supra* note 52.

¹⁴¹ See *id.* See also Durlauf, *Neighborhood Effects*, *supra* note 132 at 516.

¹⁴² See *id.* at 519. In addition, stratification of this type exerts maximum effect on inequality—that is, it maximizes the income of the wealthiest family, at the same time it minimizes the income of the lowest-income family. See *id.* at 516.

¹⁴³ See *id.*

¹⁴⁴ See Durlauf, *Neighborhood Effects*, *supra* note 132 at 520.

¹⁴⁵ See Benabou, *Local Connection*, *supra* note 136 at 247.

¹⁴⁶ See *id.*

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monopolize the benefit of the extra spending per pupil, and to avoid having to pay the higher land prices they would have to pay if blacks had been allowed to bid on the land.¹⁴⁷

Thus, in Benabou's view, these advantages may now have become locked in because blacks cannot afford to move into richer white neighborhoods. Blacks are no longer barred by law but are now barred by the relatively more difficult time they have buying into an increasingly expensive white neighborhood.¹⁴⁸ Benabou concludes that remedies are unlikely to be effective if neighborhood differences already have become locked in. Equalizing school budgets is not likely to work because the cumulative disadvantage is now too great to overcome. Nor at this late stage would it be effective to increase incentives to lure rich families to poor communities.

Indeed, switching costs associated with this strategy would likely be high, because the cost to persuade a wealthy family to move back into a poorer neighborhood will be higher than the cost to prevent a relatively wealthier family from moving to a better neighborhood. "[S]tratifaction is likely to be much harder to undo once it has occurred than it is to stop [it] in its tracks early on. Due to the cumulative nature of the process, the amount of transfers required to induce the first few rich families to come back is considerably larger than what it would have taken to make them stay in the first place."¹⁴⁹

2. Network Effects of Neighborhood Job Referral Networks (or "It's Not What You Know, It's Who You Know")

Although social networks have been the object of study since the early 1920s, interest in the subject has skyrocketed over the last twenty-five years in a number of fields, including economics, sociology, complex systems theory and others. This section focuses on the connection between job referral networks and residential segregation by race.

¹⁴⁷ *See id.*

¹⁴⁸ *See id.* *See also* Durlauf, *Neighborhood Effects*, *supra* note 132 at 520 (concluding that the possible permanence of inequality seems appropriate for analyzing the U.S. economy, where the economic status of blacks has been so strongly affected by historical factors).

¹⁴⁹ *Id.* at 258 (discussing irreversibility).

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Scholars agree that employment referral networks play a key role in matching jobs with employees.¹⁵⁰ Mark Granovetter's groundbreaking work in the 1970s demonstrated that high-income employers fill the majority of their jobs through personal referrals, many of which come from neighborhood networks.¹⁵¹ Recent research confirms that a significant portion of employment offers are made through social network connections, and that those networks are often formed via neighborhoods.¹⁵²

The network effects of neighborhood job referral networks are also self-reinforcing. Once an individual is employed in a high-income job, she becomes a potential referee in the neighborhood social network. The more connections to high-income jobs that a neighborhood network has, the more likely an individual will be employed in a high-income job. In turn, the more individuals who are employed in such jobs, the more effective the neighborhood referral network will be.

Recent research on job referral networks by James Montgomery demonstrates the potential link between neighborhood referral networks and residential segregation.¹⁵³ Montgomery's model assumes that because minorities and women tend to have fewer employed friends, or fewer ties to high-wage jobs in their social circles, their social networks will produce fewer high-wage referrals.¹⁵⁴ In operation, Montgomery's model shows that very small race and gender differences in job referral networks will raise wages significantly for whites who have more

¹⁵⁰ See, e.g., WILLIAM JULIUS WILSON, *WHEN WORK DISAPPEARS: THE WORLD OF THE NEW URBAN POOR* x (1997) (arguing that informal networks are a key part of explaining the segregation of neighborhoods).

¹⁵¹ In Granovetter's study, in a group of professional, managerial and technical workers, over 55 percent of employees found their jobs through references from social contacts. See MARK GRANOVETTER, *GETTING A JOB: A STUDY OF CONTACTS AND CAREERS* (1995); see also Mark Granovetter, *The Strength of Weak Ties*, 78 *AMER. J. OF SOCIOLOGY* 1360 (1972).

¹⁵² See Harry Holzer, *Hiring Procedures in the Firm: Their Economic Determinants and Outcomes*, National Bureau of Economic Research Working Paper No. 2185 x (March, 1987) (finding overall rates of 36 percent); KAREN CAMPBELL AND PETER MARSDEN, *RECRUITMENT AND SELECTION PROCESSES: THE ORGANIZATIONAL SIDE OF JOB SEARCHES*, IN *SOCIAL MOBILITY AND SOCIAL STRUCTURE* 59 (Ronald Breiger ed. 1990).

¹⁵³ James D. Montgomery, *Social Networks and Labor-Market Outcomes: Toward An Economic Analysis*, 81 *AMER. ECON. REV.* 1408 (1991).

¹⁵⁴ See *id.*

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connections, and lower wages for non-whites, who have fewer connections.¹⁵⁵

Other research in the same field demonstrates that racial discrimination can essentially render job referral networks inoperable, if discrimination drives a referral network below its critical operating threshold.¹⁵⁶ The network's critical operating threshold is the critical number of links between each agent needed to create a working network that hangs together and functions effectively.¹⁵⁷ Above this point, neighborhood referral networks function to connect residents to jobs. Below the critical threshold, a neighborhood can become so isolated from high-wage jobs that the neighborhood becomes locked into the position of underclass.¹⁵⁸

According to the research, external events like racial discrimination affect the number of links in job referral networks. If racial discrimination drives the number of network contacts to good jobs below the critical operating threshold, then the neighborhood can become cut off from those job possibilities and locked into underclass status.¹⁵⁹ More troubling, when racial discrimination drives a network below its critical threshold, then disadvantage becomes self-reinforcing, and the network (and the neighborhood's economic well-being) begins to spiral downwards.¹⁶⁰

Self-reinforcing inequalities in income and education may actually work in tandem to reinforce each other. Job referral networks

¹⁵⁵ *See id.* at 1413.

¹⁵⁶ *See* Lisa Finneran and Morgan Kelly, *Social Networks and Inequality*, 53 *J. Urban Economics* 282 (2003).

¹⁵⁷ The concept of network thresholds can be explained as follows. If one tries to build a network starting from a large number of isolated agents, adding links randomly will connect some of these agents to each other. When enough nodes are added that each agent has some threshold number of links to another agent, a clustered network is formed, and the network "hangs together." In physics, this phenomenon is called a phase transition, similar to the moment when water freezes; sociologists would say that a community has been formed. *See* ALBERT-LASZLO BARABASI, *LINKED* 18 (2003).

¹⁵⁸ *See* Finneran and Kelly, *Social Networks*, *supra* note 156 at 285.

¹⁵⁹ *See id.* at 17. *See also* Katherine S. Newman, *Dead End Jobs: A Way Out*, *The Brookings Review*, Fall 1995 (arguing that although blacks have job contacts, these contacts are not for upwardly mobile jobs).

¹⁶⁰ "Below the critical probability, an underclass appears with zero probability of ever being referred . . ." *See* Finneran and Kelly, *Social Networks*, *supra* note 157 at 300.

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supply more job referrals for residents of a high-income neighborhood, but those residents are far more likely to be hired for the job if they also have benefitted from the generous public financing of education.¹⁶¹ Likewise, public school finance supplies more educational resources for residents' children, but these children are far more likely to benefit from the additional resources if they come from high-income families.

B. Locked-In Segregation

This section argues that racial inequalities associated with residential segregation may now have become permanently locked in place, for two reasons. First, non-whites face significant barriers to entry--if they want to move to a relatively affluent white neighborhood to take advantage of superior neighborhood benefits, they will have to pay an additional housing cost that whites do not have to pay.¹⁶² Second, and in the same vein, policymakers looking for a remedy will face significant "switching costs"--costs associated with breaking out of the self-reinforcing feedback loops now in place.

1. Barriers to Entry

In economics, a barrier to entry is "defined as a cost . . . borne by a firm which seeks to enter an industry but is not borne by firms already in the industry."¹⁶³ In the lock-in model of racial inequality, barriers to entry are the costs that non-whites must pay to "compete" that whites do not have to pay. For example, non-whites may face additional costs to compete because they attend poorer public schools, and thus must pay to acquire additional training or education. Whites, who attend relatively better-resourced schools, need not pay this cost.

