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ARTICLES

THE INTEGRATION GAME

Abraham Bell* and Gideon Parchomovsky**

Despite studies indicating an increasing preference for integrated housing and legal measures against housing discrimination, housing segregation persists in American society. This Article addresses this seeming paradox by challenging Thomas Schelling’s classic tipping model as overly simplistic, and advancing in its stead a three-game model of homeowner preferences. After characterizing the interplay of incentives that distorts homeowner choices in resegregating neighborhoods, the Article draws on techniques that have been developed to neutralize distortionary incentives in the stock market to propose four measures for combating market incentives leading to resegregation: home-equity insurance, realty sales taxes, institutional subsidies, and growth controls. While these techniques will not completely arrest resegregation, they will enable nonbiased homeowners to achieve their goal of racially integrated housing. In addition to increasing integration, these techniques should create a separating equilibrium in which only racially biased individuals would choose to leave racially changing neighborhoods, thereby revealing their true colors.

INTRODUCTION

Several decades after Brown v. Board of Education1 and the beginning of the civil rights movement, the legacy of racism and racial segregation remains a shameful mark on American society.2 Neither the invalidation

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of racially restrictive covenants in *Shelley v. Kraemer*, nor the outlawing of private housing discrimination in the Fair Housing Act of 1968 have eradicated urban and suburban racial segregation. Recent studies show that urban America is only marginally less segregated today than it was in the 1960s and 1970s, during the height of racial rioting. Worse yet, other studies demonstrate that one's neighborhood largely determines one's achievements. Living in the wrong neighborhood often means a poor education, greater exposure to crime, fewer positive role models, and inadequate municipal services. Thus, the denial of housing opportunities on the basis of race inflicts additional harms on its victims beyond the already corrosive effect of racial discrimination. Paradoxically, still other studies show an increase in individual preferences of members of all ethnic groups for living in integrated communities. The incongruity is that racial segregation—and its characteristic institutional form, the black ghetto—are the key structural factors responsible for the perpetuation of black poverty in the United States.*); Thomas F. Pettigrew, Racial Change and Social Policy, 441 Annals Am. Acad. Pol. & Soc. Sci. 114, 122 (1979) (dubbing racial residential segregation the "structural linchpin of modern American race relations").

5. See Massey & Denton, American Apartheid, supra note 2, at 81 ("Despite the optimism of the early 1970s, a comprehensive look at trends and patterns of racial segregation within large metropolitan areas in the ensuing decade provides little evidence that the residential color line has diminished in importance."); David M. Cutler et al., The Rise and Decline of the American Ghetto, 107 J. Pol. Econ. 455, 495 (1999) ("[T]he level of segregation in urban America rose for nearly a century and then modestly declined." (emphasis added)); Richard H. Sander, Individual Rights and Demographic Realities: The Problem of Fair Housing, 82 Nw. U. L. Rev. 874, 884 (1988) [hereinafter Sander, The Problem of Fair Housing] (noting that "race still dictated residence in most cases, even though there was substantially more progress towards integration during the 1970s than during any other postwar period"). As most of these studies depend upon census data, the year 2000 census may modify this finding.

6. See, e.g., John F. Rain & John M. Quigley, Housing Markets and Racial Discrimination: A Microeconomic Analysis 297-98 (1975) (suggesting that housing discrimination may affect black wealth and employment opportunities); Massey & Denton, American Apartheid, supra note 2, at 150 ("Where one lives determines a variety of salient factors that affect individual well-being: the quality of schooling, the value of housing, exposure to crime, the quality of public services, and the character of children's peers."); Gary Orfield, The Movement for Housing Integration: Rationale and Nature of the Challenge, in Housing Desegregation and Federal Policy 18, 18 (John M. Goering ed., 1986) [hereinafter Orfield, Housing Integration] ("[A] family's spatial location determines... the quality of schools, the level of municipal services, increases in housing value, relative tax burdens, ease of access to work, safety, and much else.").

7. See generally David M. Cutler & Edward L. Glaeser, Are Ghettos Good or Bad?, 112 Q.J. Econ. 827, 865 (1997). The authors calculated that a 15% decrease in segregation would eliminate approximately one-third of the gap between whites and blacks in schooling, employment, earning, and out-of-wedlock pregnancies.

8. See, e.g., Lawrence Bobo et al., Changing Racial Attitudes Toward Residential Integration, in Housing Desegregation and Federal Policy, supra note 6, at 152, 168 ("Today the dominant belief is that blacks deserve the same treatment and respect as whites, and that some degree of racial integration is a positive thing."); Orfield, Housing Integration, supra note 6, at 27 ("Most Americans believe that black and Hispanic people
of these two empirical findings—decreasing racial animus in the housing sphere and persistent racial segregation—has puzzled social scientists, legal scholars, and policymakers.

We argue that the solution to this puzzle lies in understanding the incentives that prompt individuals to take actions that strengthen racial segregation, even as these same individuals favor racial equality and integration. Traditional explanations of housing segregation have focused on the importance of the continuing pathology of racism. And indeed, we do not dispute that racism remains a persistent part of American life and plays a role in housing segregation. Yet, the traditional explanations fail to do justice to the complex web of motivations that make integration of the housing market such an elusive goal. In particular, they fail to should have equal access to housing and neighborhoods they can afford and whites say that they are ready to accept nonwhite neighbors.

Some now prefer the term "diversity" to "integration" on the grounds that "integration" suggests the assimilation of minorities into the majority culture, while "diversity" suggests the value of preserving minority cultures alongside majority ones. See J. Linn Allen, Rare Blend: Achieving, Maintaining Diversity Is No Easy Task, Chi. Trib., Nov. 28, 1993, at W1. While we use the prevalent terminology of "integration" and "segregation," we do not suggest that integration requires the absorption of minority cultures into a majority culture.

9. For example, in examining the potential causes of segregation Massey and Denton conclude that "[t]he persistence of racial segregation in American cities . . . is a matter of race and not class." Massey & Denton, American Apartheid, supra note 2, at 88; see also Douglas G. Glasgow, The Black Underclass: Poverty Unemployment and Entrapment of Ghetto Youth 31–52 (1981) (arguing that racism is a key factor in explaining continued racial segregation); Alphonso Pinkney, The Myth of Black Progress 1–17 (1984) (arguing that racism is deeply embedded in American institutions); Lawrence Bobo & Camille L. Zuberinsky, Attitudes on Residential Integration: Perceived Status Differences, Mere In-Group Preference, or Racial Prejudice?, 74 Soc. Forces 883, 883 (1996) (presenting research to support the hypothesis that racial prejudice—as opposed to perceived economic status or in-group preference—is the dominant factor perpetuating residential segregation).

10. Our model of the dynamics of the market goes a long way toward erasing the false dichotomy between racial and economic motivations in housing segregation. See infra Part IV. For example, we do not accept the assumptions underpinning the statement that "[i]n Oak Park in the 1980s . . . escalating housing prices may have been as responsible as the village's programs in stabilizing the suburb." Andrew Fegelman, City Segregation Moves to Suburbs Blacks Frozen Out of Some Areas, Chi. Trib., Feb. 27, 1991, § C (Chicagoland), at 1 (quoting Douglas Massey). On the contrary, as the rest of our Article makes clear, escalating housing prices must be seen together with Oak Park's equity insurance program and other "managed integration programs" as part of the mechanism by which homeowners' incentives are altered. In other words, the equity insurance program and escalating housing prices are not distinct phenomena that can be treated separately; the two are intrinsically linked, and "managed integration programs" must take account of this linkage.
take seriously the expressions of preference of most Americans for integration.\footnote{See infra notes 84–91 and accompanying text (discussing surveys showing Americans’ preference for integration).} It is possible to dismiss this problem as merely illusory by arguing that verbally expressed preferences should not be taken seriously at all. After all, talk is “cheap,” and if people do not act upon the preferences they express, there is no reason to take them at face value. In a recent article, Daphna Lewinsohn-Zamir discusses this hypothesis as a potential explanation for the disparity between the preferences citizens express verbally with respect to provision of public goods and their behavior as consumers. Ultimately, she rejects this hypothesis as “too simplistic” and opines that “the attitudes people express in the public sphere” also stem from “true commitment, responsibility, and solidarity.” Daphna Lewinsohn-Zamir, Consumer Preferences, Citizen Preferences, and the Provision of Public Goods, 108 Yale LJ. 377, 391 (1998).

Similarly, social scientists Howard Schuman, Charlotte Steeh, and Lawrence Bobo confront the question of whether “changes in [survey] responses mean anything” and conclude that responses are generally accurate, in that most respondents “feel some genuine belief” in integration. While respondents may also feel conflicting beliefs, the authors conclude that “[u]ttering lying is probably rare.” Howard Schuman et al., Racial Attitudes in America: Trends and Interpretations 201–03 (1985). This finding is corroborated by the work of some other social scientists. See, e.g., Paul M. Sniderman & Thomas Piazza, The Scar of Race 56–65, 141–46, 172–74 (1995) (examining question of “whether you can take a person at his word when he says he supports racial equality” and finding that survey responses are generally accurate). But cf. Donald R. Kinder & Lynn M. Sanders, Divided By Color 270 (1996) (noting results of some social scientists, including Schuman, Steeh, and Bobo, showing that changes in white survey attitudes might not result in similar changes in support for racially beneficial policies).

\footnote{As Gary Orfield points out:

Segregation is not a fixed phenomenon—it is dynamic, constantly spreading, and usually associated with a wide range of negative developments for affected minority communities over time. . . . [A]lthough the first minority families moving into white areas near ghettos or barrios often have higher incomes and status than the whites they buy from, often epitomizing the very values that the local whites claim to defend most vigorously, the white majority commonly views them as harbingers of the neighborhood’s rapid racial transformation and decline . . . . Whites then proceed to act in ways that make this self-fulfilling prophecy come true.

Orfield, Housing Integration, supra note 6, at 21; see also Pettigrew, Attitudes on Race and Housing, supra note 8, at 76–79 (discussing computer simulations showing the effect of purchasing power, prejudice, and other variables on resegregation).

A famous variant of dynamic segregation is the case of “white flight.” The term “white flight” refers to a massive exodus of white homeowners from predominantly white neighborhoods following the entry of a handful of black families. White flight was common in the 1940s to 1960s when black demand for housing far exceeded supply, and only a few white neighborhoods opened their doors to black residents. The two distinguishing characteristics of white flight were the panic that accompanied the white exodus and the short period of time—typically two to three years—during which target}
neighborhood increasingly populated by racial minorities. But the true picture is much more complex.

Imagine a white homeowner in "Whiteacresville," a predominantly white, middle class neighborhood in a typically segregated American city. One day, she notices that an African-American family has moved into a house down the street. Several days later she observes several "for sale" signs in the neighborhood. She welcomes the opportunity, finally, to live in an integrated neighborhood, but several matters concern her. First, and most importantly, she has heard that other neighborhoods in the city that underwent racial change have not stabilized as integrated neighborhoods but, rather, have become resegregated minority neighborhoods. Second, in other neighborhoods where this resegregation has occurred, the value of real-estate dropped substantially and never recovered. She has been told that those who sold first received the best prices for their houses while those who waited received considerably lower prices. Third, in saying that she would prefer to live in an integrated neighborhood she means a neighborhood consisting of 80% whites and 20% blacks. The enjoyment she will derive from living in a neighborhood with a different racial composition is significantly lower. Finally, she suspects that her neighbors' preferences regarding the ideal mix for integration differ from hers.

That evening, she returns home to discuss her options with her spouse or partner. As long as the two of them believe that all the observations made earlier that day are correct, they will decide to sell their house immediately, unless their preference for integration—even as a member of a white minority in a majority black neighborhood—is sufficiently strong.

neighborhoods were abandoned by whites. Sander elaborates on the difference between white flight and resegregation:

(Res)egregation does not depend on "white flight"; it can come just as inexorably (though more slowly) from a simple imbalance of white and black demand. It is a group phenomenon, caused not by any individual's characteristics or preferences but by the summation and interaction of those characteristics and preferences. Sander, The Problem of Fair Housing, supra note 5, at 897. Yet, dynamic resegregation and white flight are not analytically unrelated. They are united by the fact that in both cases, market expectations dictate certain individual behavior. Thus, the two phenomena have a lot in common, and essentially differ in degree, not in kind.

13. See Orfield, Housing Integration, supra note 6, at 21 ("The belief in the inevitability of ghetto expansion... [has] been the dominant perspective of researchers who have shaped scholarly understanding of racial change."); see also Massey & Denton, American Apartheid, supra note 2, at 92-96 (describing whites' apprehension about living in mixed neighborhoods as the principal obstacle to integration); Sander, The Problem of Fair Housing, supra note 5, at 892 n.158.

14. Although we use the terms "black" and "white" in our analysis, we do not mean to suggest that other minority groups do not suffer from housing segregation. We explicitly recognize the fact that dynamic resegregation may be triggered by entry of other minority groups into white neighborhoods. However, there is a wide agreement among scholars that the problem of housing segregation is especially acute in the case of African-Americans. As Massey and Denton observe of the various ethnic groups in the United
There are several things to note about this example. First, one may contribute to resegregation even though one places a positive value on living in an integrated neighborhood. Indeed, as in the example, even homeowners who harbor no racial animus may rationally decide to sell. Second, so long as one believes that an integrated neighborhood is not the expected outcome of the change in the neighborhood’s racial composition, one’s preference for an integrated neighborhood does not provide a sufficient motivation to stay. Third, even if it is possible for the neighborhood to become and remain integrated, one might nevertheless decide to sell in light of the failure to achieve the desired mix of integration, and the expected drop in one’s house’s market price. Thus, in the example, if she believes that the neighborhood will eventually stabilize with a white minority, she may still decide to sell. Fourth, the key presumption that underlies the homeowner’s decision is the belief that irrespective of her decision, there will be rapid changes in the racial composition of her neighborhood that will lead to a neighborhood lacking the desired racial mix and to reductions in the value of her house. It makes no difference to the homeowner’s decision to sell her house that the expected drop in housing values stems from racial animus or racial stereotyping. Although the stereotypes that lead to expectations of changes in housing prices may be unfounded, and, indeed, the expected price changes may never materialize, so long as these expectations are widespread, the homeowner will respect them in making her decision. Fifth, after minority group members—who are segregation’s primary victims—the ones most likely to bear the cost of resegregation are those who value integration the most, that is, white integrationists who choose to stay despite the decrease in property value. While the segregated neighborhood satisfies the segregationist, it confounds the wishes of the integrationist, who never achieves her preferred living arrangement.