In the context of residential segregation, according to the research, many non-whites may face significant barriers to entry in the form of additional housing costs. Benabou's theoretical research confirms that black families likely must pay an additional housing cost to

¹⁶¹ See Ford, *Boundaries of Race*, *supra* note 15 at 1851.

¹⁶² Because neighborhoods are linked to schooling and employment, the barriers to entry for housing also create barriers to entry for schooling and access to job networks.

¹⁶³ GEORGE STIGLER, *THE ORGANIZATION OF INDUSTRY* 67 (1968).

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enter a predominantly white neighborhood where residents enjoy greater neighborhood benefits.¹⁶⁴ Based on early monopoly efforts, white neighborhoods generated additional social capital for residents--better funded schools and more neighborhood network access to high-income jobs, among others.¹⁶⁵ Because this additional capital made white neighborhoods more attractive, buying into the neighborhoods became more expensive.¹⁶⁶

Non-whites must now pay this additional cost up front when buying into a white neighborhood, to purchase the additional value generated by social capital. Whites, by comparison, do not have to pay the same additional cost. Most whites have benefitted from the community's social capital (having already lived in white neighborhoods), and they can use that surplus value to purchase housing. Whites can also use the surplus value generated from their monopoly on land during the period of segregation--the additional money whites saved in housing purchases because blacks were not allowed to bid to purchase land. Benabou explains:

As long as Blacks are simply not allowed [during segregation] to bid for land in the suburbs to which White families move, the latter can regroup without dissipating too much of the resulting rents on higher land values. When, later on, Blacks are allowed in, those who want to come must pay the full value of the community's social capital [the surplus described above]. Although the education gap between their children and those of their white neighbors will close, the gap in total wealth will not. In fact, the inequality in wealth which occurs the moment *de jure* segregation is lifted and property values

¹⁶⁴ See Benabou, Local Connection, *supra* note 136 at 247 (arguing that blacks will have to pay an additional cost that reflects the full value of accumulated social capital).

¹⁶⁵ See *id.*

¹⁶⁶ As Benabou notes, whites also benefitted in terms of relatively lower housing and land prices because blacks were not allowed to bid for those houses or properties. See Benabou, Local Connection, *supra* note 136 at 247.

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adjust can even be sufficient to sustain de facto economic segregation. . . . through a rent differential . . .¹⁶⁷

In addition to increased housing costs, non-whites are often asked to pay more when neighborhoods enact zoning ordinances that increase the cost of buying into the neighborhood. Zoning ordinances often impose minimum requirements for land use, and in other cases, restrict land from being used for relatively lower cost housing.¹⁶⁸ For example, prohibitions on multi-family housing increase the expense of the housing in a particular community. Thus, zoning exacerbates barriers to entry for non-whites, who are already much less likely to have the required assets to buy housing in a white neighborhood.¹⁶⁹ Zoning also prevents entrepreneurs from offering low-cost housing in the neighborhood to permit lower-income residents to move in.¹⁷⁰

2. Switching Costs (or “We’d Rather Fight Than Switch”)

How difficult would it be to eliminate these barriers to entry or to dismantle the self-reinforcing institutional processes that produce lock-in? This section suggests that switching costs would make social change very difficult. In market lock-in theory, switching costs are defined as the costs of moving from the incumbent’s product to a competitor’s product.¹⁷¹ In the lock-in model of inequality, switching costs are those costs associated with moving from current institutional practices to an alternative set that do not disproportionately exclude people of color.¹⁷² Switching costs reflect the empirical reality that once institutional

¹⁶⁷ *See id.*

¹⁶⁸ *See* Benabou, Human Capital, *supra* note 138 at 823. *See also* Raquel Fernandez and Richard Rogerson, Keeping People Out: Income Distribution, Zoning and the Quality of Education, NBER Working Paper No. 4333 (1993) (looking at the self-reinforcing effects of zoning and public education finance).

¹⁶⁹ *See* Benabou, Human Capital, *supra* note 138 at 823.

¹⁷⁰ *See id.* *See also* Ford, Boundaries of Race, *supra* note 15 at 1855.

¹⁷¹ *See* BAIN, BARRIERS TO NEW COMPETITION, *supra* note 48 at 116 (costs to entrants in a product differentiated market may include a discounted price or a higher selling cost or some combination of the two).

¹⁷² For a full discussion of switching costs in the lock-in model of racial inequality, see Roithmayr, Locked In Inequality, *supra* note 18 at x.

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structures and practices are cemented in place, after some critical period of time it may be too expensive to dismantle those structures.

For example, a move from local to regional school financing at the state level requires policymakers to consider questions about structural compatibility.¹⁷³ Bureaucrats may have to “rewire” the network of local services and bureaucratic structures to ensure that local funding mechanisms are compatible with regionalized structures.¹⁷⁴ Relatedly, any effort to dismantle these self-reinforcing institutional processes may also incur massive political switching costs. Uncoupling the feedback loop between neighborhoods and their benefits potentially deprives white families of enormous benefits in terms of both past and future property values and social capital. Homeowners are extremely sensitive to the impact of any significant change to their property values.¹⁷⁵ In fact, relative to other investors, homeowners are more risk adverse to potential neighborhood decline.¹⁷⁶ For that reason alone, white homeowners who risk the loss of accumulated social capital are likely to exert significant political resistance to any move to uncouple neighborhoods from neighborhood benefits.¹⁷⁷ More generally, the model suggests that, in certain circumstances, lock-in might prove to be

¹⁷³ For general arguments towards regional financing of tax-based services, see e.g., MYRON ORFIELD, *METROPOLITICS: A REGIONAL AGENDA FOR COMMUNITY AND STABILITY* (1997); Richard Briffault, *Our Localism: Part II—Localism and Legal Theory*, 90 COLUM. L. REV. 346, 415-435 (1990). For arguments specific to public school education, see James Ryan, *The Influence of Race in School Finance Reform*, 98 MICH. L. REV. 432 (1999). Some economists have argued that vouchers can sever the link between school quality and residential location, and thus increase property values in poor districts and reduce them in wealthy districts. See Thomas J. Nechyba, *Introducing School Choice into Multidistrict Public School Systems*, in *THE ECONOMICS OF SCHOOL CHOICE* (Caroline Hoxby ed. 2003).

¹⁷⁴ See John E. Coons, William H. Clune III and Stephen D. Sugarmann, *Educational Opportunity: A Workable Constitutional Test for State Financial Structures*, 57 CAL. L. REV. 305 (1969); COONS, CLUNE AND SUGARMANN, *PRIVATE WEALTH AND PUBLIC EDUCATION* (1970). For a full discussion of the school finance litigation, relevant judicial orders and the results, see James Ryan, *Schools, Race and Money*, 109 YALE L.J. 249 (2003).

¹⁷⁵ See WILLIAM FISCHEL, *HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE AND LAND-USE POLICIES* 11-12 (2001).

¹⁷⁶ See *id.* Fischel argues that homeowners are more risk averse because they cannot insure against the risk of potential neighborhood decline, nor can they diversify their risk as easily by buying homes in more than one location. See *id.*

¹⁷⁷ See *id.*

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irreversible.¹⁷⁸ For example, local government structures might prove wholly incompatible with regional ones, and policymakers may not be able to structurally rewire without dismantling institutional structures altogether.¹⁷⁹

In other cases, attempting to reverse the lock-in process may actually prove counterproductive. For example, if policymakers try to reverse neighborhood income stratification by luring wealthier white families back into relatively poorer non-white neighborhoods, they could trigger gentrification: as property values rise again, non-white residents are priced out of their own homes and displaced again into segregated communities.¹⁸⁰

Likewise, some commentators have suggested that decoupling public school finance from local property taxes will drive *down* public spending on services like education.¹⁸¹ Centralizing the finance of public services deprives relatively more affluent communities not only of their surplus neighborhood capital, but also of their ability to use relative differences in neighborhood benefits as a basis for jurisdictional competition.¹⁸²

Thus, some scholars argue that any attempt to regionalize public school finance will reduce incentives for the more affluent to adequately fund public schools—if property values no longer depend on the quality of the neighborhood schools, then there is less incentive to fund those schools adequately.¹⁸³ More generally, this kind of uncertainty

¹⁷⁸ See Benabou, Local Connection, *supra* note 138 at 257-58 (discussing potential irreversibility).

¹⁷⁹ Richard Briffault has suggested that a move to regionalize may require that local governments be stripped of their ability to bargain between themselves in order to get around regional dictates. See Briffault, Our Localism, *supra* note 173 at x.

¹⁸⁰ See John A. Powell and Marguerite Spencer, *Giving Them The Old One-Two: Gentrification and the K.O. of Impoverished Urban Dwellers*, 46 HOW. L. J. 433, 436 (arguing that the very same neighborhoods that experienced white flight are vulnerable to displacement via gentrification if white families move back in); see also Jerome G. Rose, *The Mount Laurel II Decision: Is It Based on Wishful Thinking?* 12 REAL ESTATE L.J. 115, x (1983).

¹⁸¹ See *id.* See also Roithmayr, Locked In Inequality, *supra* note 18 at x.

¹⁸² See *id.*

¹⁸³ See Fischel, The Homevoter Hypothesis, *supra* note 175 at 109-11. See also William A. Fischel, *Did Serrano Cause Proposition 13?*, 42 NAT'L TAX J. 465, 466 (1989) (arguing that California voters responded to the decision in *Serrano v. Priest* by passing Proposition 13 to

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constitutes a potential switching cost that will accompany any move to radically restructure institutional practices.

3. An Agent-Based Model

In a forthcoming project, Derek Robinson and I have developed an agent-based model to demonstrate how early historical events can lock in residential segregation.¹⁸⁴ The model demonstrates that, owing to the self-reinforcing qualities of social capital, segregation can become locked into neighborhood patterns, even when laws effectively prohibit intentional discrimination.

In this model, black and white families engage in two primary activities over many generations. First, families accumulate assets from two sources: a portion of each generation's wealth comes from their "inheritance" from their "ancestors," and the remainder comes from added social capital that they acquire from their neighbors.¹⁸⁵ (This social capital is meant to reflect the value of public schools and of access to job referral networks). Second, families are permitted each generation to move to new neighborhoods. Families will move under two conditions: (i) if the new neighbors are on the average wealthier than the old,¹⁸⁶ and (ii) if the family assets are sufficiently large to buy into the new neighborhood.¹⁸⁷

limit property tax assessments). *But see* Kirk Stark & Jonathan Zasloff, *Tiebout and Tax Revolts: Did Serrano Really Cause Proposition 13?*, 50 UCLA L. REV. 801 (2003).

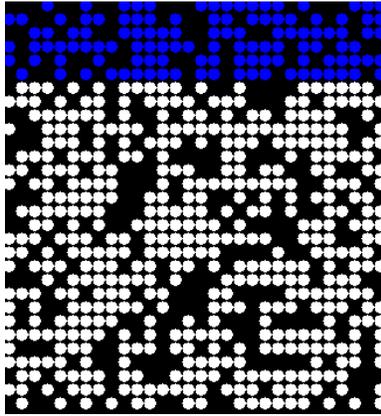
¹⁸⁴ See Daria Roithmayr and Derek Robinson, *An Agent Based Model of Residential Segregation and Fair Housing Law* (draft on file with author). Agent based modeling is a method used by complex systems theorists to represent the interactions of individual agents in a complex system according to simple rules of conduct. The computer simulation permits the modeler to set initial conditions and then to run the model to simulate dynamic evolution. *See* ROBERT AXELROD, *ADVANCING THE ART OF SIMULATION IN THE SOCIAL SCIENCES*, IN *SIMULATING SOCIAL PHENOMENA* (Rosario Conte, Rainer Hegselmann and Pietro Terna eds. 1997).

¹⁸⁵ Asset accumulation for each family increases each generation by 5% of the previous generation's assets, and by 3% of the average assets from neighbors. *See* Appendix A-1.

¹⁸⁶ Whether the neighborhood is sufficiently attractive is determined by assessing whether the average neighbor's assets are at least fifteen per cent greater than the moving family's assets. *See id.*

¹⁸⁷ Whether a family can afford to move into the neighborhood is determined by whether the family's assets are greater than or equal to the average of neighbor assets. *See id.*

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The dynamics of wealth accumulation and neighborhood relocation is affected by race in two ways. First, at the beginning of the game, white families are assigned significantly more initial wealth than

black families, to reflect the dramatic difference in assets enjoyed by black and white families after the end of slavery.¹⁸⁸ Second, for the first fifty generations, black families are prohibited from moving near white families. This “segregation rule” is lifted after the first fifty generations. Thereafter, all families can move freely, subject to financial constraints.

The frame below demonstrates the arrangement of families at the outset. Black families are represented by blue dots, and white families by white dots. Each area contains an equal mix of rich and poor families.

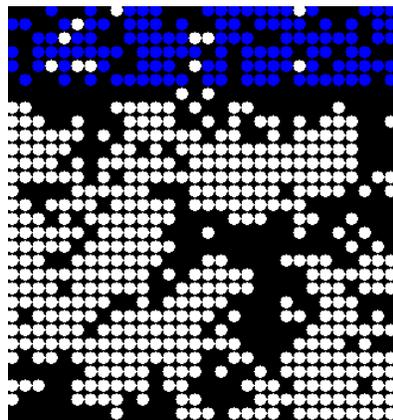
¹⁸⁸ Black families are assigned 60% fewer initial assets than white families, to reflect disparities in wealth that existed at the end of Reconstruction. *See id.*

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During the first fifty generations, the segregation of neighborhoods significantly affects the relative rates of asset accumulation for white and black families. Because white families have more initial assets relative to black families, white ancestors can pass down more wealth to white families. As importantly, because blacks are not permitted to move into wealthier white neighborhoods, black families generate less social capital from their neighborhoods than do wealthier whites.

The following illustration shows the positions of blacks and whites fifty generations after the beginning of segregation.

This frame indicates that some poorer white families have moved into black neighborhoods, but no black families have been permitted to move into white neighborhoods. Assets differ dramatically between races.



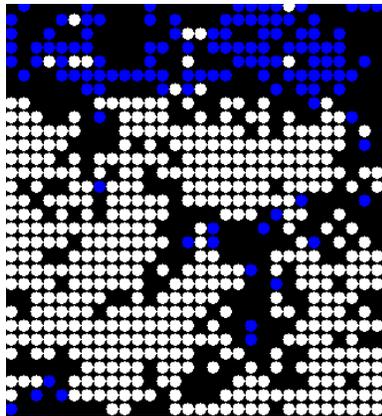
During the second period, the next fifty generations, black families are now permitted to move into areas next to white neighbors, because the rule requiring segregation as been lifted. All families,

black and white, now are free to move to a more attractive

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neighborhood, subject to their ability to purchase housing in the desired neighborhood.

The following frame shows the neighborhoods fifty generations after the ending of the segregation rule. This frame demonstrates that, although a few more whites have moved into the black neighborhood, and a few blacks have moved to the outer edges of white neighborhood clusters, most if not all residents are living in relatively segregated communities. The model demonstrates that segregation persists over time because black families face significant economic barriers to entry to white areas. This is true even though the segregation rule has been lifted to permit “free movement,” and black families are permitted to move anywhere they can afford to move.



Multiple runs of the simulation demonstrate that in twenty-four out of twenty-five runs, the families remain largely segregated by both race and assets.

Black families are not able to move into neighborhoods with white families in any significant number, because they are unable to afford the relatively more expensive housing prices. On infrequent occasions, via

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random chance distributions of wealth and the dynamics, black families are able to integrate well into the white neighborhood.

The agent-based model provides a useful way to visualize the way in which segregation might have evolved to become locked in place. The model demonstrates how de jure segregation on the basis of race can mutate to become de facto segregation on the basis of economic barriers to entry.¹⁸⁹

IV. Shifting Paradigms: From Individual Intent to Institutionally Locked-In Monopoly

This section argues that law should move away from the individual intent model and towards an institutional lock-in model of inequality. In terms of legal and policy remedies, the lock-in model suggests that we expand the definition of discrimination, to include actions that reinforce historical disparities.

The section also argues that the lock-in model is far superior to the intent model. Because the individual intent model cannot recognize either the role of history or the importance of membership in a neighborhood or group, the intent model does little to address the persistent inequality produced by lock-in. In contrast, the lock-in model better reflects recent empirical and theoretical research on the importance of institutions, and on the dynamic effects of accumulated disadvantage on contemporary racial disparities. Perhaps more importantly, the metaphors of “monopoly” and of “locked-in” highlight many important dimensions of racial inequality—for example, its historic and collective nature--that the individual intent model marginalizes or suppresses.

¹⁸⁹ The Appendix contains relevant programming information and initial parameter settings for the model.