A final note about the example. Our analysis is from the perspective of the white homeowner because the white homeowner is the driving force behind resegregation. As is evident from our subsequent analysis, in utilizing this perspective, we do not intend to suggest that the perspective of the white homeowner is in any way more valuable than that of the black owner.15 On the contrary, our goal is to guarantee the freedom of

15. A full study of resegregation must examine twin pairs of resegregation participants, potential white émigrés from and black entrants into white neighborhoods, and potential black émigrés from and white entrants into black neighborhoods. The white
choice of minority homeowners by changing the choice dynamics in the housing market.

The pressure on homeowners to sell during periods of dynamic resegregation, as described in our example, is in many ways similar to the pressure on owners that arises in other contexts, such as the pressure on shareholders to sell stock during tender offers. In both cases, the dynamics of the "panic sale" may make it rational for individual shareholders or homeowners to sell their assets (stock or houses), even though shareholders or homeowners as a group would be better off if the "panic sales" did not take place. Indeed, as Professor Lucian Bebchuk has shown, coercive tender offers will lead shareholders to sell shares at prices that they believe are less than the "actual" value of the shares. Curiously, while scholarship has been prolific on the distorting effects of certain tender offers on shareholders' decisions to sell their shares, scant attention has been paid to the distorting effects of the dynamics of white flight on homeowners' decisions to sell their houses. Although Thomas Schelling noted the ability of benign motives to lead to housing segregation more than twenty years ago, others have failed to elaborate on his core insight and to engage in a critical examination of the preferences of and pressures on homeowners in neighborhoods undergoing changes in racial composition. Specifically, no one has attempted to take Schelling's

neighborhood has been the traditional arena for resegregation, and white emigrés the traditional cause; consequently, we have chosen to focus on the first half of the first pair. As controversy about gentrification grows, the second pair will have to be examined as an arena for potential resegregation as well. Cf. infra note 61 (discussing supply-side and demand-side proposals for overcoming segregation).

Finally, we do not intend to suggest an equivalence between black and white separationism. Separation of minorities as a result of their voluntary choice is sometimes viewed as a positive or even necessary step toward preservation of the minority culture and social cohesiveness. See infra notes 29–30 and accompanying text.


17. See, e.g., id. at 1697 nn.7–9; John C. Coffee, Jr., Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer's Role in Corporate Governance, 84 Colum. L. Rev. 1145, 1175–98 (1984) (explaining how target shareholders may be compelled to sell their shares at a loss); Martin Lipton, Takeover Bids in the Target's Boardroom: An Update After One Year, 36 Bus. Law. 1017, 1025 (1981) (noting several instances where shareholders benefited from rejecting tender offers they originally wanted to accept); Robert A. Ragazzo, Unifying the Law of Hostile Takeovers: Bridging the Unocal/Revlon Gap, 35 Ariz. L. Rev. 989, 1008–22 (1993) (arguing that a board of directors should employ defensive measures when such defenses increase shareholder value and avoid distorted outcomes).


19. See Richard H. Sander, Housing Segregation and Housing Integration: The Diverging Paths of Urban America, 52 U. Miami L. Rev. 977, 988 (1998) [hereinafter Sander, Housing Segregation] ("Schelling's important theoretical work has been almost completely neglected in empirical studies of segregation."). Curiously, even where
game-theoretic perspective one step further by devising legal and institutional solutions that alter the economic incentives that apply to homeowners in racially changing neighborhoods. Worse yet, no one has undertaken to rectify the limitations of Schelling’s model from a game-theoretic perspective. Our goal in this Article is to redress this omission and craft a game-theoretic framework for solving the problem of dynamic resegregation.

We base our proposed solution on two insights. Our core insight is that the key to resolving the problem of residential segregation lies in mapping the complex interplay of homeowner motivations. We show that the housing market in many American cities displays the characteristics of three types of games: (1) the resegregation game (in which the dominant strategy of white homeowners is to sell as fast as possible); (2) the integration game (in which only some white homeowners depart and stable integration results); and (3) the assurance game (in which both selling and waiting are stable equilibria, but in which market signals of impending sales lead to mass exodus). Thus, to overcome the problem of dynamic resegregation it is necessary to alter the economic incentives presently operating in the housing market. In doing so it becomes possible to change the payoff matrix into one whose dominant strategy is staying in an integrated neighborhood, or to signal players in the assurance game that selling will not be the inevitable outcome.

Our second insight is that in analyzing the distorted choice structure of homeowners in racially changing neighborhoods, it is useful to analogize it to the market for corporate control. In particular, we will show that a comparison of the choice dynamics of shareholders and homeowners is valuable not only in identifying the motivations that lead individuals to sell their assets, but also in crafting solutions to change the distorting


21. Overcoming the problem of dynamic resegregation will mean (1) if a payoff matrix generating a resegregation game exists, altering the economic incentives in the housing market to form a matrix that will generate an integration game, and (2) if an assurance game exists, signaling players that selling will not be the inevitable outcome.
effects of market panic. The study of the choice dynamics of shareholders has advanced well beyond simple game theory grids. Legal and economic scholars have developed techniques and modes of analysis whose sophistication is matched only by the colorfulness of their attendant jargon. The multitude of techniques generated by the challenge of tender offers—poison pills, shark repellents, pac-man defenses, and the like—can supply similarly creative responses to the pathologies of white flight and resegregation. These techniques, and others, share one common characteristic: They all alter the incentive structure of buyers and/or sellers in the relevant market. More pertinently, they enable policymakers or takeover targets to neutralize the market distortions caused by panic and thereby permit market participants to reach decisions that are consistent with their true preferences and which maximize social welfare. By the same token, we propose the adoption of mechanisms in the housing market that neutralize the effects of panic and enhance social welfare.

Of course, there are a number of relevant distinctions between the stock market and the housing market. However, these distinctions do not ultimately undermine our methodology; they only necessitate certain adjustments in the importation of the techniques employed in the corporate context into the housing context. By utilizing the right techniques, policymakers can alter the incentive structures that lead to white flight. We draw on the stock market techniques used to eliminate panic and other distortions to devise a set of measures for remedying the distortions in racially changing housing markets.

Specifically, we propose four techniques—home-equity insurance, realty sales taxes, institutional subsidies, and growth controls—that alter the payoff structure for participants in the housing market and create reassuring signals to combat the presumption of eventual resegregation. First, equity insurance, properly implemented, can imitate the effects of some versions of the poison pill, which compensate shareholders who sell their shares in the "back end," thereby eliminating the incentive to sell quickly in the face of racial change. Second, a tailored home sales tax produces effects similar to this variety of poison pill, and, in addition, generates a "cooling-off" period during which homeowners can rationally evaluate their options. Cooling-off periods have proven important in combatting distortions in the market for corporate control.22 Third, sub-

22 Cooling-off periods have been widely utilized in the context of the market for corporate control, both in legislation and in defensive techniques such as the deadhand poison pill. See Jeffrey N. Gordon, "Just Say Never?" Poison Pills, Deadhand Pills, and Shareholder-Adopted Bylaws: An Essay for Warren Buffett, 19 Cardozo L. Rev. 511, 512–14 (1997); Dale Arthur Oesterle, Delaware's Takeover Statute: Of Chills, Pills, Standstills, and Who Gets Iced, 13 Del. J. Corp. L. 879, 879–88 (1988). Cooling-off periods have also proven useful outside the context of the market for corporate control. The most notable example of that is the installation of "circuit breakers" into the New York Stock Exchange following the October 1987 market fall. The circuit breakers were designed to "slow the action on turbulent days and give cooler heads a chance to prevail." John J. Phelan, Jr., Setting Controls on Volatility in the Securities Market, Chi. Trib., Nov. 6, 1989, § 1, at 19.
sidies for community institutions resemble "flip-over" techniques from the market for corporate control, thus granting non-selling homeowners the benefits of remaining in an integrated neighborhood. Fourth, we show that regional growth controls, like "pac-man defenses" in the market for corporate control, can reverse market dynamics and discourage resegregation. To be sure, these techniques hardly exhaust the list of mechanisms that can be borrowed and adapted from the field of securities and corporate control. Nor does our analysis of the incentive structure of dynamic resegregation exhaust the myriad phenomena that lead to segregation. But the central insights of this Article regarding the economic incentive structure that accompanies resegregation should guide policymakers seeking strategies to foster a more integrated American society.

It is unlikely that the measures we propose will eradicate racial segregation altogether. Indeed, it is quite likely that certain white homeowners will prefer to pay above and beyond market price for segregated housing. To them, the elimination of all financial incentives to engage in dynamic resegregation will not matter, as they are driven by racial animus for which they may be willing to sacrifice a great deal. Thus, we cannot submit that our proposed scheme will uproot racism completely. Yet, the game-theoretic perspective we develop offers two significant benefits over the existing situation. First, it is likely to reduce dramatically residential resegregation in the United States. Second, it leads to a separating equilibrium in which racially motivated homeowners will be forced to separate themselves from the rest of the public. By neutralizing the economic bias to resegregate, we make racially driven homeowners reveal their true colors and deal with the social consequences of their preferences. Consequently, implementation of our proposal will prevent racially motivated homeowners from seeking refuge in economic rhetoric as a justification for their racial preferences. This, in turn, will finally enable policymakers to combat effectively the racial roots of residential segregation. Therefore, even if our proposal does not result in the elimination of residential segregation, it constitutes a major step toward achieving that goal. Moreover, the adoption of our proposal would place the cost of dynamic resegregation on the parties who most strongly resent housing integration.

Structurally, the Article consists of five parts. In Part I, we describe the phenomenon of segregation and its historical development in the United States. In Part II, we turn to dynamic resegregation. After summarizing Thomas Schelling's popular tipping model, we offer an alternative game-theoretic analysis that explains the incentives leading to dynamic resegregation. In this Part, we challenge Schelling's game-theoretic model of resegregation and present an alternative three-game model of the dynamics of the housing market. In Part III, we compare the incentive structure that leads to distorted choices in response to tender offers and discuss several techniques that have been used to com-
bat panic sales in this context. In Part IV, we derive our solutions for the problem of dynamic resegregation from our analysis of tender offers. We propose equity insurance, transaction taxes, institutional subsidies, and growth controls as likely mechanisms for correcting the distortions of preference that encourage white flight and resegregation. Finally, in Part V, we address several potential objections to our proposed solutions on moral, legal, and practical grounds.

I. THE SEGREGATION PATHOLOGY

Of the various problems facing American society, segregation in the housing market is no doubt one of the most persistent and troubling ones. In addition to the abstract inequity inherent in any differential treatment of human beings on the basis of race, housing segregation inflicts numerous concrete harms on its victims. Segregation restricts employment opportunities for minorities, perpetuates education gaps, and creates an environment congenial to crime and a host of other social pathologies. These social problems reinforce and perpetuate negative stereotypes against blacks and other minorities, which, in turn, diminish the likelihood of achieving residential integration. Thus, housing segregation creates a vicious cycle for blacks and other minorities, preventing them from becoming equal citizens in American society.

In the following sections we will review the history of housing segregation in the United States and analyze its causes.

A. A Review of the History of Modern Housing Segregation

Modern housing segregation dates back to the Great Migration of blacks to the northern United States. While the causes of segregation have changed over time, the magnitude of the problem has remained relatively static over the last half century. In a recent study, Professors

23. See, e.g., Tom C. Clark & Philip B. Perlman, Prejudice and Property: An Historic Brief Against Racial Covenants 14 (1948) (describing—in a brief written by the United States Attorney General and Solicitor General, and submitted before the Supreme Court on behalf of the Justice Department—the deleterious social impact of segregation resulting from racial restrictive covenants); Sander, The Problem of Fair Housing, supra note 5, at 875 (describing the persistence of the urban ghetto, which "isolates many blacks from employment opportunities in the suburbs, perpetuates segregation in the schools, and creates an environment where crime, gangs, drug use, and a range of other social problems flourish").


26. See, e.g., Sander, Housing Segregation, supra note 19, at 978 (asserting that despite the civil rights achievements of the 1960s, "blacks continued to be extraordinarily segregated"); Douglas S. Massey & Nancy A. Denton, Trends in the Residential Segregation
Cutler, Glaeser, and Vigdor divide the modern history of segregation into three periods, each characterized by a different set of causes. The first period, 1890 through 1940, witnessed the emergence of the black ghetto and its evolution into a widespread phenomenon. This period was characterized by a massive migration of blacks from the agricultural South to the industrial North, a movement that dramatically transformed the racial composition of urban residential areas. Cutler, Glaeser, and Vigdor report that "[i]n 1890, the average urban black lived in a neighborhood that was 27 percent black; by 1940, that neighborhood was 43 percent black."27 Throughout that period, segregation resulted from the preferences and actions of both whites and blacks. While whites favored segregation because of racial animus towards blacks,28 blacks chose to flock together for a completely different reason. For blacks, and other minorities, clustering together facilitated the transition to the new environment of the urban North.29 As was the case with many immigrant groups that arrived in America, living among their own enabled blacks to preserve...
their cultural heritage, and recreate social and religious institutions that softened the adjustment to the new reality. At the same time, whites employed various legal and illegal means to thwart any attempts at integration. These included racial zoning ordinances, racially restrictive covenants, organized realtor practices, and racial violence. Hence, it is highly likely that segregation would have occurred during that period irrespective of the preferences of blacks.

The second period, 1940 through 1970, was marked by an expansion of segregation. Continuing migration to urban centers exacerbated preexisting racial tensions, and ghettos were created in many city centers. By 1970, segregation had reached unprecedented heights. Cutler, Glaeser, and Vigdor estimate that in 1970, "the average black in urban America lived in a neighborhood that was 68 percent black," and Sander adds that in that year, "roughly seven out of every eight blacks in large U.S. cities . . . resided in a ghetto." During this period, segregation was perpetuated, and expanded, by means of "concerted group ra-

30. Scholars have recognized the potential benefits of pooling together. See, e.g., Davis McEntire, Residence & Race: Final and Comprehensive Report to the Commission on Race and Housing 133 (1960) (noting that segregation studies may include both enforced and voluntary segregation); Roy L. Brooks, Analyzing Black Self-Esteem in the Post-Brown Era, 4 Temp. Pol. & Civ. Rts. L. Rev. 215, 216 (1995) ("[B]lack institutions rather than white (or integrated) institutions are the key to the development of healthy black self-esteem"). But cf. Spear, supra note 25, at 53-54, 225-27 (noting rise of separatist Racial Solidarity movement in Chicago as a response to discrimination, but arguing that the movement was ultimately unsuccessful).

For a discussion of the benefits pulling together offered to immigrants see Drake & Cayton, supra note 25, at 174 ("It is not unusual for a language, nationality, or racial group to begin life in the city as a 'colony.'"); Herbert J. Gans, The Urban Villagers: Group and Class in the Life of Italian-Americans 15-16 (1962) ("The sharing of values was also encouraged by the residential stability of much of the population."). This phenomenon is widely known as the "port of entry" theory.