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A. Individual Intent And Disparate Impact Doctrines: Poor Remedies for Locked-In Inequality

1. The Individual Intent Doctrine

Many scholars have argued elsewhere that the individual intent requirement does not adequately address institutional racism or persistent inequality.¹⁹⁰ Those general arguments need not be rehearsed here fully, except to note that the individual intent model does not recognize locked-in inequality as illegal discrimination. In *Arlington Heights v. Metropolitan Housing Corporation*, the Supreme Court found that the city's decision to deny an application for rezoning, based on its desire to protect property values, did not constitute discrimination.¹⁹¹ In that case, the trial court did not investigate the village's original zoning plan, to see whether racial animus might have played a role in the city's early decision to adopt the plan in 1959. Nor did the court find it relevant that the city's decision operated in practice to reinforce historical inequalities in property value and residential location associated with intentional discrimination. Most importantly, the Court did not recognize that the very property values the village sought to protect had been created through a process of racial exclusion, by generating additional monopoly profits on social capital.¹⁹²

Likewise, the individual intent model of anti-discrimination law cannot accommodate the lock-in argument because the intent model does not recognize the importance of membership in racial groups, even though the model sanctions distributing opportunity or entitlements on the basis of membership in other socially relevant groups.¹⁹³ For

¹⁹⁰ See e.g., Owen Fiss, *Groups and the Equal Protection Clause*, 5 PHIL. & PUB. AFF. 107 (1976); Peller, *Race Consciousness*, *supra* note 7; Cass Sunstein, *The Anti-Caste Principle*, 92 MICH. L. REV. 2410 (1994); Robert Post, *Prejudicial Appearances: The Logic of American Anti-Discrimination Law*, 88 CAL. L. REV. 1 (2000); Reva Siegel, *Discrimination in the Eyes of the Law: How Color-Blindness Discourse Disrupts and Rationalizes Social Stratification*, 88 CAL. L. REV. 77 (2000).

¹⁹¹ See *Village of Arlington Hts. v. Metro. Housing Dev. Corp.*, 429 U.S. 252 (1977).

¹⁹² See *id.*

¹⁹³ Reval Siegel points out that the law is literally blind to historical hierarchies and to the "normal status-linked benefits and detriments of group membership." See Reva Siegel, *Colorblindness*, *supra* note 190 at 77, 84.

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example, in the case of *Hopwood v. Texas*, the Fifth Circuit prohibited the University of Texas from taking into account an individual's membership in a racial group, but found it permissible for UT's Admissions Office to discount Cheryl Hopwood's GPA on the basis of the fact that she attended a community college.¹⁹⁴ The lock-in model argues, in contrast, that racial membership ends up being as socially relevant to competition as attendance at a community college.

Moreover, some of the Court's rulings on societal discrimination actually make the individual intent model hostile to the concept of lock-in.¹⁹⁵ In *Croson v. City of Richmond*, for example, the Supreme Court rejected an argument that, if viewed broadly, could be understood to be somewhat like a lock-in claim. In *Croson*, Richmond tried to justify its affirmative action program by pointing to the disparities in the experience level of black-owned construction businesses that could be traced to earlier exclusion by labor unions and discrimination by lenders.¹⁹⁶ Framed in lock-in terms, the earlier discrimination against blacks by unions and lenders constituted the original anti-competitive conduct to obtain a monopoly advantage in construction. That early advantage then became self-reinforcing because bidding practices in construction award ostensibly race-neutral points for experience in the industry, thus further reinforcing the unfair "first mover" advantage

¹⁹⁴ *See id.* at 93.

¹⁹⁵ *See* *Wygant v. Jackson Board of Education*, 476 U.S. 267, 274 (1986) ("This Court never has held that societal discrimination alone is sufficient to justify a racial classification. Rather, the Court has insisted upon some showing of prior discrimination by the governmental unit involved before allowing limited use of racial classifications in order to remedy such discrimination."); *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 505-06 (1989) (societal discrimination not compelling interest because "[t]he dream of a Nation of equal citizens in a society where race is irrelevant to personal opportunity and achievement would be lost in a mosaic of shifting preferences based on inherently unmeasurable claims of past wrongs"); *Regents of University of California v. Bakke*, 438 U.S. 286, 310 ("[T]he purpose of helping certain groups..... perceived as victims of "societal discrimination" does not justify a classification that imposes disadvantages upon persons like respondent, who bear no responsibility for whatever harm the beneficiaries of the special admissions program are thought to have suffered.").

¹⁹⁶ 488 U.S. 469 (1989). *See also* *Concrete Works of Color, Inc. v. City and County of Denver*, 124 S.Ct. 556 (2003) (Mem.) (Scalia, J., dissenting from denial of cert.) (arguing that if size and experience of a firm were held to be impermissible explanations of racial disparity, every field of industry would be affected, and courts could impose no logical stopping point to race-conscious remedies)

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gained by whites. In *Croson*, the Court implicitly rejected such argument, fearing the endless reach of such a claim.¹⁹⁷ Indeed, the Court recognized the significant switching costs that would be required to dismantle the locked-in disparities of experience produced by early anti-competitive conduct.

2. The Disparate Impact Doctrine

One might well argue that the disparate impact doctrine is perfectly designed to deal with the problem of locked-in inequality. Certainly, at first glance, disparate impact appears to be just the ticket for addressing lock-in. In fact, the Court's language in *Griggs v Duke Power* strongly evokes the lock-in model of racial inequality. In that case, the Court held that the disparate impact provisions of Title VII were meant to eliminate institutional practices, "neutral on their face and neutral in intent" that "operate to freeze the status quo of prior ... discriminatory practices."¹⁹⁸

However, disparate impact doctrine may not adequately address institutional lock-in, for several reasons. First, a significant number of courts and commentators have cut back on the reach of disparate impact, converting it to essentially an evidentiary technique for proving intentional discrimination.¹⁹⁹ This interpretive shift makes the disparate impact doctrine less useful as a potential candidate to address locked-in inequality.

Relatedly, according to some commentators, the Court may well further limit the reach of the disparate impact doctrine by finding that the broadest interpretation of disparate impact (the interpretation that would permit the law to address lock-in claims) violates the equal protection clause. Richard Primus has suggested that, under the Court's current

¹⁹⁷ See *Croson*, 488 U.S. at 498 (expressing the fear that race-conscious remedies for societal discrimination would "ha[ve] no logical stopping point." . . . "Relief" for such an ill-defined wrong [societal discrimination] could extend until the percentage of public contracts awarded to MBE's in Richmond mirrored the percentage of minorities in the population as a whole.")

¹⁹⁸ *Griggs v. Duke Power*, 91 S.Ct. 849, 853 (1971).

¹⁹⁹ See Richard Primus, *Equal Protection and Disparate Impact: Round Three*, 117 HARV. L. REV. 493, 521 (2003) (noting the shift by many courts to use evidence of disparate impact to infer that defendants intended to discriminate).

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interpretations of equal protection law, disparate impact remedies will violate the equal protection clause if they refer to historical discrimination or to race-conscious classes.²⁰⁰ If Primus is correct, then disparate impact provisions could not accommodate a claim of lock-in, which relies on references to history and to group membership.

Second, the disparate impact defenses as currently interpreted by the Court render the disparate impact doctrine relatively toothless when applied to lock-in. Under the various civil rights statutes, defendants can avoid liability if they can prove some sort of structural need--a business necessity or an educational justification.²⁰¹ But institutional practices become locked in precisely because businesses and educational institutions have structured their organizational routines around certain institutional practices. Indeed, the “necessity” of the institutional practice to the organization is precisely what makes the practice locked-in. Thus, the disparate impact doctrine appears to offer relatively little usefulness as a vehicle in which to make a lock-in argument.

B. Shifting Paradigms: Moving From Individual Intent and Disparate Impact to Institutional Lock-In

This section suggests that the law abandon the individual intent model altogether in favor of a more modern and useful framework--the institutional model of locked-in monopoly. The latter is more empirically and theoretically up-to-date, more pragmatically useful, and focuses on many of the dimensions of racial inequality hidden by the individual intent model. The first part of this section sketches pragmatically how policy remedies, legal remedies and legislation might change under a lock-in model. The remainder of the section then compares the lock-in remedies with those available under the individual intent model.

²⁰⁰ *See id.*

²⁰¹ Get footnote.

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1. Potential Lock-In Remedies

As an initial matter, the lock-in model offers several minor but potentially useful insights for policymakers in addressing racial inequality. First, the non-linear, threshold driven nature of lock-in suggests that small changes in the right places may accomplish a great deal. For those problems that demonstrate threshold effects, policy makers may merely need to move the self-reinforcing effect below some critical threshold.

For example, in the case of job referral networks, recent research indicates that analysts can calculate the critical threshold above which referral-based hiring induces racial stratification.²⁰² One could imagine that in a Title VII case, courts might hold defendants presumptively liable if they have engaged in more than a specified amount of referral-based hiring. Here, the aim would be not to eliminate referral-based hiring, but to lower it past the critical point.

Relatedly, in light of threshold effects, the lock-in model might argue for a large temporary policy intervention rather than a small, more permanent one. For example, small neighborhood subsidies may not be enough to prevent wealthier minorities from migrating to white neighborhoods. If white neighborhood benefits still exceed minority neighborhood benefits, then out-migration will still occur.²⁰³ Policymakers may be better off targeting segregated neighborhoods with substantial temporary subsidies, designed to push disparities below their critical thresholds, in order to eliminate or even reverse the cycle of neighborhood effects.

Finally, the lock-in model suggests that integration alone will never remedy locked-in inequality. Because residential segregation has

²⁰² See [get footnote]. Based on the principles of social networks, policymakers are trying to create job referral networks for minorities that give individuals in those networks a critical number of connections to high-income employment. Many of those networks make use of the Internet to provide job referral networks targeting minority employees, but given the nature of the digital divide, such networks are not likely to provide a critical density for job referral networks in segregated neighborhoods. See, e.g., www.diversitycareers.com, www.minoritycareernet.com, www.minoritycareer.com (viewed last on Feb. 1, 2004) (posting job opportunities primarily in professional occupations).

²⁰³ See Lundberg and Startz, Persistence of Inequality, *supra* note 136.

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created cumulative disadvantage in economic terms, bringing non-whites into white neighborhoods by itself will not eliminate wealth disparities.²⁰⁴ Some additional subsidy, perhaps some form of reparations, is required to compensate for the compounded, self-reinforcing effects of early anti-competitive exclusion.²⁰⁵

What sort of large-scale legal remedies might the lock-in model of inequality generate? First and most obviously, the model suggests that the law should expand the definition of discrimination. Specifically, discrimination could be defined to include any institutional rule, practice or decision that has racially disparate effects--regardless of whether the rule, practice or decision is motivated by malice, economic self-interest or administrative efficiency--if the rule, practice or decision creates, reproduces or reinforces specific racial disparities that were historically associated with intentional discrimination.²⁰⁶ This definition captures the disparities that can be traced to lock-in.

Thus, a municipal decision in an all-white township not to rezone for multi-family housing probably would constitute discrimination because the decision to rezone would have racially disparate effects, and

²⁰⁴ *See id.* at 318-20.

²⁰⁵ In thinking more concretely about additional subsidies, antitrust jurisprudence might again be instructive. At least one commentator has suggested that the treble damages awarded in antitrust claims actually compensate for the compounded interest on the initial damages that flow from a violation. *See* Robert Lande, *Are Antitrust Treble Damages Really Single Damages?* 54 OHIO ST. L.J. 115, 130 (1993) (arguing that treble damages compensate for a range of adjustments, including lack of prejudgment interest). Likewise, the lock-in model might argue for some form of interest-based assessment of damages, to compensate for both the compound interest of lost assets and lost social capital. Importantly, the lock-in model counsels that such reparations should not come in the form of lump-sum transfers, but in funding for policies designed to increase social capital--perhaps in the form of means-tested wage subsidies, vouchers for housing purchases and other human-capital related programs. *See* Lundberg and Startz, *The Persistence of Inequality*, *supra* note 136 (arguing for wage subsidies, minority scholarships, increased funding for inner-city schools). *See also* Schuck, *Judging Remedies*, *supra* note 7 at x (arguing for housing vouchers on a unit-by-unit basis instead of subsidies in the form of public housing).

²⁰⁶ This definition draws from one offered by Cass Sunstein, who included requirements that "are neutral 'on their face' but that would not have been adopted if the burdened and benefitted groups had been reversed. [The definition] does not pick up measures merely having discriminatory effects unless those effects are, in the sense indicated, tied up with racial, sexual or other bias." Cass R. Sunstein, *Why Markets Don't Stop Discrimination*, SOC. PHIL. & POLICY, Spring 1991 at 34 (footnote omitted).

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would reinforce racial disparities in residential segregation that have been historically associated with Jim Crow segregation.²⁰⁷

Likewise, a rule permitting public school financing to be based on property taxes would constitute discrimination because the rule likely reproduces racial disparities in educational resources that are historically associated with “separate but equal” education.²⁰⁸ In contrast, the charging of a flat utility fee that did not accommodate racial differences in wealth might not as easily constitute discrimination because the fee would not reinforce specific disparities that were historically associated with discrimination, although the fee does reinforce general wealth disparities.²⁰⁹

South Africa’s recent experience with a similarly expanded definition of discrimination may prove instructive. The South African equal protection clause, Section 9, prohibits “unfair discrimination” on the basis of race, gender, sexual orientation and a number of other listed grounds.²¹⁰ In deciding its cases, South Africa appears to have adopted a definition of discrimination very similar to that provided in Canada. In *Andrews v The Law Society of British Columbia*, the Supreme Court of Canada defined discrimination as any differentiation that “has the effect of imposing burdens, obligations or disadvantages on such individual or group not imposed on others, or which withholds or limits access to opportunities, benefits and advantages available to other members of society.”²¹¹

²⁰⁷ *Cf. Arlington Heights*, 429 U.S. 252 (1977)

²⁰⁸ *Cf. San Antonio v. Rodriguez*, 411 U.S. 1 (1973) (holding that racial disparities in education did not violate the Equal Protection clause).

²⁰⁹ In a South African case using a somewhat similar definition, the Court held that flat fees were permissible. *See Pretoria City Council v. Walker*, 1998 (2) SA 363 (CC) at par. 63 (finding that the process of cross-subsidization, even for the rich by poor residents, “is an accepted, inevitable and unobjectionable aspect of modern life.”)

²¹⁰ S. Afr. Const. ch. 2 (Bill of Rights), § 9.

²¹¹ 1 SCR 143, 174 (1989). This expanded definition of discrimination is part of a broader approach to equality, which includes Constitutional socio-economic rights that entitle all South African citizens to the right to sufficient food, housing, water, health care and basic education. *See* S. Afr. Const. Ch 2, §§ 26-29.

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Importantly, this expanded definition does not depend on any allegation of individual intent.²¹² Using this definition, the South African Constitutional Court has held that administrative differentiations on the basis of geographic location for purposes of assessing fees constitute potentially unfair racial discrimination because those specific differentiations historically have had a racially disparate impact.²¹³ An expanded definition like South Africa's would be far more able to capture that notion—the link between geography and race—than an intent-based definition.

Second, in addition to expanding the definition of discrimination, this Article suggests that a lock-in remedy must impose very strict requirements on available defenses. As mentioned earlier, it cannot be enough for defendants to prove a business necessity, because business necessities are precisely what make institutional practices self-reinforcing.²¹⁴ Rather, defendants should be held to a “business necessity plus” standard more akin to compelling government interest.

Again, the South African experience is instructive. As mentioned earlier, Section 9 focuses on whether the defendant has engaged in “unfair discrimination.”²¹⁵ In this regard, South African jurisprudence allows defendants to raise defenses of justification at two points during litigation. First, the defendant can argue that the relevant action is actually fair discrimination.²¹⁶ Such a defense is quite hard to prove. To date, the only case in which the Constitutional Court has found fair

²¹² In *Pretoria City Council v. Walker*, 1998 (2) SA 363 (CC), the South African Constitutional Court explicitly decided that plaintiffs need not allege intent to discriminate in order to bring an unfair discrimination claim under §9(3) of the South African Constitution. See *id.* at para. 43-44. To be sure, the Walker court also held that the intent to discriminate was relevant in assessing the potential unfairness of government conduct, but the court found that intent was not dispositive. See *id.*

²¹³ “The effect of apartheid laws was that race and geography were inextricably linked and the application of a geographical standard, although seemingly neutral, may in fact be racially discriminatory.” See *Pretoria v. Walker*, 1998(3) BCLR 257.

²¹⁴ See *supra* note 201 and accompanying text.

²¹⁵ See § 9(2).

²¹⁶ See *Harksen v. Lane N.O. and Others*, 1997 (11) BCLR 1489 (CC) at par. 45.

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discrimination involved a city's efforts to remedy the historic disadvantage of blacks via race-conscious means.²¹⁷

Second, if the defendant is the government or is acting pursuant to government authority, the defendant must prove that the discrimination is nevertheless "reasonable and justifiable in an open and democratic society."²¹⁸ This too is quite difficult for defendants to prove. For challenges based on race, the South African Court has imposed a "formidable onus" on defendants to prove that unfair discrimination would nevertheless be reasonable and justifiable.²¹⁹ The Court has yet to find for the defendants on this basis in any case.²²⁰ One might expect similar results here in the U.S. under a "business necessity plus" or something closer to the "compelling interest" standard.