To be sure, there existed important differences between immigrant communities and African-American communities. Culturally, and, of course, linguistically, the transition might have been easier for African-Americans than it was for other immigrant groups. Yet in both cases, creating separate communities helped the newcomers adjust more quickly to the new lifestyle imposed by the new environment.

31. Such ordinances were ultimately held unconstitutional and unenforceable in Buchanan v. Warley, 245 U.S. 60 (1917).

32. See, e.g., Clark & Perlman, supra note 23, at 14 ("Racial covenants have a dominant role in maintaining and enforcing this pattern of Negro residential segregation."); Drake & Cayton, supra note 25, at 178-80 (listing numerous violent activities carried out by whites to create and enforce race segregation); McEntire, supra note 30, at 241-45 (describing the role of real-estate brokers in enforcing and creating race segregation); see also Sander, The Problem of Fair Housing, supra note 5, at 877 (suggesting that violence, restrictive covenants, realtor practices, and poverty could all have contributed to racial segregation).

33. See Cutler et al., supra note 5, at 456.

34. Id.

35. Sander, The Problem of Fair Housing, supra note 5, at 883 (noting, however, that "this is an oversimplification").
on the part of white property owners. At the beginning of this period, the most widely used mechanism of exclusion was restrictive racial covenants that barred sales of property to minorities. Professors Clark and Perlman suggested in 1948 that restrictive racial covenants were inserted into eighty percent of the deeds in certain areas. The use of racially restrictive covenants as a lawful means of exclusion came to an abrupt end in the landmark case of Shelley v. Kraemer. In Shelley, the Supreme Court ruled that even though racial covenants are private agreements that do not violate the Fourteenth Amendment, their enforcement by the Court would violate it. However, by that time, racial segregation was a fait accompli, and while the Court’s intervention successfully blocked the proliferation of the malady by legal vehicles, it failed to reach its deeper social roots. At that stage, segregation was an already prevalent social reality, and this kind of judicial effort alone could not eradicate it. Even though the Supreme Court’s ruling in Shelley declared racially restrictive covenants legally unenforceable, white homeowners continued to honor them, thus rendering the enforceability issue moot.

The other branches of the federal government finally joined the battle against segregation in the 1960s. The first salvo occurred in 1962, when President Kennedy issued an executive order that prohibited racial

36. A synonymous term sometimes used in the literature is “collective action racism.” See, e.g., Cutler et al., supra note 5, at 476 (describing an identical phenomenon as “collective action racism”).

37. See Clark & Perlman, supra note 23, at 14; Massey & Denton, American Apartheid, supra note 2, at 36–37 (discussing the central role of restrictive racial covenants in the creation of ghettos).

38. See Clark & Perlman, supra note 23, at 15, 88 n.23.


40. See id. at 13, 20. Consistent with this reasoning, the Court held five years later in Barrows v. Jackson that a white seller who sold to blacks, in violation of a racial covenant, was not liable to pay damages to his neighbors. 346 U.S. 249, 251, 257 (1953). Finally, in 1968, in Jones v. Alfred H. Mayer Co., the Supreme Court ruled that section 2 of the 1866 Civil Rights Act “bars all racial discrimination, private as well as public, in the sale or rental of property.” 392 U.S. 409, 413 (1968).

41. See Sander, The Problem of Fair Housing, supra note 5, at 878.

42. See id. at 895 (noting that in the 1950s and 1960s “[d]iscrimination was not only socially accepted but socially expected”).

43. See McEntire, supra note 30, at 74–77.

44. See Sander, The Problem of Fair Housing, supra note 5, at 879–81. Before joining the struggle for integration, the government was often actively fighting on the opposite side. See Orfield, Housing Integration, supra note 6, at 23 (“The courts upheld, and the federal government strongly encouraged, a system of racial covenants that made integrated housing illegal in many areas.”); Sander, The Problem of Fair Housing, supra note 5, at 879 (suggesting that federal housing agencies “were at best indifferent towards residential segregation and often actively promoted it” (footnotes omitted)); see also John M. Goering, Introduction to § 4, Racial Desegregation and Federal Housing Policies, in Housing Desegregation and Federal Policy, supra note 6, at 197–200 (listing examples of government agencies, such as HUD, actively promoting and creating segregation).
discrimination in any federally supported housing activity. Although the direct effect of the order was quite modest, it spurred state and local legislation against discrimination, and popular pressure for more comprehensive legislation began to mount. In 1968, Congress enacted the Fair Housing Act. Essentially, the Fair Housing Act effected three important changes in the housing market. First, it prohibited most owners and renters from engaging in discriminatory practices in transactions involving their property. Second, it extended the same prohibition to institutional actors such as real-estate brokers and mortgage lenders. Finally, the Act called on the federal government to promote fair housing and establish adequate enforcement mechanisms. Since the enactment of the Fair Housing Act, nearly all levels of American government have made continuous, consistent efforts to eradicate segregation. Alas, the dramatic change in the legal and political environments has had but a minimal effect on the prevalence of segregation as a social phenomenon.

Between 1970 and 1990, the third and final stage in Cutler, Glaeser, and Vigdor's scheme, segregation waned somewhat. However, the decline fell far short of the optimistic expectations of integrationists. There is some disagreement among scholars in the field as to the exact rate of the decline. Professors Massey and Denton, representing the pessimistic view, maintain that between 1970 and 1990 segregation dropped by 7.5%. Cutler, Glaeser, and Vigdor, representing the more optimistic

46. See Sander, The Problem of Fair Housing, supra note 5, at 879–80 (noting that "the order affected only a small fraction of the nation's housing and lacked a well-defined enforcement component").
47. 42 U.S.C. §§ 3601–3619 (1994) (Title VIII of the Civil Rights Act of 1968). It is noteworthy that there is an ongoing debate as to the goal of the Fair Housing Act. Under the more narrow view, the only goal of the Act was to eliminate discriminatory practices in the housing market. Under the more expansive one, the goal of the Act was not only to ban discriminatory practices, but also to promote integration in the housing market. For possible support for both views, see generally Tein, supra note 19, at 1466–67 (concluding that the expansive view is doubtful given the text and legislative history of the Fair Housing Act).
49. See id. §§ 3605–3606.
50. See id. §§ 3608–3614.
51. See, e.g., Sander, The Problem of Fair Housing, supra note 5, at 882–83 (observing that "fair housing laws have barely dented the pervasiveness of racial segregation").
52. See Cutler et al., supra note 5, at 471–72 (citing Massey & Denton, American Apartheid, supra note 2). Massey and Denton concluded that average segregation in the 30 residential areas with the largest black populations dropped by seven percentage points between 1970 and 1990. See Massey & Denton, American Apartheid, supra note 2, at 222 tbl.8.1.
view, estimate the decline at 16.7%. Yet, even if the latter figure is correct, it is still striking that segregation was much more pervasive in 1990 than it was in 1940. According to Cutler, Glaeser, and Vigdor, "[b]y 1990, the average black lived in a neighborhood that was 56 percent black," and 98 of the 313 metropolitan areas constituting the database had a ghetto. In the same vein, in his 1988 study, Sander observed that "in many cities, over eighty percent of the black population lives in virtually all-black neighborhoods." Furthermore, they observe that looking at segregation at a national level disguises a basic fact: "[T]he relative segregation of different cities is very stable over time." Of the five most segregated cities in 1890, three—Chicago, Cleveland, and Detroit—have managed to retain this dubious distinction one hundred years later. These findings suggest that once segregation becomes prevalent in a certain area, banning its perpetuation by legal means is unlikely to reverse the trend. Indeed, the comprehensive legislative and judicial ban on discrimination alleviated the problem of "concerted," or "centralized," segregation, but it failed to remedy the problem of "decentralized segregation." Law, after all, is not the only incentive affecting human behavior.

Exploring the cause of the limited effectiveness of the Fair Housing Act, economists have found that after the Court banned discriminatory covenants and zoning, segregation has been maintained by collective actions on the part of white property owners. In their comprehensive study of discrimination in the housing market, Cutler, Glaeser, and Vigdor observe that "at the middle of the century, blacks paid relatively more for housing in segregated cities than in integrated cities," whereas "[b]y 1990 . . . whites paid more for equivalent housing than blacks in more segregated metropolitan areas." After the enactment of the Fair Housing Act, supra note 5, at 472. The authors explain that the difference between the figure is attributable in part to disagreement about definitions (i.e., who should be considered white and who should be considered a minority) and also in part to the use of different samples. Cutler and his colleagues further report that when they used Massey and Denton's sample, while retaining their set of definitions, they found a decline of 10.8 percentage points. See id. at 456.

53. See id. at 471. However, this figure actually represents a decline from the situation in 1970. See id.
54. Id. at 472.
55. Sander, The Problem of Fair Housing, supra note 5, at 875.
56. Cutler et al., supra note 5, at 472. More specifically, the authors note that "[t]he correlation across cities between segregation in 1890 and segregation in 1990 is as high as 50%." Id. at 457.
57. See id. at 457.
58. Indeed, there is ample evidence that the impact of the Fair Housing Act was much more limited in areas in which segregation had been widespread at the time the Act was enacted. See Sander, The Problem of Fair Housing, supra note 5, at 898–99 (contrasting Oakland, where attempts at integrating the city's large black ghetto have met with limited success and resegregation is substantial, with San Antonio, where attempts at integrating the small black population were relatively successful).
59. Cutler et al., supra note 5, at 457.
ing Act, whites could no longer use centralized means of exclusion, and had to settle, instead, for a more expensive and less effective method of exclusion: decentralized segregation. Thus, although the Fair Housing Act did not eliminate the problem of segregation, it changed the primary method used to maintain it.

At the end of the day, there are three important things to note about the effect of the Fair Housing Act on the problem of segregation. First, it eliminated the most effective and cheapest way to maintain segregation, and thus, increased the cost of pursuing this goal. Second, it passed the cost of maintaining segregation on to white property owners, forcing them to exclude minorities by fencing themselves in, rather than fencing minorities out. Third, and finally, it did not raise the cost of segregation sufficiently to eradicate the problem. The last point merits elaboration. Economic theory suggests that if the cost of maintaining segregation were higher than the benefits conferred by segregation, integration would result. Evidently, passing the cost of maintaining segregation on to white homeowners did not completely offset the benefits of segregation. Understanding why requires an in-depth analysis of the monetary and non-monetary factors that impact the decisions of white homeowners in the face of a change in the racial composition of their neighborhoods. The next section undertakes this task.

B. The Intricate Web of Racial and Monetary Motivations

A review of the literature on housing segregation reveals two main hypotheses as to why white homeowners in segregated neighborhoods are averse to minority entry. The first, and more straightforward one, is

61. Most commentators agree that the supply side is the key to maintaining segregated housing. See, e.g., Armstrong, supra note 19, at 1059 and sources cited therein. Although we focus on the supply side, we recognize that the demand side warrants attention as well. Unfortunately a full analysis of the demand side is beyond the scope of this Article. For an example of a study discussing demand-side-oriented remedies (that unfortunately collapses racial and socioeconomic categories), see J. Mark Powell, Fair Housing in the United States: A Legal Response to Municipal Intransigence, 1997 U. Ill. L. Rev. 279, 298–313 (discussing two types of demand-side remedies, mobility grants and “fair share” legislation, and concluding that they can be effective in fighting resegregation). Sander too has proposed demand-side subsidies. See Sander, The Problem of Fair Housing, supra note 5, at 931–52. Other discussions of demand-side proposals to overcome segregation may be found in Bruce S. Gelber, Race-Conscious Approaches to Ending Segregation in Housing: Some Pitfalls on the Road to Integration, 57 Rutgers L. Rev. 921, 958 (1985) (arguing that measures such as affirmative marketing can promote racial integration without compromising the rights of homeowners), and Suja A. Thomas, Note, Efforts to Integrate Housing: The Legality of Mortgage-Incentive Programs, 66 NYU L. Rev. 940, 944–52 (1991) (concluding that properly structured mortgage incentive programs can be valid under the intermediate scrutiny test and the Fair Housing Act).

62. See generally David R. Harris, "Property Values Drop When Blacks Move In, Because...": Racial and Socioeconomic Determinants of Neighborhood Desirability, 64 Am. Soc. Rev. 461, 461 (1999) (summarizing theories on white aversion to minority integration).
aversion to minorities per se. The second is fear of adverse economic effects associated with minority entry. Under the first view, it is pure racial animus that spearheads resegregation. Under the second, race is merely a proxy for negative economic implications—either real or perceived. While both views are in agreement about the fact that race plays a crucial role in the decisionmaking process of white homeowners, they differ as to the reason.

Champions of the pure racism hypothesis claim that whites' aversion to black neighbors stems from racism. Lawrence Bobo is the most notable herald of this view, which maintains that whites dislike blacks simply because of negative stereotypes. On this view, negative stereotypes of blacks and Latinos cause whites to resist integration, and prompt them to move out of neighborhoods into which blacks relocate. Yet, whites' aversion towards integration is not purely emotional. Bobo, as well as other commentators who subscribe to this view, explain that, for whites, residential segregation is the key to maintaining their longstanding privileged social status. Hence, whites "tend to view integration with any of

63. See Bobo & Zubrinsky, supra note 9, at 903.
65. Understanding the exact causes of segregation holds the key to solving the problem. In this context, Harris makes the following argument:
   If whites avoid blacks because they are black, then stable integration is unlikely; no matter what policy is pursued, whites will still object to living near blacks. Alternatively, if whites avoid blacks because of characteristics associated with being black, then stable integration can be achieved through policies that promote racial integration while minimizing undesirable nonracial characteristics.
Harris, supra note 62, at 462. While we agree that identifying the cause or causes of segregation is a prerequisite for solving the problem, we do not share Harris's view that racial animus is an insurmountable obstacle. As we will show, even racial animus can be overcome if the expected payoff from staying in a racially changing neighborhood is sufficiently high. Granted, the cost of overcoming racial animus may be much higher than the cost of neutralizing the impact of negative economic effects associated with race. But this does not change the fact that, in principle, both problems can be cured. Thus, in contrast to Harris, we believe that from a policy standpoint the difference between the two hypotheses is one of degree—i.e., the price of remedying them—and not of kind.
66. See Bobo & Zubrinsky, supra note 9, at 904. A 1990 study by St. John and Bates provides some empirical support for this view. St. John and Bates found that whites in Oklahoma City rank neighborhoods less favorably as the percentage of black residents increases, even when crime rate, neighborhood cleanliness, interneighbor cohesion, and distance from city center were held constant. See Craig St. John & Nancy A. Bates, Racial Composition and Neighborhood Evaluation, 19 Soc. Sci. Res. 47, 56, 58-60 (1990).
68. See Bobo & Zubrinsky, supra note 9, at 904; see also Massey & Denton, American Apartheid, supra note 2, 182-85 (describing the systematic process by which whites turned
the minority groups as threatening or undermining a previous status relation of superiority.  