As an alternative to modifying equal protection jurisprudence, Congress might modify one or more of the civil rights statutes, specifically to expand the definition of discrimination and to raise the

²¹⁷ In *Pretoria v. Walker*, the Court found for the City of Pretoria on behalf of black residents, when the city had adopted differential rates that favored historically black areas. In that case, the Court decided that rate differentiations were in fact discrimination on the basis of race, but that the discrimination was not unfair given that the rate differentials were trying to remedy historic disadvantage. See 1998(3) BCLR 257.

²¹⁸ S. Afr. Const., Ch. 2, § 36.

²¹⁹ S. Afr. Const. Ch. 2, S § 6 (Limitations Clause). The burden faced by defendants in justifying a violation of Section 9 constitutes a "formidable onus." Karthigasen Govender, *Operational Provisions of the Bill of Rights 14* (2000) (unpublished manuscript, on file with the author). This standard is not the same for every case—under the Section 36 Limitations Clause, the South African Constitutional Court applies a case-by-case assessment of the burden on defendant, which will vary depending on the importance of the right and the availability of less restrictive means to accomplish the defendant's purpose. See *Christian Education South Africa v. Minister of Education*, 2000 (10) BCLR 1051 at 30-31. For Section 9 claims, the burden is quite heavy. See Govender, *Operational Provisions*, *supra* note 219 at 14. However, the Court has rejected a formulaic "strict scrutiny" test that requires defendants to prove a compelling government interest. See S. Afr. Const. at par. 29.

²²⁰ Of course, given the country's long legacy of pervasive apartheid and the pervasive way in which racial inequality structured almost all institutional practices, one could argue that aggressive measures were uniquely necessary to transition to the country to a new Constitutional order (and by implication that such a test is not warranted here in the U.S.) Nevertheless, South Africa's experience is still instructive as a point of reference from a country that is deeply committed to racial transformation.

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business necessity/educational necessity defense standard even higher.²²¹ Such an act is not without precedent—Congress has modified the Voting Rights Act to create the equivalent of an effects-based test for actions that focused on whether political processes were equally open to all racial groups.²²² One might argue that the right to participate equally in voting is no more important than the right to equal participation in the social benefits of good neighborhoods.

Specifically in the area of fair housing law, a revised statute might give a range of legal actors—potential residents, developers and others—a race-conscious right to sue to eliminate those barriers to entry (like housing costs) that can be traced to zoning or other land-use regulations.²²³ This option is also not without precedent. Currently,

²²¹ South Africa has included the same aggressive standard in its equality statutes, including the Employment Equity Act, Act 55 of 1998, Chapter II, SS 5-6; and the Promotion of Equality and Prevention of Unfair Discrimination Act, Act No. 4 of 2000, Govt. Gazette No. 20876, Chapter 2, SS 6-7. Given earlier conversations about the increasingly narrow reading of equal protection, such legislative remedies likely would be declared unconstitutional. *See* Primus, Round Three, *supra* note 199 at 521.

²²² In 1982, Congress amended the Voting Rights Act to create a Section 2 claim, which challenges any action that has the effect of creating disparities in opportunities to vote. Voting Rights Act Amendment of 1982, Pub. L. No. 97-205, sec. 3, 96 Stat. 134 (codified as amended at 42 U.S.C. S 1973 (1988)). “No voting qualification or prerequisite to voting or standard, practice, or procedure shall be imposed or applied by any State or political subdivision in a manner which results in a denial or abridgement of the right of any citizen of the United States to vote on account of race or color, or in contravention of the guarantees set forth in section 4(f)(2), 42 U.S.C. 1973b, as provided in subsection (b).” (b) A violation of subsection (a) is established if, based on the totality of circumstances, it is shown that the political processes leading to nomination or election in the State or political subdivision are not equally open to participation by members of a class of citizens protected by subsection (a) in that its members have less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice.” *See also* Ford, Boundaries of Race, *supra* note 15 at 1903 (arguing for challenges to residency requirement or boundaries for voting in local elections).

²²³ Strategies to reduce housing costs created by zoning or land use controls, include: statewide control of local land use decisions and statewide review of local land use decisions to determine their consistency with state guidelines; regional control of land use decisions within metropolitan-area boundaries or metropolitan review of local land use decisions; and state regulation of local land use, in particular the prohibition of specific exclusionary zoning practices. *See* Altschuler, et. al, Metropolitan American, *supra* note x at 80. Strategies to promote inclusion of low-income residents into more affluent neighborhoods include: fair-share requirements imposed on local communities and developer requirements to construct low-cost housing in exchange for receiving permits. *See id.* at 80. Relatively

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developers have the right to sue local jurisdictions that resist low- and moderate-income housing in the Massachusetts Anti-Snob Zoning Law.²²⁴

State legislative strategies might continue to focus on uncoupling the link between neighborhood effects and family assets. Already, plaintiffs have initiated several waves of litigation under state constitutions challenging the constitutionality of locally generated public school funding.²²⁵ In response to such litigation, states currently are experimenting with a wide range of school finance reform alternatives. At their core, all such efforts involve severing the link between school finance and asset wealth.²²⁶ These latter two remedies have the advantage of being formally race-neutral.

To be sure, the current Court does not appear predisposed to shift to an expanded definition of discrimination or an effects-based test. Moreover, given the modern Court's jurisprudence on societal discrimination, the Court likely would strike down as unconstitutional any of the above legislative remedies that rely on notions of historical discrimination or race-consciousness. The next two sections argue that the model might be most useful as conceptual model.

little research has been done on whether any of these strategies in fact eliminate economic barriers to entry. *See id.* Part of the difficulty with such research is that any strategies to reduce housing costs may be swamped by countervailing pressures that lead to increased costs (like population growth) *See id.*

²²⁴ Mass. G. L. Chapter 40(B), § 21(1969). Under the statute, a developer submits a federally and state-approved project to a local Zoning Board of Appeals (ZBA), which consults with other relevant local boards. If the local ZEA rejects an affordable housing project, the developer has the right to appeal to the State Housing Appeals Committee, which can overrule the local decision. *See id.* *But see* [Fischel study from Metropolitan America, not enough to reduce costs to make it affordable].

²²⁵ For a full discussion of school finance litigation, see Ryan, *Schools, Race and Money*, *supra* note 174.

²²⁶ Early results from centralized school funding reform have been mixed. Some schools have exhibited both increased expenditures per pupil and increased performance on a range of outcome measures. Other states have actually reduced average expenditures per pupil in response to mandatory centralization, largely owing to political switching costs. *See THE ECONOMICS OF SCHOOL CHOICE 33* (Caroline Hoxby ed. 2003).

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2. Reflecting Recent (Empirical and Theoretical) Research

Compared to the individual intent model, as a theoretical matter, the lock-in model better reflects recent theoretical work in social science on the institutional nature of racial inequality. First, as the earlier sections have discussed, the lock-in model better incorporates the latest empirical research in economics and sociology on the racially stratified effects of neighborhood social capital on family assets.²²⁷ Likewise, the model better reflects research by education scholars on the links between school funding and family wealth, and research by labor economists on the racial stratification of social networks in referral-based hiring.²²⁸

More generally, the model reflects a growing consensus in social science research that accumulated advantage and disadvantage play a central role in persistent racial disparities.²²⁹ Just within the past year, five books on the subject of racial disparities have put forward some version of this analysis.²³⁰ These authors uniformly suggest that the cumulative effect of initial differences in assets—particularly differences in home-ownership—go a long way towards explaining current disparities.²³¹

Recent empirical research confirms that a significant portion of contemporary wealth disparities might be traced to early asset differences that have become self-reinforcing. Focusing on disparities produced by slavery, James Curtis suggests that the initial wealth disparities that existed at the end of the Civil War explain somewhere

²²⁷ See *supra* Part III.

²²⁸ See *id.*

²²⁹ See CONLEY, *BEING BLACK*, *supra* note 52; OLIVER AND SHAPIRO, *BLACK WEALTH, WHITE WEALTH*, *supra* note 52.

²³⁰ See ANDREW BARLOW, *BETWEEN FEAR AND HOPE: GLOBALIZATION AND RACE IN THE UNITED STATES* (2003) (arguing in the global context that like interest on a bank deposit, children collect economic potential for themselves from the property and social status of their parents); MICHAEL BROWN ET. AL, *WHITEWASHING RACE: THE MYTH OF A COLORBLIND SOCIETY* (2003); EDUARDO BONILLA-SILVA, *RACISM WITHOUT RACISTS: COLOR-BLIND RACISM AND THE PERSISTENCE OF RACIAL INEQUALITY IN THE UNITED STATES* (2003); ASHLEY DOANE, *WHITEOUT: THE CONTINUING SIGNIFICANCE OF RACISM* (2003); THOMAS SHAPIRO, *THE HIDDEN COST OF BEING AFRICAN-AMERICAN: HOW WEALTH PERPETUATES INEQUALITY* (2004).