The proxy hypothesis assigns a different role to race. Under this hypothesis, it is not racial animus per se, but rather various negative effects people associate with race that drive them to leave racially changing neighborhoods. That is, it is not minorities that whites are striving to avoid, but rather low socioeconomic status and the vices associated with such status. The primary vices on the list include crime, poor education, unemployment, and out-of-wedlock birth. These phenomena have an obvious undesirable impact on quality of life and consequently on real-estate prices. Social scientists have found that entry by low-socioeconomic-status residents often introduces the problems of poverty, drug use, and other types of crime, which reduce the motivation of other dwellers to invest time and effort in maintaining the neighborhood. This, in turn, causes consistent deterioration in the condition of buildings and other neighborhood facilities. Once this process occurs, the more affluent residents leave for better neighborhoods, and the less affluent families fill the vacancies created by their departure. Generally, the new residents lack sufficient financial means to improve, or even maintain, their homes, and further deterioration results. As this process continues, the downward trend becomes virtually irreversible, and real-estate values drop dramatically. Because many social problems that trigger neighborhood decay are disproportionately concentrated in neighborhoods with large black populations, many whites believe that the best way to avoid the problem is to live in a predominantly white neighbor-
hood. Thus, under the proxy hypothesis, "racial preferences simply represent a desire to live in areas free of crime, deteriorating buildings, ineffective public schools, and other social ills."74

Interestingly, the bulk of the literature on segregation treats the two hypotheses as mutually exclusive, but, as David Harris correctly points out, there is no reason why it should be so.75 Both theories may explain continued racial segregation. Indeed, a certain percentage of the white population may oppose integration for purely racial reasons, while the remainder may be reluctant to pursue it for economic reasons. Moreover, both rationales may apply to the same individual; an individual may oppose integration for both racial and economic reasons. Purporting to cure this methodological flaw, Harris's 1999 study develops a new approach for gauging the relative roles of racial and nonracial factors in residential segregation. Rather than relying on respondents' responses to questioners—which may or may not reflect their true beliefs—Harris focuses on real-estate buyers' and sellers' actual preferences by analyzing housing prices in real market transactions.76 He finds that prices of residential units drop by 16% when the percentage of blacks in a neighborhood changes from less than 10% to 10-60%. Translated into dollar terms, this drop represents a $1,187 reduction in annual costs for the average dwelling unit.77 A much steeper decline in real-estate value occurs when the percentage of blacks exceeds 60%. In the latter case, Harris estimates a loss of 46% of the annual value, which represents a $3,351 reduction in annual housing costs for the average unit.78 Based on these findings, Harris concludes that race effects on property values "are highly significant both statistically and substantively, and are consistent with the observation that 'property values drop when black families move in.' "79

74. Harris, supra note 62, at 464.

75. See id. (noting that "[m]any studies assess the importance of racial or nonracial neighborhood factors, rather than racial and nonracial neighborhood factors" but that researchers must examine both factors to distinguish between the pure discrimination hypothesis and the racial proxy hypothesis). But see Bobo & Zubrinsky, supra note 9, at 892-99, 904 (critically analyzing both theories and concluding that "individual and institutional discrimination" is the main cause of racial segregation in the United States); Harris, supra note 62, at 464.

76. See Harris, supra note 62, at 465-67.

77. See id. at 471.

78. See id. This result is consistent with observations reported by other commentators. See, e.g., Farley et al., supra note 64, at 775-77 (noting drop in property value in Detroit as black population increased). Harris reports considerable variation in price effects in different geographic submarkets:

Western housing loses no more than 33 percent of its value when located in neighborhoods that are more than 10 percent black. By contrast, reductions in annual costs are as much as 40 percent in the South, 52 percent in the Midwest, and 70 percent in the Northeast for dwellings located in neighborhoods that are more than 10 percent black.

Harris, supra note 62, at 472 (footnote omitted).

79. Harris, supra note 62, at 471 (quoting Farley et al., supra note 64, at 775).
In analyzing the causes of these price reductions, Harris posits that socioeconomic factors, such as "neighbors' income, employment status, and educational attainment are the significant neighborhood-level determinants of property values in all regions."80 However, Harris's study does not completely discard the pure discrimination hypothesis. On the contrary, controlling for socioeconomic factors, Harris finds that the pure discrimination hypothesis does play a role in the decisions of white homeowners. Moreover, he identifies a significant difference in attitude towards black entry between white renters and white homeowners. Whereas rental property drops only marginally when the percentage of blacks exceeds 10%, owner-occupied units lose 21% of their annual value.81 This finding can be reconciled with the pure discrimination hypothesis, which argues that race per se is a factor affecting property values and neighborhood desirability irrespective of other socioeconomic factors.82 It is important to recognize that only a unified account that takes both hypotheses into consideration can aptly capture the causes of segregation and provide a sound basis for institutional responses to the problem.

II. DYNAMIC RESSEGREGATION AND GAME THEORY

A. Schelling's Dynamic Model of Segregation and Its Limits

Having examined the history of segregation and its causes, we now turn to the mechanisms by which segregation is maintained. In this section, we examine in depth the dynamic model of segregation—the model that best explains how segregation is being maintained in the post-Fair Housing Act era. We do so by first examining the popular tipping model developed by Thomas Schelling to explain why neighborhoods resegregate. We then consider three shortcomings in Schelling's model and offer a richer, alternative game-theoretic model to explain resegregation.

1. Schelling's Tipping Model. — Thomas Schelling was the first to develop a basic model of the choice structure of homeowners in situations of dynamic segregation.83 Schelling's tipping model is predicated on the assumption that whites vary considerably in their racial tolerance and, consequently, in their preferences for integration. When the first blacks move into a predominantly white neighborhood, they "tip out" the least tolerant whites, causing them to leave for a more white neighborhood. The departure of those whites creates vacancies that are filled by new black families, which leads, in turn, to the departure of additional whites.

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80. Harris, supra note 62, at 474.
81. See id.
82. See, e.g., Bobo & Zubrinsky, supra note 9, at 903-04 (noting that elements of both hypotheses seem valid, but concluding that prejudice is more important as a factor).
who are only marginally more tolerant than the first to leave. Once again, black families buy some of the housing units that have become available, thereby prompting still more whites to leave. In the extreme case, this process will continue until the former predominantly white neighborhood becomes completely black. In intermediate cases, the process will result in a predominantly black neighborhood with a white minority comprising mainly residents of low socioeconomic status. Thus, regardless of the end result, this dynamic of black entry and white departure vitiates the possibility of attaining sustainable integration. But why are there not intermediate equilibria? Why, for example, can’t this process lead to a racial composition of 50% whites and 50% blacks in equilibrium? After all, if whites really prefer integration, shouldn’t they stop leaving at some point? Conversely, why do blacks keep moving into neighborhoods vacated by whites when they know that doing so will result in resegregation? To answer these questions, it is necessary to understand the problem of “tipping points” and its effect on resegregation.

Numerous studies indicate that a majority of both whites and blacks prefers, or at least, does not object to, residential integration. In response to opinion polls, a majority of whites consistently expresses willingness to live in a stably integrated area, especially with blacks who have a similar socioeconomic background. Moreover, in a national sample, 66% of the white respondents expressed a preference for living in either a “mostly white,” or a “half-white, half-black,” neighborhood. With respect to blacks, the evidence supporting integration is even stronger. Not

84. For example, a national poll conducted in 1976 indicated that 88% of the white respondents expressed the view that blacks should be able to live wherever they want. See Schuman et al., supra note 11, at 74–75; cf. Herbert H. Denton & Barry Sussman, Blacks, Whites Agree Blacks Have Gained, Differ on What’s Ahead, Wash. Post, Mar. 24, 1981, at A1. However, the same poll found that 60% of whites thought that whites should be able to exclude blacks from their neighborhoods if they wanted to. See Schuman et al., supra note 11, at 74–75.

Recent polls seem to corroborate these findings. See Kevin Sack & Janet Elder, Poll Finds Optimistic Outlook but Enduring Racial Division, N.Y. Times, July 11, 2000, at A1: 85 percent of whites said they did not care whether they lived in an area where most of their neighbors were white or where most were black. But two-thirds of the whites said they thought most white people preferred to live in white areas. And perhaps most telling, 85 percent said they actually live in areas where they have no or few black neighbors, the same percentage that said they had no preference.

The variations in responses may depend on how the questions are being framed. See Kinder & Sanders, supra note 11, at 183–95.


86. Sander, The Problem of Fair Housing, supra note 5, at 896 n.189 (citing Clark, supra note 85, at 59). But see Massey & Denton, American Apartheid, supra note 2, at 92–93 (reviewing studies showing increasing white apprehensiveness as the proportion of blacks in a neighborhood rises).
only do opinion polls consistently demonstrate that a sizable majority of blacks favors integration, but actions taken by blacks also provide empirical evidence of the expressed preference. For instance, a census study of the years 1967-1971 disclosed that during that period blacks who could afford to move into white neighborhoods attempted to do so, and about half actually moved. Given this evidence, the conclusion that generally both whites and blacks prefer to live in integrated neighborhoods is ineluctable. Yet, this result is puzzling. If everyone prefers integration, why is segregation so prevalent? As is often the case, the devil is in the details.

Although most blacks and most whites prefer to live in integrated neighborhoods, they diverge widely as to the exact degree of integration they would choose. Indeed, as Sander points out, whites and blacks “often mean different things when they use the term [integration].” While for most blacks the optimal racial benchmark is roughly 50% black and 50% white, the ideal composition for whites is no more than 20% black. Strange as it may seem, this discrepancy between whites and blacks is the main obstacle to achieving residential integration. Given their stronger preference for integration, blacks will continue to move into a neighborhood until it becomes at least 50% black, but since this percentage exceeds whites’ preference for black neighbors, whites who can afford it will leave en masse to other predominantly white neighborhoods. Indeed, because each group is aware of the other’s preference, resegregation commences once the first wave of blacks moves into a white neighborhood. Thus, once the first wave of blacks moves into a white neighborhood, resegregation becomes a self-fulfilling prophecy.

More importantly, as we show in the next section, variations in preferences between homeowners may translate, in the aggregate, into a situation in which an average preference for integration leads to segregation.

87. See Massey & Denton, American Apartheid, supra note 2, at 88-91 (reviewing various studies of blacks’ attitudes toward integration, especially Detroit in the 1970s).

88. A census study of the years 1967-1971 disclosed that during that period “fifty percent of middle-income blacks and forty percent of moderate-income blacks who moved within urban areas . . . moved into a unit previously occupied by a white household.” Sander, The Problem of Fair Housing, supra note 5, at 894 (citing Larry H. Long & Daphne Spain, Racial Succession in Individual Housing Units 15 (Bureau of the Census, Current Population Reports, Series P-23 No. 71, 1978)).

89. Sander, The Problem of Fair Housing, supra note 5, at 896.

90. See Massey & Denton, American Apartheid, supra note 2, at 93; see also Cutler et al., supra note 5, at 488 (reporting that 67% of blacks surveyed in 1982 preferred to live in a neighborhood that is half white and half black, or mostly white).

91. See Massey & Denton, American Apartheid, supra note 2, at 93. Significantly, Cutler and his colleagues found that 46% of whites surveyed in 1990 refused to live in a neighborhood that is half black. See Cutler et al., supra note 5, at 490. Given the fact that blacks make up significantly less than 50% of the population of the United States, it would obviously be impossible for all communities to reach the racial composition sought by blacks.
2. Shortcomings of Schelling's Tipping Model. — While Schelling's model provides an explanation for the observed phenomenon of dynamic resegregation, it suffers from three major flaws. First, the preferences in Schelling's model are absolute. Second, they are isolated. Third, they are immutable.

Schelling's model hypothesizes that white homeowners who decide whether to leave or stay on the basis of an absolute preference. In the model, once a white homeowner finds herself in a neighborhood whose percentage of black homeowners exceeds her preference, she will exit the neighborhood. But, in reality, the white homeowner's choice is much more complex. She can only decide whether it is advantageous to leave or stay in reference to the cost of relocating and the value of her preference for a given level of integration. For example, let us suppose that homeowner Alice prefers to live in a neighborhood that is 20% black. In Schelling's model, when the percentage of black owners reaches 21%, Alice will leave immediately. But Alice's exit is not frictionless. If Alice's exit cost is $1,000, while her loss from the fact that her racial preference was exceeded is only $100, she will choose to remain. If enough homeowners are similarly situated to Alice, the dynamic segregation can be arrested and a stable integration equilibrium may result.

Second, Schelling's preferences are isolated in that the choices of white homeowners in racially changing neighborhoods are exogenous. But Alice's decision as to whether to stay or leave is largely strategic. Since Alice knows that other homeowners may sell their houses, further changing the racial composition of the neighborhood, her decision to stay or leave necessarily depends upon her prediction of her neighbors' behavior. Suppose, for example, that Alice's loss from exceeding her racial composition preference of 20% is $1,500. If Alice believes that the neighborhood will inevitably become 100% black, then even if the neighborhood has become only 1% black, she will sell immediately.92 She need not wait for the neighborhood to reach 21% black before she is "tipped" out. In other words, Alice decides whether to stay or leave not at the point in time posited by Schelling—the moment the percentage of blacks exceeds 20%—but rather at the much earlier time when Alice predicts that more than 20% of her white neighbors will choose to leave.

Third, the preferences of white homeowners in Schelling's model are predetermined and immutable. He assigns to each owner a preference for a given racial composition at the outset, and this preference does not change thereafter. However, studies show that people's prefer-

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92. There may be instances in which Alice will decide to remain for reasons unrelated to the impending resegregation, such as the lack of available alternative housing. Nevertheless, aside from the marginal benefit of briefly enjoying an optimal racial mix on the way to resegregation, there is little reason for Alice to wait for her "tipping point" to be reached once it is clear that resegregation is inevitable.
ences shift over time in response to changes in external circumstances.\textsuperscript{93} For example, it is possible that at the outset, when the neighborhood is 100\% white, Beth prefers to live in a 5\% black neighborhood. However, after living for some time next to a black neighbor, Beth may learn to adjust her preference to a 20\% black neighborhood. This phenomenon is widely known in the literature as the production of "adaptive preferences."\textsuperscript{94}

As a result of these shortcomings, Schelling's model leads one to believe that dynamic resegregation is unavoidable. Schelling's game-theoretic presentation suggests the rush of lemmings towards a cliff. In particular, it presents integration as a desirable yet unattainable goal. We challenge both Schelling's characterization and his ultimate conclusion.

B. An Alternative Game-Theoretic Model of Dynamic Segregation

The shortcomings of Schelling's model are best illustrated through the prism of game theory. In this section, we show that Schelling's model can be transformed into three different game matrices depending on the relative values white homeowners ascribe to their integration preferences. This exposition demonstrates that Schelling's tipping model need not lead to resegregation, as Schelling predicts, but rather that it may lead to stably integrated neighborhoods depending on the values of the parameters.

To demonstrate the shortcomings of Schelling's model, we present three different game models of the process of black entry, leading to three different outcomes. First, we present a model in which white reaction to black entry leads to a dominant strategy of resegregation as predicted by Schelling's basic model. Second, we present a model in which black entry leads to an assurance game, in which there is no dominant strategy, and, as a result, the neighborhood may become either integrated or resegregated. Finally, we present a third model in which white reaction leads to an intermediate separating equilibrium in which the neighborhood becomes stably integrated. This three-game model presents a far more accurate description of reality than does Schelling's single model in that it explains why some neighborhoods remain stably integrated,\textsuperscript{95} while others rush over the cliff of resegregation. Although our model is admittedly simplified, it represents the basic choice structure faced by homeowners in neighborhoods experiencing racial turno-

\textsuperscript{93} See Cass R. Sunstein, Democracy and Shifting Preferences, in The Idea of Democracy (David Copp et al eds., 1993). See also McEntire, supra note 30, at 275–76 (noting how changes in racial attitudes can result from integration).


\textsuperscript{95} For examples of stably integrated neighborhoods, see Sander, The Problem of Fair Housing, supra note 5, at 898 nn.199–203 (listing and discussing examples of successfully integrated neighborhoods).
ever: the choice between leaving and staying based upon one's expectations regarding her neighbors' choices. Furthermore, our model captures the central concerns of a homeowner in a potentially resegregating neighborhood: homeowners' preferences, the intensity of those preferences, and relative property values. We further address concerns about the adequacy of our stylized model in Part V of this Article.96

All three of our models are designed around the same basic story. Extending Schelling's framework of analysis, we posit a neighborhood consisting of three houses, initially owned by three white homeowners—Alice, Beth, and Carol. As in Schelling's model, this simplified neighbor-

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96. While we use numerical examples in this section to illustrate the three basic games in our model, these three games, in addition to a fourth game—the strong integration game discussed in Part IV—provide a good proxy for the set of all possible outcomes. That is, in any given case, one of the four games will produce a reasonable analogue for any given choice of numbers. This may be seen by examining a matrix in which we do not know anything about the players' preferences and payoffs. Consider the following matrix, where payoffs are represented by variables whose value we cannot determine. For convenience, we have also included quadrant numbers (I-IV) above the payoff variables in each cell in the matrix.

**Table 1: General Payoff Matrix**

<table>
<thead>
<tr>
<th></th>
<th>Carol Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong> Stay</td>
<td>IV (w_A, w_C)</td>
<td>I (X_A, X_C)</td>
</tr>
<tr>
<td>Leave</td>
<td>III (Y_A, Y_C)</td>
<td>II (Z_A, Z_C)</td>
</tr>
</tbody>
</table>

Without knowing the value of any of the payoffs, we can see that the game can have only four outcomes: two players staying (quadrant IV), which we call the strong integration game in our model; two players leaving (quadrant II), which we call the resegregation game; one player leaving and one player staying (quadrants I and III), which we call the weak integration game; and combination outcomes (any combination of multiple quadrants), where both leaving and staying, in some combination, are equilibrium outcomes, a situation that we represent with the assurance game. Of course, the assurance game is a particular kind of combination outcome (quadrants IV and II), but it represents the basic outcome of integration or resegregation occurring as a result of perceptions of the other player's likely choice.

More generally, in any game of \(n\) players, there will be \(2^n\) cells, of which only one will involve all players staying (the strong integration game) and another one will involve all players leaving (the resegregation game). The other \(2^n\)\(-2\) cells will involve some number of between 1 and \(n-1\) players leaving while the rest stay (the weak integration game). A total of \(2^n2^n-2^n\) combination outcomes are also possible (the assurance game).

The result of the game will depend in all cases—whether there are \(n\) players or simply two players—on the players' payoffs, which, in turn, will rely upon the shapes of the players' preference curves. Our model does not rely upon and does not posit anything about the shape of those preference curves, and we have not attempted to gather empirical data about the mixture of individual preference curves to be found in any given neighborhood.

The foregoing discussion relies upon the simplifying assumption that games have a "winning" outcome whose quality is uniform. By treating outcomes as essentially alike, we ignore the important distinctions between different types of winning outcomes, such as the differences between strongly and weakly dominant strategies. The changes to our model that would be introduced by such complexities are beyond the scope of this note.
hood allows us to examine the choices of a homeowner who looks only to her right and to her left—that is, to the two houses abutting her own. In our model, all three of the white homeowners favor integration (to varying degrees). One of the three white homeowners, Alice, sells her home to a black purchaser. This makes the racial composition of the neighborhood 33% black and 67% white. The remaining two white homeowners, Beth and Carol, must now choose whether to remain in the neighborhood or to sell their homes and leave.

We model the decisionmaking process of Beth and Carol in the three two-player games below. In each model, we vary the assumptions regarding the subjective value the two homeowners attach to their integration preferences.97

1. Resegregation Game. — In this first model, we presume that Beth prefers to live in a neighborhood that is 33% black, but that Carol prefers a neighborhood that is only 25% black (or any other percentage smaller than 33%). However, Beth’s preferences are more elastic than Carol’s. That means that while Carol is mildly discomfited by each incremental divergence from her optimal integration preference, Beth’s reaction is far more extreme.

Beth assigns a value of $100 to her continued residence in her home, so long as the current level of integration remains. Carol attaches less value to her continued residence in her current home, since her optimal level of integration has been exceeded. She assigns a value of $85 to remaining in her current home, and a higher value of $90 to relocating to a new predominantly white neighborhood.98 Beth assigns a value of only $70 to the option of relocating to a new predominantly white neighborhood, reflecting her more extremely graded integration preferences.99 Finally, Beth assigns the even lower value of $60 to remaining in her home, should the neighborhood become 67% black. Should Beth leave while Carol remains, Carol would assign a higher value of $80 to living in a 67% black neighborhood, since her preferences are less graded than Beth’s.

The payoff matrix for this game is as follows:

97. For simplicity’s sake, we ignore concerns of liquidity in all of the games. We also ignore the possibility that a departing owner will sell the property to a white owner with divergent integration preferences.
98. Carol does not assign a value of $100 to the option of moving for two reasons. First, she incurs transaction costs in selling her home and purchasing another. Second, living in a predominantly white neighborhood also fails to correspond to her integration preference.
99. The lower value of this option also reflects the transaction costs in selling her home and purchasing another.
TABLE 2: RESSEGREGATION GAME

<table>
<thead>
<tr>
<th>Carol</th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>100, 85</td>
<td>60, 90</td>
</tr>
<tr>
<td>Leave</td>
<td>70, 80</td>
<td>70, 90</td>
</tr>
</tbody>
</table>

In this game, Beth has no dominant strategy. If Beth believes that Carol will leave, Beth will also choose to leave; if Beth believes that Carol will decide to stay, Beth will elect to stay. Carol, on the other hand, has a dominant strategy. No matter what Beth decides to do, Carol will decide to leave: Leaving guarantees Carol both the highest absolute payoff and the highest average payoff. Thus, the Nash equilibrium for this game is for both homeowners to sell their homes. The result is the one predicted by Schelling: resegregation of the neighborhood.

2. Assurance Game: Segregation or Integration. — In this model, we assume that Beth and Carol now have the same preferences for integration at a level of 33% black. Both also have the same intensity in their preferences. Thus, both Beth and Carol assign a value of $100 to remaining in a 33% black neighborhood, but a value of only $60 to remaining in a 67% black neighborhood. Finally, both assign a value of $90 to moving to a different, predominantly white neighborhood.

The payoff matrix for this game is as follows:

TABLE 3: ASSURANCE GAME

<table>
<thead>
<tr>
<th>Carol</th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>100, 100</td>
<td>60, 90</td>
</tr>
<tr>
<td>Leave</td>
<td>90, 60</td>
<td>90, 90</td>
</tr>
</tbody>
</table>

In this game, there are two Nash equilibria: both players staying and both players leaving. For both Beth and Carol, then, the decision to stay or leave is largely strategic. If Beth thinks that Carol is likely to leave, she too will decide to leave; if Carol thinks Beth will stay, Carol will stay as well. In this game, the outcome depends entirely on the parties' perception of the others' likely move. Thus, it is possible for either stable integration or resegregation to result. This game is known in the literature as an assurance game.

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100. This kind of game is known as the Boxed Pigs game. See Eric Rasmusen, Games and Information: An Introduction to Game Theory 22–25 (2d ed. 1994). This game differs from a classic prisoners' dilemma game in that only one of the players in this game has a dominant strategy. In a classic prisoners' dilemma game, both players have a dominant strategy.

101. Assurance games are also known as Ranked Coordination games. Assurance games are characterized by a payoff structure in which (1) it is always better for the actors to make the same choice (A,A or B,B) than to make dissimilar choices (A,B or B,A); and (2) while both players would be better served by a certain choice (A,A over B,B), that choice is not the players' dominant strategy. While A,A is Pareto optimal, and therefore
3. **Weak Integration Game.** — In the last model, we alter the assumptions of the previous game slightly. Beth is slightly less extreme in her opposition to living in a 67% black neighborhood and she assigns a value of $80 to this outcome. Otherwise the assumptions remain the same.

The payoff matrix for this game is as follows:

**Table 4: Weak Integration Game**

<table>
<thead>
<tr>
<th></th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>100, 85</td>
<td>80, 90</td>
</tr>
<tr>
<td>Leave</td>
<td>70, 80</td>
<td>70, 90</td>
</tr>
</tbody>
</table>

In this game, Carol retains her dominant strategy of leaving. However, due to the change in values, Beth now has a dominant strategy as well; irrespective of Carol's decision, Beth will decide to stay. This game thus has a dominant equilibrium outcome, meaning a single Nash equilibrium. Carol will leave and Beth will stay, meaning that the neighborhood will become stably integrated at 67% black.

4. **The Effect of Dropping Property Values.** — Finally, we must take note of the effect of changing property values on property owners' choices. Schelling's model predicts resegregation irrespective of changes in property values. In fact, Schelling's model omits reference to prices altogether. But, as we have seen, once prices are included in the model, resegregation is not the necessary result in the factual scenario predicted by Schelling. Consequently, changes in property values must be taken into account in predicting homeowner responses.

We demonstrate here that while declines in property values do not change the outcomes of the resegregation and assurance games, they may change the outcome of the integration game. Specifically, declines in property values may transform the integration game into a resegregation game.

Returning to our hypothetical three-house neighborhood, let us presume that the utility of staying in the neighborhood drops by $10 for each 33% increase in black ownership. This drop reflects the decreased property values. For purposes of the game, we will assume that if both homeowners sell simultaneously, they split the loss for the next anticipated 33% change in racial makeup.²³

preferable to B,B, both A,A and B,B are Nash equilibria. See Lewinsohn-Zamir, supra note 11, at 391–99.

²² We label this game the "weak" integration game in contrast with the later "strong" integration game in which the dominant strategy for both players is to stay. See infra Part IV.C.

²³ For simplicity's sake, we assume that if both players decide to leave, they will share equally in the loss associated with the disutility produced by resegregation. Since the values reflect the players' ex ante estimations of their actions' likely payoffs, it is irrelevant
a. The Resegregation Game. — For the resegregation game, we use the same assumptions as in the previous resegregation game, and incorporate the expected property loss values.

Using these assumptions, the new payoff matrix becomes as follows:

**TABLE 5: Resegregation Game, Modified to Reflect $10 Expected Loss in Property Value**

<table>
<thead>
<tr>
<th>Carol</th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>90, 75</td>
<td>40, 80</td>
</tr>
<tr>
<td>Leave</td>
<td>60, 60</td>
<td>55, 75</td>
</tr>
</tbody>
</table>

The change in housing values does not change the players' strategies. Once again, Carol's dominant strategy is to leave, while Beth lacks a dominant strategy and would prefer to follow Carol. The result, once again, is resegregation.

Even if the change in values is more drastic, $30 rather than $10, the result is the same and neither player's strategy changes.

**TABLE 6: Resegregation Game, Modified to Reflect $30 Expected Loss in Property Value**

<table>
<thead>
<tr>
<th>Carol</th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>70, 55</td>
<td>0, 60</td>
</tr>
<tr>
<td>Leave</td>
<td>40, 20</td>
<td>40, 60</td>
</tr>
</tbody>
</table>

Indeed, we may generalize and say that in this game no reduction in value of any size can alter the players' strategy.104

b. The Assurance Game. — In the assurance game, the payoff matrix becomes as follows:

**TABLE 7: Assurance Game, Modified to Reflect $10 Expected Loss in Property Value**

<table>
<thead>
<tr>
<th>Carol</th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>90, 90</td>
<td>40, 80</td>
</tr>
<tr>
<td>Leave</td>
<td>80, 40</td>
<td>75, 75</td>
</tr>
</tbody>
</table>

As in the case of the resegregation game, the change in values does not change the players' strategies. Neither Beth nor Carol has a domi-

---

104. Given the baseline values we have assigned, changes in property values will change the players' strategies only if there is an increase in values of sufficient magnitude.
nant strategy, and, once again, there are two stable equilibria: for both to stay and for both to leave.

Also, as in the case of the resegregation game, even a more drastic reduction in property values fails to alter the underlying strategies.

**Table 8: Assurance Game, Modified to Reflect $30 Expected Loss in Property Value**

<table>
<thead>
<tr>
<th></th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>70, 70</td>
<td>0, 60</td>
</tr>
<tr>
<td>Leave</td>
<td>60, 0</td>
<td>45, 45</td>
</tr>
</tbody>
</table>

Indeed, as in the case of the resegregation game, no reduction in property values of any size can change the players' strategies.  

**c. The Weak Integration Game.** — In the weak integration game, the payoff matrix changes to the following:

**Table 9: Weak Integration Game, Modified to Reflect $10 Expected Loss in Property Value**

<table>
<thead>
<tr>
<th></th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>90, 75</td>
<td>60, 80</td>
</tr>
<tr>
<td>Leave</td>
<td>60, 60</td>
<td>55, 75</td>
</tr>
</tbody>
</table>

Here, again, the players' strategies fail to change. Carol's dominant strategy is to leave, while Beth's is to stay, resulting in an equilibrium of stable integration.

However, if the drop in values is more drastic, the game will become like the resegregation game above, with an equilibrium result of both players leaving.