²³¹ See CONLEY, *BEING BLACK*, *supra* note 52 at x.

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between 79.3 percent to 89.2 percent of current wealth disparities between blacks and whites.²³² Curtis documents the fact that five years after emancipation, blacks held only \$71 in real estate wealth, compared to \$2,437 for whites.²³³

Beyond empirical research, the lock-in model also reflects recent theoretical work on the nature of institutions. Douglass North has defined institutions as those rules of the game in a society that structure interaction and shape the way society evolves.²³⁴ Scholars have described lock-in as a very specific kind of institutionalization, in which both the rules of interaction and the social patterns associated with them become self-reinforcing and then locked-in over time.²³⁵

As such, the institutional lock-in model of racial inequality builds on the recent explosion in research on network externalities, neighborhood effects, and a range of other related institutional concepts. Some of the most recent and interesting work explores the self-reinforcing qualities of economic geography. As discussed above, the literature around neighborhood effects demonstrates how the kind of neighborhood in which one lives shapes the family's assets and mobility. Similarly, some of the country's most illustrious economists are now exploring the links between geography--particularly the North-South divide--and patterns of economic development.²³⁶

Most importantly for this project, the lock-in model of inequality

²³² See *id.* at 13. Although whites lost significant amounts of wealth (property and slaves) during the Civil War, even taking that loss into account, the differences in black-white wealth at the end of the war were still quite dramatic. See *id.*

²³³ See James Curtis, Long Run Differences In Wealth Among Blacks and Whites: Empirical Results From Structural Regression Decomposition (presented at Social Science History Association Annual Meetings, Chicago, IL, November 17, 2001) at B-2.

²³⁴ See NORTH, INSTITUTIONS, *supra* note 16 at x. Scholars of institutionalization have used the concept of institution in varying and sometimes confusing ways. See Ronald L. Jepperson, Institutions, Institutional Effects and Institutionalism, in THE NEW INSTITUTIONALISM, *supra* note 16. This project sidesteps that question by focusing on North's definition. See NORTH, INSTITUTIONS, *supra* note 16.

²³⁵ Walter Powell includes the dynamic of market lock-in as a particular kind of institutionalization. See Walter Powell, Expanding the Scope of Institutional Analysis, in THE NEW INSTITUTIONALISM, *supra* note 16 at 192-94.

²³⁶ See, e.g., PAUL KRUGMAN, GEOGRAPHY, DEVELOPMENT AND ECONOMIC THEORY (1995); David Bloom and Jeffrey Sachs, Geography, Demography and Economic Growth in Africa, Brookings Papers On Economic Activity (1998).

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incorporates a relatively new theoretical concept, developed in complex systems theory, called “emergence.”²³⁷ Emergence explains how complex social patterns can emerge from interaction at the individual level, in ways that are not obviously predictable. Complex systems theorists study the behavior of complex systems—systems in which individual agents interact with each other according to regular rules.²³⁸ Complex systems include a wide range of phenomena, from small living cells and physical-nanosystems, to ecosystems, stock markets, ant colonies, brains, legislatures, and, of course, neighborhoods, among others.²³⁹

Emergence is the idea that complex social patterns can emerge from individual agents in ways that cannot be predicted in advance.²⁴⁰ For example, in the marketplace, individual investors follow a relatively simple set of rules—e.g., “buy low, sell high.” Nevertheless, at the collective level of the institution, the stock market exhibits complex patterns of behavior—bubbles, crashes, slow slides, quick runs—that cannot be easily deduced from or predicted by the behavior of the individual investor.²⁴¹

Similarly, the lock-in model demonstrates that patterns of racial inequality can emerge from institutions even in the absence of individual

²³⁷ See JOHN HOLLAND, *EMERGENCE: FROM ORDER TO CHAOS* 7-8 (1998); STEVEN JOHNSON, *EMERGENCE: THE CONNECTED LIVES OF ANTS, BRAINS, CITIES AND SOFTWARE* (2001). For an argument that emergence isn’t really a new concept, see James Crutchfield, *Is Anything Ever Really New? Considering Emergence*, in *THE SCIENCES OF COMPLEXITY* (G. Cowan et. al eds. 1994).

²³⁸ For a highly readable introduction to complex systems theory, including the narrative of the genre’s evolution, see MITCHELL WALDROP, *COMPLEXITY: THE EMERGING SCIENCE AT THE EDGE OF ORDER AND CHAOS* (1992). For a more technical discussion of the principles of complex systems, see ROBERT AXELROD AND MICHAEL COHEN, *HARNESSING COMPLEXITY* (2000); for an introduction somewhere in the middle, see Brian Arthur, *Why Do Things Become More Complex*, *Scientific American.*, May 1993, at 144.

²³⁹ See *id.*

²⁴⁰ See HOLLAND, *EMERGENCE*, *supra* note 237 at x; JOHNSON, *EMERGENCE*, *supra* note 237 at x.

²⁴¹ Likewise, an ant colony exhibits extremely complex behavior, like “deciding” to relocate to higher ground after a flood. But the complex conduct at the group level cannot be predicted from the conduct of the individual ant, who follows extremely rudimentary rules of conduct, rules like “follow the pheromone trail of the ant in front of you.” See JOHNSON, *EMERGENCE*, *supra* note 237 at x.

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race-conscious discrimination. Like the stock market, at the level of the collective, neighborhoods and cities can exhibit patterns of race and income stratification even when individuals are following race-neutral rules. People who follow these rules--“move to a new neighborhood if it is more attractive and you can afford it” or “protect property values” or “hire new employees through other employees you already know”--are further reinforcing existing racial inequalities, without necessarily intending to do so.²⁴²

3. Uncovering the Suppressed Dimensions of Racial Inequality

This section suggests that the best reason to shift paradigms might be conceptual. That is, anti-discrimination law should shift to the metaphor of locked-in monopoly because the model highlights important aspects of racial inequality that the individual intent model suppresses and ignores. The following discussion focuses on the notion that segregation has rigged the game unfairly in advance for non-whites, and the idea that institutions (and not individuals) are responsible for reproducing that unfair advantage.

A. Racial Advantage As Unfair Monopoly Power

A closer look at the conceptual metaphor of “discrimination as monopoly” highlights a number of dimensions of contemporary discrimination that the individual intent model marginalizes. First, the image of a racial monopoly exposes the way in which institutional structures of power rig the game unfairly in advance. As Michel Foucault has noted, power is not simply the exercise of immediate coercion between actors. Instead, power is the means by which some action serves to limit ahead of time the actions of a “fundamentally free

²⁴² Benabou and Durlauf ‘s work on public school finance shows that patterns of racial and class stratification can emerge from individuals who follow the simple rule of moving to the neighborhood with the best public school financing that they can afford. *See supra* note Durlauf, Neighborhood Effects, *supra* note 132; Benabou, Local Connection, *supra* note 136.

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subject,” by structuring the possible fields of action in advance.²⁴³ Indeed, monopoly power, in the legal lexicon, is unfair because it structures the field of competition in advance of the game.

Moreover, as Foucault points out, the game is rigged unfairly not by individual actors but by institutional structures—in particular, institutional differences in status, privilege and economic well-being, as well as institutional customs and practices that are taken for granted. For Foucault, the key to understanding an institution’s power is to study institutional differentiations, practices, customs, background assumptions, to figure out how institutions structure conduct in advance.²⁴⁴

Likewise, the lock-in model focuses on the institutional attributes that unfairly structure the game in advance for people of color. The model suggests that the game is unfairly rigged in advance to favor white families and disfavor non-white families. Non-white families who live in segregated neighborhoods face the self-reinforcing effects of earlier efforts to exclude them. White families enjoy structural advantages, in terms of schooling, job referral networks and other forms of social capital.

The lock-in model also focuses on the way in which institutional structures are responsible for this unfair advantage. The model targets the institutional categories (e.g, the “unable to afford the purchase price” category) that correspond to race because of earlier historical events. The model also focuses on taken-for-granted neighborhood institutional practices—requiring the newcomer to pay the purchase price of a house, funding public schools via property taxes, using neighbors as points of contact in a job referral network. These practices and categories are not traceable to individual actors—indeed, these institutional practices have the power to structure the conduct of individual actors. By focusing on institutional notions of power, the lock-in model demonstrates how racial inequality can persist even in the absence of intentional discrimination.

²⁴³ See Michel Foucault, *The Subject and Power* in MICHEL FOUCAULT: POWER 340 (Paul Rabinow ed. 1994). “The exercise of power is not simply a relation between partners, individual or collective. It is a way in which certain actions modify others.” “The exercise of power consists of the guiding of the possibility of conduct and putting the order in possible outcomes.” *See id.*

²⁴⁴ *See id.* at 344.