**Table 10: Weak Integration Game, Modified to Reflect $30 Expected Loss in Property Value**

<table>
<thead>
<tr>
<th></th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>70, 55</td>
<td>20, 60</td>
</tr>
<tr>
<td>Leave</td>
<td>40, 20</td>
<td>25, 45</td>
</tr>
</tbody>
</table>

Due to the reduction in property values, Beth now prefers to leave in the event that Carol leaves, so she no longer has a dominant strategy of staying. Carol's dominant strategy does not change; she will leave regardless. The game's equilibrium outcome, then, is for both players to leave.

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105. However, an increase in property values can alter the players' strategies.
Here, too, we may generalize the result. A small change in property values will not change the game’s outcome, but a sufficiently large reduction in property values will change the game into a resegregation game.

The results of our analysis may be summarized as follows. First, black entry into predominantly white neighborhoods sets in motion a process that may lead to resegregation or to integration. The process may be mapped in three game-theoretic models—the resegregation game, the assurance game, and the weak integration game. Second, the particular game form that the process will take depends on white homeowners' integration preferences and their relative intensity, as well as changes in property values. Third, perceived declines in property values of sufficient magnitude drive white homeowners away from weak integration models, and accelerate the movement toward resegregation of racially changing neighborhoods. Fourth, and finally, perceptions (even inaccurate ones) are crucial in determining how white homeowners will respond to racial change. The likelihood that a white homeowner will abandon a racially changing neighborhood is dramatically enhanced by a perception that property values will decline or that one's white neighbors will leave the neighborhood.

Having described the choice structures of white homeowners in racially changing neighborhoods, we now turn to an analysis of the choice structures of shareholders facing tender offers. The choice structure of shareholders facing tender offers in the market for corporate control closely resembles that of homeowners in neighborhoods facing dynamic segregation. The choice structure in both cases is subject to similar distortions, a factor leading shareholders and homeowners individually and collectively to make decisions that run counter to their individual and collective self-interest. Thus, in analyzing the market for corporate control, we focus on the solutions that have been developed for rectifying distorted choice structures.

III. The Market for Corporate Control as a Model for the Housing Market

A. The Coercive Effects of Tender Offers

We begin our analysis of the similarities between the housing and corporate control markets by introducing the tender offer. The tender offer has been the most common technique for taking control of a corporation in the last several decades. In a tender offer, the would-be acquiror (less complimentarily known as a “raider”) issues an offer to purchase shares from shareholders in the target corporation. The tender offer—the means by which the raider makes the offer—specifies a price that the raider will pay to any shareholder who tenders (i.e., offers) her shares for sale. The purpose of the tender offer is to enable the raider to

obtain a majority of shares in the target corporation, and thereby to gain control over the target. Usually the tender offer contains a limitation specifying that the tenders will only be accepted by the raider if the raider is successful in receiving enough tenders to acquire majority control. If the raider fails to achieve majority control by the deadline specified in the tender offer, the tender offer ends, and the raider does not buy any of the tendered shares.

Tender offers can come in several variations. In a partial tender offer, the raider proposes to purchase only a portion of the shares of the target corporation at a specified price. For example, a raider may issue a tender offer for 51% of outstanding shares in the target corporation. The raider can then take majority control of the corporation with these shares, while leaving the remaining 49% of shares to others in the market.

A popular variation of this is the two-tier, front-loaded tender offer. This tender offer specifies a first, higher price for the first "tier," or front end, and a second, lower price for the second "tier," or back end. However, the tender offer specifies that only a certain portion of the shares on the market will be able to be tendered in the front tier. For example, a raider, R, interested in acquiring target corporation, T, might issue a tender offer containing the following terms. The raider will pay $80 per share for the first 51% of shares tendered to the raider.107 This is the front end or first tier. Remaining shareholders will be paid in newly issued securities worth $50 per share.108 This is the back end or second tier. A technique called the "freezeout" or "takeout" allows the raider to force nontendering shareholders to accept the back-end price. In a freezeout, the raider forces minority shareholders to exchange their shares for an inferior class of shares.109

An "any-and-all tender offer," by contrast, specifies only a single price to be paid to all shareholders who tender by the specified date, without

107. Law or the corporate charter or rules may allocate decisionmaking power in a number of ways, not all of them requiring majority rule. The laws or charter may also specify different levels of control for different decisions. However, the basic point is the same, irrespective of the precise number of shares necessary for control to make particular decisions.


109. In a freezeout, R, the new owner of the target corporation T, merges T into another of R's corporations. Because T ceases to exist, shares in T no longer represent a share of ownership, and R must compensate T's shareholders. R compensates these shareholders by giving them securities of lesser value in the new post-merger corporation. The minority shareholders are thus "frozen out" of their ownership in T. For a discussion of the problems of valuation in a freezeout, see John C. Coates IV, "Fair Value" as an Avoidable Rule of Corporate Law: Minority Discounts in Conflict Transactions, 147 U. Pa. L. Rev. 1251 (1999).
limitation on the number of shareholders who may tender. However, the any-and-all tender offer contains an implicit back end as well, since, after the closing date of the tender offer, the acquiror can execute a freezeout and thereby force minority shareholders to "sell" their shares at a lower, back-end price.

Bebchuk outlined the coercive effects of tender offers in a series of articles in the 1980s. The tender offer, Bebchuk noted, forces the shareholder either to tender her shares at the front-end price specified in the offer, or to risk parting with the shares at the back-end price if the takeover succeeds. So long as the front-end price is higher than the back-end price—and it always is—a shareholder who believes that a tender offer will succeed is best advised to tender her shares according to the terms of the tender offer.

Empirical studies indeed verify that the front-end share price specified in tender offers generally exceeds the market price both prior to the announcement of the proposed takeover and subsequent to its successful completion. That is, the front-end price is usually the best price availa-

110. See, for example, Pantry Pride's offer in Revlon, Inc. v. MacAndrews & Forbes Holdings, 506 A.2d 173, 177 (Del. 1985).


112. For this Article, we have assumed that the relevant actors are not willing to engage in extrajudicial activity. Unfortunately, this is not always the case, and there will certainly be cases of vandalism or even violence when blacks first enter some white neighborhoods. While recognizing the problems of violence and vigilanism, this Article focuses on the more subtle harm of resegregation.

113. See Bebchuk, Pressure to Tender, supra note 111 (discussing SEC study finding lower post-takeover value of minority shares); David W. Leebron, Games Corporations Play: A Theory of Tender Offers, 61 N.Y.U. L. Rev. 155, 186 n.116 (1986) (discussing congressional studies showing that tender offers were generally 15% higher than market value); see also J. Gregory Sidak & Susan E. Woodward, Takeover Premiums, Appraisal Rights and the Price Elasticity of a Firm's Publicly Traded Stock, 25 Ga. L. Rev. 783, 796–98 (1991) (suggesting that competitive takeover market requires bidders to make high front-end offers).
ble for a share, unless another suitor presents a superior offer. Thus, even if a shareholder believes that the "true" value of the share is greater than the front-end price, she will tender her shares, so long as she believes that the tender offer is likely to succeed. As several commentators have noted, the tender offer places shareholders in the familiar position of players in a prisoners' dilemma.114

To return to the earlier example, suppose that shares in target corporation T sell at $65 prior to a tender offer. Rose, a potential raider, issues a tender offer for shares in T at $80 per share in the front end, with a contemplated back end of $40 per share. Any shareholder who believes that the tender offer will succeed will therefore tender her shares at $80, lest she be caught in the back end.

These coercive effects can be expressed in game-theoretic fashion. Let us assume that there are only three shareholders—Rose, Sally, and Theresa—with each holding one-third of the shares of the corporation. Rose issues her tender offer for $80 for one share (which will give her control of two-thirds of the shares) with a contemplated back-end price of $40 for the other share. If Sally and Theresa both tender, the front-end price will be apportioned among their shares, and each will end up with a blended price of $60. If only one tenders, the tendering shareholder will receive the front-end price of $80 and the nontendering shareholder will receive the back-end price of $40. Finally, if neither shareholder tenders, the tender offer will fail and shares will retain their previous value of $65. The payoff matrix for the game is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Rose Tenders</th>
<th>Sally Tenders</th>
<th>Theresa Tenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rose</td>
<td>$60</td>
<td>$80</td>
<td>$40</td>
</tr>
<tr>
<td>Sally</td>
<td>$80</td>
<td>$60</td>
<td>$40</td>
</tr>
<tr>
<td>Theresa</td>
<td>$40</td>
<td>$40</td>
<td>$65</td>
</tr>
</tbody>
</table>

114. See, e.g., Bebchuk, Pressure To Tender, supra note 111, at 922–25 (illustrating how shareholders' tender decisions may be distorted due to the prisoners' dilemma); John C. Coffee, Jr. & William A. Klein, Bondholder Coercion: The Problem of Constrained Choice in Debt Tender Offers and Recapitalizations, 58 U. Chi. L. Rev. 1207, 1224–33 (1991) (demonstrating how corporations use exchange offers to place shareholders in a prisoners' dilemma); Jeffrey N. Gordon, Ties That Bond: Dual Class Common Stock and the Problem of Shareholder Choice, 76 Cal. L. Rev. 3, 42–60 (1988) (discussing the likelihood that shareholders will face collective action problems that permit managers to make wealth-reducing recapitalizations); Robert A. Prentice, Front-End Loaded, Two-Tiered Tender Offers: An Examination of the Counterproductive Effects of a Mighty Offensive Weapon, 39 Case W. Res. L. Rev. 589, 439–44 (1989) (arguing that front-loaded two-tier tender offers, a type of prisoners' dilemma, have a coercive effect on shareholders).

There is much dispute about the reason why front-end prices should be higher than back-end or pre-tender-offer prices. In such instances, the raider believes that the shares are undervalued at market price. This may be because she believes that the market price does not sufficiently reflect the available information concerning the target corporation's prospects for future earnings. Alternatively, it may be because she believes that if she is able to take control of the corporation, she will be able to introduce superior management or synergy, and thereby improve the target corporation's profitability. Another possibility is that the raider may intend to use control of the corporation to divert illicit corporate profits away from the corporation (and, thereby, away from the minority owners) to herself. For our purposes, the motives of the raider are irrelevant. It is important only to note that the price differential between the front-end and back-end prices pressures shareholders to tender.
TABLE 11: TWO-TIER TENDER OFFER

<table>
<thead>
<tr>
<th></th>
<th>Theresa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sally</td>
<td>Don't tender</td>
</tr>
<tr>
<td>Don't tender</td>
<td>65, 65</td>
</tr>
<tr>
<td>Tender</td>
<td>80, 40</td>
</tr>
</tbody>
</table>

The dominant strategy in the game is for both parties to tender, although the players would be better off collectively were they to abstain from tendering. Without the possibility of coordinated action, each player will prefer the payoff of tendering (80 or 60 instead of 65 or 40, respectively).

The end result is that the structure of the tender offer drives shareholders to tender their shares, even if the terms of the tender offer are inadequate.115

B. Responses to Shareholder Coercion

The coercive effects of tender offers have prompted legal regulation and private defensive tactics of all manner and variety. The most extensive regulation is found in the Williams Act of 1968, which was expressly designed to rein in the coercive aspects of tender offers.116 Subsequent legislation in various states has added further legal limitations on tender offers.117 The takeover boom of the 1980s, together with creative lawyering, produced a set of private defensive techniques utilized by firms seeking to ward off unwanted tender offers.118 This section briefly examines these regulations and defensive techniques with an eye toward adopting the techniques for use in the housing market. We must add two important caveats. First, a complete survey of these regulations and techniques is beyond the scope of this Article; indeed, only a book-length work could provide an adequate summary. Our look at the regulations and techniques is deliberately abbreviated to focus on those items of concern to

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115. Even opponents of regulation of tender offers tend to agree on the ability of tender offers to pressure shareholders into decisions that may be to their disadvantage. However, opponents of regulation view the "coercive" effects as salubrious. They see the ability to exclude shareholders from the full financial benefit of the takeover as necessary to promote the proper functioning of the market by creating the possibility of profit for a successful takeover that replaces suboptimal management. See Ronald J. Gilson, A Structural Approach to Corporations: The Case Against Defensive Tactics in Tender Offers, 33 Stan. L. Rev. 819, 875 (1981).


118. For a recent overview of defensive techniques, see John H. Matheson, Corporate Governance at the Millenium: The Decline of the Poison Pill Antitakeover Defense, 22 Hamline L. Rev. 703, 718–33 (1999).
our analogy. Second, we do not concern ourselves here with the efficacy or desirability of the various regulations and techniques in the stock market. Indeed, many believe that the various regulations and techniques harm market efficiency, and that the pressure to tender should generally be viewed as benign. But, irrespective of whether the regulations and techniques help make the market for corporate control more efficient, there is little doubt that such techniques do alter the choice structures of the relevant participants in that market. Therefore, we describe the structure and goals of the regulations or techniques in general terms, with an eye toward adapting their effects on the choice structures of market participants in the market for corporate control to participants in the housing market.

Collectively, the defensive measures and regulations can be grouped into four categories—regulations of time, information, substance, and coordination.

Regulations of time include such basic provisions as the SEC's twenty-day rule. The rule, promulgated under the authority of the Williams Act, requires that most tender offers be held open for at least twenty days. Prior to the Williams Act, raiders would induce panic among shareholders by issuing tender offers with offer periods of only several days. The "Saturday Night Special," for example, would be issued on a Friday with a closing period of the following Monday, requiring shareholders to decide whether to tender over the weekend. Many of the defensive

119. See supra note 115 (explaining possible harms and benefits of tender offers). While there is a great deal of dispute about the extent to which tender offers should be regulated, there is near-universal agreement that at least some regulations are aimed at helping entrench management rather than protecting shareholders from undesirable coercion. Even Bebchuk has agreed that states' relentless efforts to come up with new antitakeover statutes seems to be motivated by a desire to make takeovers more difficult rather than by an attempt to address in a cost-effective way some valid policy concerns. And the latitude that states have afforded the use of defensive tactics has surpasses what even the strongest supporters of defensive tactics have advocated. Bebchuk & Ferrell, supra note 117, at 1171.

120. 17 C.F.R. § 240.14e-1(a) (2000). Modern defensive techniques focus on coordination, but our survey is designed to elucidate historical methods that affect the question of choice structure, even if such methods are no longer in fashion. See André, supra note 106, at 535–36 ("The principal objective of the latest generation of defenses is to convert the tender offer process from one emphasizing the exercise of individual shareholder choice . . . into one requiring the approval of either the target's board of directors or the stockholders acting collectively.").