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Second, the metaphor of “discrimination as monopoly” builds on the intuitive notion that dismantling power requires radical restructuring. In the world of antitrust law, courts routinely acknowledge that eliminating monopoly power may require dismantling a web of institutional processes that reinforce monopoly power.²⁴⁵ Indeed, divestiture is very much the central image of antitrust—the paradigmatic cases of monopoly and antitrust involve the break-up of AT&T and Standard Oil, when courts required those company to dismantle the institutional links that consolidated their power.²⁴⁶

The idea of “breaking up a monopoly” also captures the idea of protecting the public interest as an interest separate from punishing the offender who intentionally discriminates. The U.S. Supreme Court regularly has ordered divestiture—the break up of a firm or an organizational network--when the Court finds that injunctive relief would not sufficiently protect the public interest.²⁴⁷ Just as divestiture in antitrust protects the public interest by eliminating entrenched monopoly power, so too does the idea of breaking up the entrenched racial monopoly advance broader social interests.

²⁴⁵ The Supreme Court has heard fifty-two cases involving divestiture of some kind, and has ordered divestiture as a remedy in forty-five of those cases. See Thomas Sullivan, *The Jurisprudence of Antitrust Divestiture: The Path Less Traveled*, 86 MINN. L. REV. 565, 568-69 (2002). A review of cases reveals that the Court has ordered injunctive relief when it has determined that the defendant does not have market power, but has favored divestiture when it finds market power. See *id.* at 571. The Court has ordered divestiture in only two cases in the last two decades—AT&T in 1983 and *California v. American Stores*, 495 U.S. 271 (1990), in 1990. However, this could be explained by the fact that increased review of potential violations and worked-out consent decrees by the Department of Justice Antitrust Division and the FTC makes litigation unnecessary. See Sullivan, *The Path Less Traveled*, *supra* note 245 at 573.

²⁴⁶ In the AT&T case, the court ordered the divestiture of the so-called Baby Bells as part of a consent decree. See *Maryland v. United States*, 460 U.S. 1001 (1983) aff'g *United States v. Am. Tel. & Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982) (approving consent decree to divest Bell Operating Companies). In the Standard Oil case, the Court ordered the dissolution of the principal holding company, which acted through its subsidiaries to divide up the country into districts for anti-competitive purposes. See *Standard Oil Co. of N.J. v. U.S.*, 221 U.S. 1 (1911) (holding that unification of power in the hands of one holding company raises presumption of an intent to exclude and centralize perpetual control).

²⁴⁷ See Sullivan, *The Path Less Traveled*, *supra* note 245 at 571.

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B. Racial Inequality As “Locked-In”

The concept of racial inequality as “locked-in” also does a fair amount of discursive work, by describing the social closure that embodies racial inequality. Under the individual intent model, neighborhood boundaries are open to those who can pay. Neighborhood borders permit movement in and out by those who choose to associate for tax purposes, or to be with members of their own culture.²⁴⁸ Because the individual intent paradigm does not accommodate any discussion of economic barriers to entry, the model suggests that, once individual discrimination is eliminated, racism has disappeared.²⁴⁹ Indeed, in many of the recent school desegregation cases, the Supreme Court has speculated that segregated schools and residential segregation might now well be the product of free individual choice.²⁵⁰

In contrast, the image of “locked-in” in segregated neighborhoods brings to the surface the almost-physical constraints created by “barriers” to entry. Understanding inequality as “locked in” exposes the lack of any real mobility across the boundaries of race and class. For sociologist Max Weber, the idea of social closure goes hand in hand with the idea of monopoly power. In his view, a social relationship is

'closed' against outsiders so far as, according to its subjective meaning and its binding rules, participation of certain persons is excluded, limited, or subjected to conditions. . . If the participants expect that the admission of others will lead to an improvement of their situation . . . their interest will be in keeping the relationship open. If,

²⁴⁸ See THOMAS C. SCHELLING, *MICROMOTIVES AND MACROBEHAVIOR* 147-55 (1978) (setting up a dynamic sorting model on basis of notion that each agent had a slight preference for neighbors of the same race).

²⁴⁹ See STEPHEN AND ABIGAIL THERNSTROM, *AMERICA IN BLACK AND WHITE: ONE NATION INDIVISIBLE* (1997); SHELBY STEELE, *A DREAM DEFERRED* (1999).

²⁵⁰ See *Missouri v. Jenkins*, 150 S.Ct. 2038, 2062 (1995) (arguing that the continuing “racial isolation” of schools after *de jure* segregation has ended may well reflect voluntary housing choices or other private decisions). See also *Swann v. Charlotte-Mecklenburg Bd. of Ed.*, 402 U.S. 1, 26 (1971); *Pasadena City Bd. of Ed. v. Spangler*, 427 U.S. 424, 435-437 (1976); *Freeman v. Pitts*, 503 U.S. 467, 493-494 (1992).

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on the other hand, their expectations are of improving their position by *monopolistic* tactics, their interest is in a closed relationship.²⁵¹

In the context of residential segregation, barriers to entry like housing prices and zoning ordinances permit whites to maintain the closure necessary for monopoly. Importantly, the lock-in model of inequality locates closure and limitation not in the immediate intent of the individuals inside the neighborhood, but in the ostensibly race-neutral institutional practices that prevent mobility.

Conclusion

The argument to shift to the lock-in model of discrimination does not offer does some easily packaged “rule” that resolves the difficult questions surrounding racial inequality. In particular, one must still answer the central normative question plaguing policymakers: when do the benefits of racial inclusion and anti-subordination justify the “switching costs”—costs in restructuring institutional practices and in redistributing wealth?

Nor, for that matter, does the model completely answer difficult questions about the theoretical relationship between race and class. Is racial inequality merely the story about who got there first? How far back should one go to look at early anti-competitive conduct? Weren’t the key historical events those that came much earlier (perhaps as Jared Diamond suggests, having to do with the ability to domesticate certain kinds of wild plants and getting a head-start on food production)?²⁵²

Although the lock-in model does not help us to answer those questions, the model gives us a new framework within which to articulate these questions. Most importantly, the institutionalist account allows us to say new and considerably different things about racism and anti-discrimination law because different aspects of racial inequality now register as theoretically and legally important.

²⁵¹ MAX WEBER, *ECONOMY AND SOCIETY* 43 (1978) (emphasis added).

²⁵² See JARED DIAMOND, *GUNS, GERMS AND STEEL* (1996) (arguing that Western economic and cultural dominance can be traced to differences in the ability of different societies to domesticate various plants and animals for human consumption).

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In list form, here are a few of the aspects of racism that the new framework renders relevant (and that are ignored by the individual intent model):

- the role of historical exclusion during Jim Crow and slavery;
- the power of being the first-mover: getting to frame the field of competition in advance;
- the self-reinforcing economic effect of membership in a neighborhood or racial group;
- the importance of cumulative disadvantage to explaining contemporary disparity;
- the way in which an institution shapes social patterns separate from individual conduct;
- the link between segregation and higher property values in white neighborhoods;
- the public's interest in eliminating the inefficiencies and unfairness of racial monopoly;
- the need to restructure in order to eliminate institutionalized power

More generally, the metaphor of locked in monopoly seems to better fit with our intuition that facts currently outside the accepted legal framework are important—that three hundred years of slavery and segregation do have some explanatory value in terms of current disparities, that the racial composition of one's neighborhood makes an economic difference in people's lives, that it "takes money to make money," and that is why "the rich get richer and the poor get poorer." Perhaps with a framework that focuses on these aspects of racial power as legally meaningful, legal actors and thinkers can better wrestle with the possibility of social change that actually eliminates persistent racial disparities.

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Appendix A-1

Initial Condition Parameters

Lattice Size: 30X30

Mean Black Assets: 40

Standard Deviation Black Assets: 20

Mean White Assets: 100

Standard Deviation White Assets: 40

Number of Iterations to Mobility Change: 50

Family Asset Accumulation Rate Per Iteration: 3%

Neighborhood Asset Accumulation Rate Per Iteration: 5%

Number of Sites Searched to Find Suitable Space: 50

Percent Open Space: 35%

Rules for Moving:

(1) First Period Constraint:

Black Families may not move into positions with any white neighbors

(2) All Periods, All Families: Move When

- New Neighborhood Average Assets are at least 15% greater than Old Neighborhood Average Assets
- Family Assets are greater than or equal to New Neighborhood Average Assets

(3) Activation:

- Randomized, Asynchronous: Starting with a random Family, each Family is given opportunity to move once per iteration; all families move when possible.