122. For a discussion of the history of the Williams Act, see William C. Tyson, The Proper Relationship Between Federal and State Law in the Regulation of Tender Offers, 66 Notre Dame L. Rev. 241, 249–64 (1990); see also supra note 116 and accompanying text. As one commentator notes:

It was a super offensive weapon, the "Saturday Night Special," that helped prompt the initial state and federal regulation of tender offers. . . . The "Saturday Night Special" helped ensure the success of a hostile bid. . . . [by] timing [ ] the announcement [to] prevent[ ] any effective response from target
measures undertaken by target corporations are also designed to extend the amount of time during which the takeover takes place in order to reduce coercive pressure on shareholders. These time-related measures fall in a larger family of securities regulations designed to reduce panicked responses by shareholders by expanding the time horizon of decisionmaking. Examples of such regulations include "circuit breaker" cooling-off periods in the stock market following sharp declines in share prices.\textsuperscript{123}

Regulations of information seek to eliminate market distortions caused by incomplete or inaccurate information. The most important regulation in this regard is the Williams Act's bar on spreading misinformation and its prohibition of other fraudulent, deceptive, and manipulative practices.\textsuperscript{124} Other regulations impose disclosure requirements on stock purchasers, such as the 5% rule, which requires a filing with the SEC in the event that one acquires sufficient stock for one's holdings to meet or exceed 5% of outstanding stock in the corporation.\textsuperscript{125}

Naturally, though, regulations and defensive tactics of the substance of the tender offer have provided the most extensive and varied countermeasures for the coercive pressures of tender offers. Countermeasures provided for by law have generally been aimed at ensuring the "fairness" of the tender offer by ensuring equality of treatment for shareholders. A typical example of this kind of measure is the "appraisal right" which allows minority shareholders to demand an appraisal to determine the fairness of the compensation they receive in a freezeout.\textsuperscript{126} The appraisal determines whether minority shareholders have received back-end compensation that accurately represents the value of the minority shares they are surrendering.

Corporate defensive countermeasures are more wide-ranging and include several varieties. One type of technique, often called shark repellent, aims at reducing the attractiveness of the corporation as a target by taking on large amounts of debt or otherwise bringing to the corporate

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\textsuperscript{123} Prentice, supra note 114, at 391.
\textsuperscript{124} See supra note 22.
\textsuperscript{125} 15 U.S.C. § 78n(e).
\textsuperscript{126} Other measures include "best price" requirements that all tendering shares be eligible for the best price specified in the tender offer (with a pro-rata division in the event that too many shareholders tender) and "all holders" rules which require that tender offers present the same terms to all shareholders (essentially eliminating the possibility of two-tier offers). See Matheson & Olson, supra note 117, at 1438-55.
profile features that are considered unattractive to potential raiders or "sharks."\textsuperscript{127}

Another device, the "poison pill," is actually not a single technique at all. There are numerous variations of the poison pill, ostensibly aimed at protecting shareholder rights and designed to discourage unwanted tender offers on several different bases.\textsuperscript{128} Some variations of the poison pill, loosely called "flip-in" plans, seek to dilute the ownership interest of the would-be acquiror in order to render the takeover technique ineffectual. For example, the target corporation may issue convertible nontransferable, nonvoting stock to its current shareholders. However, upon a triggering event, such as the acquisition of more than 20\% of the stock of the corporation by a single purchaser, the convertible stock becomes ordinary voting stock.\textsuperscript{129} The controlling interest represented by each share is thereby diluted, making acquisition more difficult.

Another type of poison pill—the type of greatest interest to us in this Article—seeks to alter the relative attractiveness of tendering in the front end by offering compensation to shareholders who tender in the back end. For example, a "flip-over" poison pill may offer nontransferable, nonvoting stock to shareholders that, as in the previous example, lies dormant until a triggering event. Upon a takeover and freezeout, however, the stock's flip-over provisions take effect. As we noted earlier, in a freezeout, the raider merges the target into another of the acquiror's companies and forces minority shareholders in the target to exchange their shares for an inferior class of securities in the newly merged corporation. The flip-over provision allows bearers of the nonvoting shares (the nontendering minority shareholders) to exchange them for more valuable shares in the new corporation.\textsuperscript{130} If the flip-over provisions are sufficiently robust, nontendering shareholders receive back-end compensation that is superior, rather than inferior, to the front-end price received by tendering shareholders. This reversal of the attractiveness of the two types of compensations—the back end becoming preferable to the front end—neutralizes the coercive effects of the tender offer.

A particularly striking example of the technique of reversing the attractiveness of front- and back-end compensation was provided by Unocal in 1985. Responding to a proposed takeover by raider T. Boone Pickens at $54 per share, Unocal offered to buy back-end shares at $72, with the stock repurchase to be financed by a large debt issue. The enormous debt burden incurred by Unocal served as shark repellent, deterring the


\textsuperscript{128} For a recent review of the poison pill's various incarnations and its place in corporate governance, see Matheson, supra note 118.

\textsuperscript{129} See Patrick J. Thompson, Note, Shareholder Rights Plans: Shields or Gavels?, 42 Vand. L. Rev. 175, 184–85, 185 n.92 (1989).

\textsuperscript{130} For an example of a flip-over plan, see Moran v. Household Int'l, Inc., 490 A.2d 1059, 1065–66 (Del. Ch. 1985).
purchase, while the repurchase plan served as an incentive to remain in the back end, thus deterring the tender of shares to the raider.131

Some severe forms of state regulation have gone beyond the poison pill and practically seek to outlaw hostile takeovers altogether. Business combination statutes, for example, bar most mergers between target corporations and "interested" shareholders absent approval by the board of directors.132 These statutes, like the poison pills adopted by corporations, cannot completely prevent hostile takeovers, but they do change the focus of raiders' efforts. In order to complete a takeover, the raider must enlist the board of directors' support, and if the board is not willing to grant such support, the raider must seek to replace the directors themselves. Often, this is accomplished through a proxy fight, in which the raider attempts to convince shareholders to vote to replace directors with candidates of the raider's choice.133

Some have suggested a different kind of regulation altogether—regulations of coordination—aimed at increasing coordination among shareholders in order to allow them to respond to the advances of a raider the way a corporation owned by a single individual would.134 Given the unfortunate history of restrictive covenants, we do not see this avenue as a promising source for techniques in the housing markets.

Aside from the special case of coordination, the techniques and regulations we have described, along with numerous others, aim at one essential goal: altering the incentives operating on the various parties to the transaction in order to discourage some types of tender offers. In the next section, we propose adapting these techniques to alter the incentives operating in the housing market in order to discourage resegregation. There are, of course, some important differences between the market for corporate control and the housing market in racially changing markets.135 Nevertheless, the stock market techniques that were devised to


134. See, e.g., Bebchuk, Toward Undistorted Choice, supra note 16, at 1701 ("What the undistorted choice objective suggests is that we should enable a target's dispersed shareholders to act as a sole owner would be likely to act.").

135. See infra Part V.B.
neutralize the shareholders' fear of being left at the back end, as well as other market distortions, provide a fertile ground for cultivating techniques for combatting dynamic resegregation.

IV. APPLYING THE LESSONS OF THE LAW OF CORPORATE ACQUISITIONS TO DYNAMIC SEGREGATION

In this Part, we attempt to draw on the techniques used to correct distortions in the market for corporate control to craft solutions for distortions in the housing market. Although the distortions in the two markets are not identical, the analogy can nevertheless prove extremely useful in crafting solutions for the distortions in homeowners' choice structures. Drawing on the solutions crafted in the context of tender offers, we suggest the use of four major techniques: equity insurance, taxation of real-estate transactions, institutional subsidies, and growth controls. We also consider and reject the use of several other techniques.

At the outset, we must add a cautionary note. The use of each of our proposed techniques must be finely tuned in light of our goal: not to stop the process of black entry into white neighborhoods, but rather to eliminate the panic accompanying black entry by neutralizing the economic incentive for whites to leave racially changing neighborhoods. Indeed, in light of pervasive segregation in American housing markets today, the consequence of complete stability in racial turnover of neighborhood populations would be the institutionalization of racial segregation—the exact opposite of the result we seek. Thus, in presenting each of the techniques, we address this concern and suggest how we can avoid the perverse result of augmenting existing segregation.

The list of techniques that we present is not meant to be either exhaustive or exclusive. These techniques can be used alone or in combination with one another or with other techniques that others may suggest. The purpose of our analysis is to introduce some sample techniques. These techniques take advantage of the analysis of strategic choice that we presented in Part II of this Article and draw on the analogy of the distorted choice present in the market for corporate control, as discussed in Part III.

A. Equity Insurance

Of the various techniques we present in this Part, equity insurance is the only one that has been deliberately and systematically employed to counter white flight.\textsuperscript{136} A standard equity insurance scheme allows

homeowners to purchase insurance against declines in the values of their homes. This insurance is intended to assure white homeowners that they will not suffer substantial losses from declining property values caused by changes in the racial makeup of their neighborhood. Insurance schemes of this type have been employed in several communities in the state of Illinois.

Insufficient empirical evidence currently exists as to the effectiveness of home-equity insurance plans. In some neighborhoods, stable inte-

insurance plans. See, e.g., Village Home-equity Program Amended, Chi. Trib., Jan. 5, 1989, at SC (reporting that AALP has amended its equity insurance program to simplify settlement of appraisal disputes). Equity insurance has also been used in Chicago’s Southwest Side and in Baltimore’s Patterson Park neighborhood, and Syracuse is now considering adopting an equity insurance plan. See Jonathan Eig, Mixed Results: How Fear of Integration Turned White Enclave Into a Melting Pot, Wall St. J., Aug. 7, 2000, at A1.

Equity insurance may have wider applications beyond the integration context. See William A. Fischel, Voting, Risk Aversion and the NIMBY Syndrome: A Comment on Robert Nelson’s “Privatizing the Neighborhood,” 7 Geo. Mason L. Rev. 881, 886–89 (1999) (discussing equity insurance as a means for reducing local opposition to projects with local negative externalities). This may potentially be important in demonstrating lack of racial motive for constitutional purposes. For a more detailed discussion of the constitutional implications of our analysis, see infra Part V.A.

137. Typically, home equity insurance plans guarantee the insured the value of her house as appraised at the time she joins the plan. See McNamara, supra note 136, at 1466. However, the Oak Park equity insurance plan begins to provide protection “[f]ive years after the village issues a certificate of participation to the homeowner.” Id. at 1468.

138. For example, the Oak Park program reimburses the homeowner for only 80% of her loss. See id. This, in our opinion, considerably undermines the effectiveness of the program since homeowners may rationally select to avoid the program altogether and attempt to sell first.

139. In 1988, the Illinois state legislature adopted a comprehensive home insurance plan. See 65 Ill. Comp. Stat. Ann. 95/1-20. The legislation allows Chicago homeowners to pay a tax of 12 cents for every $100 of assessed valuation. The revenues from the tax go to an insurance pool, which assures the homeowner the value of the house at the time she entered the program if she remains in the program for five or more years.

140. For example, in the Southwest Side of Chicago, 10 years of equity insurance has slowed resegregation, but whether the neighborhood will ultimately remain integrated is an open question. See Eig, supra note 136. Interestingly, in the 10 years that the program has been in place, only 10 owners have filed claims. See id. Similarly, in the first five years after the establishment of the Oak Park program, only 121 homeowners chose to enroll, with the vast majority of them joining in the first year. See McNamara, supra note 136, at 1460. Oak Park officials interpreted the low enrollment figure “as indicative of the overall success of its integration program.” Id. The low number of payouts in the Southwest Side has been similarly interpreted. This accords with our analysis, which predicts that the mere existence of equity insurance will alter homeowners’ expected payoff structure and encourage integration without the necessity of actually awarding a payment.

The history of Kankakee, Illinois, differs significantly from that of Oak Park. In response to substantial racial changes, Kankakee considered but eventually rejected the possibility of adopting a homeowner equity insurance program. See id. at 1482–83. The main reason for this decision was the depressed economic outlook for the municipality. Kankakee simply could not afford to shoulder the cost of a city-wide insurance scheme. This is one example of a case showing how homeowner equity insurance programs may be impractical precisely in those municipalities where they are needed.
Integration seems to have taken hold; in others, resegregation has not slowed significantly.

The mixed success record of equity insurance programs accords with our model's predictions. The standard home-equity insurance compensates homeowners for the decline in their homes' values to the extent that the decline is disproportionate to that which may be occurring in other neighborhoods that are not experiencing a significant change in racial composition. As we noted above, a decline in expected property values is responsible for resegregation only in some cases. In others, resegregation results primarily from divergent integration preferences, irrespective of property values. Accordingly, our model predicts that home-equity insurance programs will arrest resegregation only in two cases. First, insurance can effectively impede resegregation in neighborhoods in which most white homeowners would have elected integration but for the decline in real-estate prices. This is a case that was initially characterized by the payoff matrix of a weak integration game, but was transformed into a strong segregation game by a drop in real-estate value. By compensating homeowners for the reduction in property values, the insurance program reinstates the initial payoff matrix of the weak integration game. Second, insurance can prevent segregation in neighborhoods in which white homeowners are indifferent between leaving and staying—the underlying situation is an assurance game. In this case, insurance can signal to other homeowners an intention on the part of the insurance buyer to stay in the neighborhood.

Our model also predicts that home-equity insurance will fail to produce integration in the resegregation game that we outlined above. In that game, divergent preferences are enough to produce segregation. Indeed, in that situation, only the prospect of a substantial gain associated with integration would transform the payoff matrix into that of an integration game. Existing insurance programs do not offer any such gain. Furthermore, insurance schemes will fail to produce integration if the underlying situation is one of an assurance game and other market signals drown out the signaling effect of the insurance program. The mag-

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141. If a gain of $30 was associated with each 33% increase in black ownership in our three-house neighborhood posited earlier, the payoff matrix of the resegregation game example we posited in Part III would become as follows:

<table>
<thead>
<tr>
<th></th>
<th>Carol Stay</th>
<th>Carol Leave</th>
</tr>
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<tbody>
<tr>
<td>Beth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>130, 115</td>
<td>120, 120</td>
</tr>
<tr>
<td>Leave</td>
<td>100, 140</td>
<td>115, 135</td>
</tr>
</tbody>
</table>

Given the new values, Beth's dominant strategy would be to stay, while Carol would lack a dominant strategy (preferring to stay if Beth leaves, but otherwise preferring to leave). The Nash equilibrium for this game is for Beth to stay and Carol to leave, producing stable integration at a 67% black neighborhood.
nitude of the signal associated with insurance critically depends on the number of homeowners who decide to buy insurance. A strong enough signal will not be generated unless enough homeowners buy equity insurance—the dominant strategy in an assurance game situation would then be to stay.

Finally, we must note that insurance comes at a price, while the result it guarantees may be accomplished costlessly by selling as soon as black entry occurs. A large number of white homeowners may therefore elect not to buy the proposed equity insurance. For this reason, the availability of equity insurance may not produce integration even in the two cases in which it has the potential to do so.

Both the promise and the limitations of equity insurance can be seen by comparing the program to its counterpart in the market for corporate control. Equity insurance can be compared to a limited appraisal right. Equity insurance, like the appraisal right, does not guarantee the asset holder a front-end price. It only insures the asset holder against the risk of a certain type of loss—in our case, a disproportionate drop in price relative to the purchase price or to price declines in other neighborhoods. However, equity insurance falls short of the appraisal right in two important respects. First, whereas the law extends appraisal rights to all shareholders, home-equity insurance only benefits those who elect to purchase the insurance. Second, in many cases existing equity insurance programs guarantee only the purchase price, not the full value of the asset. Nevertheless, properly implemented equity insurance can mimic the achievements of appraisal rights by limiting the exaggeration of certain distortions and, perhaps, by slowing the development of panic.

Two final difficulties with the widespread use of equity insurance must be mentioned. First, equity insurance can have undesirable distributive effects. The insurance fund pays the claims of those homeowners who sell their houses in the face of a racially changing neighborhood. Indeed, equity insurance, like many types of poison pills in the takeover

142. In addition, costless exit, while hopeful segregationists may assume it exists, may not be possible. It would be possible if there were a sufficient supply of buyers willing to pay the (new) market price for housing, and who would not perceive the "panic sale" effect and attempt to engage sellers in a bidding war. To the extent that buyers perceive the need for rapid exit, they will offer lower prices. Thus, the potential for sale may not be an acceptable substitute for adequate insurance. On the flip side, insurance might entail its own administrative costs, and would depend on the solubility of the insurer. However, on balance, it seems evident that insurance is the superior solution.

143. The appraisal right allows minority shareholders, forced to surrender their shares in a freezeout, to have the value of their shares "appraised" to make sure their back-end compensation is adequate. There is no guarantee that the back-end compensation will be as large as the front-end compensation. See supra notes 117 & 126 and accompanying text.

144. Of course, all homeowners could be required to purchase equity insurance. However, mandating the purchase of home equity insurance would come at a considerable price. Since it is very difficult to predict which neighborhoods will undergo rapid racial changes, it is impracticable to limit the scope of the scheme to certain neighborhoods.
context, is designed not to pay out; it is intended, rather, to alter the choice structure of potential sellers. Thus, the first candidates for payment will be those homeowners who have the least tolerance for integration—the pure segregationists and those who will only tolerate a very small amount of integration. In this respect, the higher the amount of equity insurance awarded, the larger the payoff to the most bigoted.145 Second, state sponsorship of a home-equity insurance plan associated with "protecting" realty values against the "risk" of racial integration threatens to reinforce the very negative racial stereotypes that we seek to eliminate.146 This objection has led to intense opposition to the use of equity insurance in some quarters.

For all these reasons, equity insurance is a less-than-ideal remedy to the problem of dynamic resegregation. It addresses only a limited subset of the choice structures that lead to resegregation and even in those cases it cannot be deemed a panacea. Nevertheless, like appraisal rights in the context of tender offers, equity insurance can provide an essential, though not sufficient, tool in combating distortions of choice.

B. Taxes on Home Sales

A second way of adjusting the relative values of staying and leaving is the imposition of taxes on realty sales in neighborhoods with high turnover of real estate (a "sales tax").147 In imposing this sales tax, policymakers should be cautious not to deter black entry altogether. Thus, we propose that the first 5% of the sales in every year should be tax-free and that all remaining transactions should be taxed substantially. The effect of this tax scheme would be to raise exit costs for all but the initial 5% of white homeowners who wished to sell. The combination of a tax-free set of transactions with a subsequent steep tax regime creates a mechanism akin to a "cooling-off" period. A neighborhood in which home sales have become "overheated" is placed in a tax regime designed to postpone most remaining sales to the subsequent year. The availability of the op-

145. Theoretically, there is no reason why equity insurance should be restricted to compensating for decreases in value of the property. The insurance plan could be crafted to ensure that all homeowners would be guaranteed a certain minimum return on their realty investment. If the payment were sufficiently large, the equity "insurance" could serve not only as a proxy appraisal right, but also as a proxy flip-in plan. For further discussion of how such plans would work, see supra notes 128-130 and accompanying text. Of course, the higher payments would increase the moral difficulty of rewarding segregationists for their intolerance.

146. For a critical review of the implications of home equity insurance, see Ankur J. Goel, Maintaining Integration Against Minority Interests: An Anti-Subjugation Theory For Equality in Housing, 22 Urb. Law. 969, 999 (1990) (arguing, inter alia, that integrative measures such as home equity insurance may stigmatize blacks).

147. Imposing this tax only in neighborhoods experiencing high racial turnover is, no doubt, the most efficient way to impose the tax. Nevertheless, basing the tax on racial turnover, as opposed to general turnover, might raise constitutional difficulties. See discussion in Part V.A.
tion to pay the tax and exit the neighborhood avoids unnecessary restrictions on homeowners' property rights. Additionally, as noted above, the homeowners most likely to pay the steep tax are those who value segregation most highly, while those most likely to avoid the steep tax burden are those most favorable to integration. Moreover, the tax money collected may be used to subsidize community institutions in racially integrated neighborhoods, as we will describe in the subsequent section.

It is possible that the five percent exemption per year would allow all segregationists to depart over the course of three or four years without paying the sales tax. This, however, is not a grave concern for us since our primary goal is to accomplish stable integration, and the goal of "penalizing" segregationists is merely secondary. If we were to eliminate the five percent exemption, we might end up barring black entry into segregated neighborhoods altogether, which would be a far worse result. For the integrationist homeowners, on the other hand, the imposition of the sales tax serves several important functions. First, by creating a cooling-off period, the sales tax deters panic sales in response to black entry. Second, by making exit more expensive, the tax reduces the incentive to leave the neighborhood. In this sense, the tax serves as the distant cousin of the "shark repellent" in the market for corporate control: It adds a substantial financial burden to any acquisition of a house outside the neighborhood, and thereby reduces the attractiveness of exercising that option.

A sufficiently large tax will convince all but the most committed segregationists to avoid selling their homes, at least until the next tax-free sale period. Nevertheless, since the tax only deters sales during the period when it is in force, the tax will not permanently alter the players' payoff matrices. A sales tax will only change the long-term equilibrium outcome of the assurance game in which the combination of the cooling-off period and the increased cost of leaving will lead both players to stay in the neighborhood.

The use of a sales tax to combat resegregation also has notable undesirable side effects. The imposition of the proposed tax will have a chil-

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148. This depends, of course, on the number of segregationists in every neighborhood, and the need of integrationists to leave the neighborhood for reasons unrelated to race.

149. For example, a tax that added $15 to the price of leaving the neighborhood in our earlier resegregation game would convince both players to avoid selling during the period of the tax, as illustrated in the following payoff matrix:

**Table 13: Resegregation Game, Modified to Reflect $15 Exit Cost in Form of a Sales Tax**

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<thead>
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<th>Stay</th>
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<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>100, 85</td>
<td>60, 75</td>
</tr>
<tr>
<td>Leave</td>
<td>55, 80</td>
<td>55, 75</td>
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</tbody>
</table>

The dominant strategy in this game is for both players to stay.
ling effect on voluntary market transactions that may be the result of such benign factors as a new job or a change in family circumstances. The increased cost of exit itself distorts the choice strategies of homeowners, and it prevents the consummation of mutually beneficial transactions that would have occurred in the absence of this tax. This problem is even more acute if the sales tax is universally applied across all neighborhoods. One could attempt to limit the negative effects of the sales tax by restricting its application to specific neighborhoods in danger of resegregation. Identifying such neighborhoods, however, is not a straightforward task, and applying the tax on a case-by-case basis could prove politically challenging.

Notwithstanding these considerable difficulties, the sales tax should be considered as one of the few means of introducing a time-related remedy to the distortions of choice that take place in situations of dynamic resegregation.

C. Institutional Subsidies

Our third proposed technique is less problematic and more far-reaching than equity insurance. We propose direct subsidization of community institutions in neighborhoods under threat of dynamic resegregation. Specifically, we propose creating a federal fund that will subsidize parks, schools, community centers, and basic infrastructure. The subsidies will be triggered by a certain level of turnover in realty ownership or by a certain level of neighborhood integration. After a general discussion of the efficacy of subsidies, we present two possible triggering mechanisms and a possible source for financing the fund.

Subsidizing community institutions adds value to homes in the neighborhood and increases the attractiveness of remaining at the back end. In this way, we imitate the effects of flip-over plans and other poison pills that raise the back-end price and compensate nontendering shareholders. Additionally, subsidizing community institutions creates positive signaling effects and rewards those homeowners who choose to remain in an integrated neighborhood, rather than those who opt for an alternative

\[\text{150. We are not the first to propose the idea of using subsidies to improve racial relationships. For example, Ronald Silverman proposed that subsidies be used to open communities up to low-income residents. See Ronald H. Silverman, Subsidizing Tolerance for Open Communities, 1977 Wis. L. Rev. 375, 377. Although the focal point of our analysis is race and not income, to the extent that race and income are correlated (and indeed they are) our proposal and Silverman's proposal are not qualitatively dissimilar. Yet, our game-theoretic framework alters the magnitude of the subsidies necessary to accomplish integration. This can best be seen in the context of the assurance game. While Silverman uses subsidies as prizes to reward tolerant communities, we use them to create and amplify signals to white homeowners about the potential of the neighborhood to remain stably integrated.}

\[\text{151. See, e.g., Paul Gewirtz, Remedies and Resistance, 92 Yale L.J. 585, 653 (1983) (arguing that making schools in racially changing communities more appealing to whites may help encourage and preserve stable racial integration).}\]
home in a segregated community. Finally, since segregationists are excluded from its benefits, subsidization of community institutions avoids some of the moral difficulties of equity insurance.

The positive effects of subsidies can be seen in all three of the games that characterize neighborhoods undergoing racial change. We turn first to the resegregation game, which was characterized by Beth's highly graduated integration preferences. To recap, the three-home neighborhood, two-player game posited that Beth assigned a value of $100 to her continued residence in her home at the current level of integration, but a value of only $60 to remaining in the event that black ownership should reach a level of 67%. Carol assigned a value of $85 to remaining in her home at the current level of integration, and $80 should black ownership reach 67%. Beth assigned a value of $70 and Carol $90 to the option of relocating to a new predominantly white neighborhood. If each homeowner is given a subsidy worth $15,152 to remain, the following payoff matrix results:

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<tr>
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<th>Stay</th>
<th>Leave</th>
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<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>115, 100</td>
<td>75, 90</td>
</tr>
<tr>
<td>Leave</td>
<td>70, 95</td>
<td>70, 90</td>
</tr>
</tbody>
</table>

The addition of the subsidies alters the strategies of the two players. While Carol's dominant strategy in the pre-subsidies game was to leave, her dominant strategy now is to stay. And while Beth lacked a dominant strategy in the pre-subsidies game, her dominant strategy now is to stay as well. Thus, the addition of sufficiently large subsidies turns the resegregation game into a strong integration game, in which the strongly dominating strategy, and the equilibrium result, is for both players to stay.153

For similar reasons, the addition of subsidies alters the weak integration game into a game with a strong integration payoff matrix, as follows:

152. The numbers in our models are intended for illustrative purposes only; studies have shown that even small improvements can produce significant increases in realty values. See Andrew J. Gold, The Trinity Initiative in Economic Perspective: Place or People Prosperity?, 30 Conn. L. Rev. 1317, 1337–58 (1998) (citing Arthur O’Sullivan, Urban Economics 367–68, tbl.14-1 (3d ed. 1996)) (referring to a St. Louis study according to which minor improvements in the exterior appearance of adjacent buildings increased sale value by five percent).

153. If the subsidies are too small, the payoffs may be changed without altering the players' strategies, or, alternatively, the game may be changed into one akin to an assurance game in which there are two equilibrium outcomes—both players leaving or both players staying.
TABLE 15: WEAK INTEGRATION GAME, MODIFIED TO REFLECT $15 OF COMMUNITY SUBSIDIES

<table>
<thead>
<tr>
<th></th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>115, 100</td>
<td>95, 90</td>
</tr>
<tr>
<td>Leave</td>
<td>70, 95</td>
<td>70, 90</td>
</tr>
</tbody>
</table>

Again, the strongly dominant strategy for both Beth and Carol is to stay in the neighborhood.154

Only in the case of the assurance game do the players' strategies remain intact. Adding the $15 subsidy produces the following payoff matrix:

TABLE 16: ASSURANCE GAME, MODIFIED TO REFLECT $15 OF COMMUNITY SUBSIDIES

<table>
<thead>
<tr>
<th></th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>115, 115</td>
<td>75, 90</td>
</tr>
<tr>
<td>Leave</td>
<td>90, 75</td>
<td>90, 90</td>
</tr>
</tbody>
</table>

This remains an assurance game; there are two equilibrium solutions—one in which both players stay and one in which both leave. The visible results of the subsidies, however, should produce clear signals of a commitment to retain the neighborhood's current integrated population.155

Moreover, if the size of the subsidy is sufficiently increased, the assurance game can also become a strong integration game. For instance, if the subsidy is increased to $35, the payoff matrix would become as follows:

TABLE 17: ASSURANCE GAME, MODIFIED TO REFLECT $35 OF COMMUNITY SUBSIDIES

<table>
<thead>
<tr>
<th></th>
<th>Stay</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay</td>
<td>135, 135</td>
<td>95, 90</td>
</tr>
<tr>
<td>Leave</td>
<td>90, 95</td>
<td>90, 90</td>
</tr>
</tbody>
</table>

In this instance, both players' strongly dominant strategy would be to remain.

154. Once again, the subsidies must be sufficiently large. In this instance, if subsidies are too small, the players' strategies will remain in a weak integration game, or, alternatively, the indifference of Carol to integration will be replaced by a weak dominant strategy of staying.

155. But see infra Part V.D (noting the potential objection that this and other remedies would only treat the symptoms of the problem, allowing racism to continue to exist).
Empirical evidence confirms the insights of our model. A recent study of white flight in Boston during the 1950s determined that resegregation took place in those neighborhoods in which religious institutions depended primarily on local support. In neighborhoods in which religious institutions were able to rely on external subsidies—primarily Catholic churches that obtained funding from their archdiocese—resegregation was retarded or even arrested.156

If improperly administered, subsidies for community institutions may be too powerful a remedy. If all homeowners are so highly compensated that they do not want to leave the neighborhood, no black purchasers will be able to enter the neighborhood, and the fund for community institutions will end up subsidizing the maintenance of segregation. One way to avoid this unfortunate irony is to calibrate the triggering mechanism for the subsidies to make them available only to neighborhoods that are already sufficiently integrated. The most obvious way to achieve this goal is by making the subsidies available only to communities with a black population of between 20% and 50%.157 Unfortunately, a triggering mechanism that explicitly relies upon racial percentages may be constitutionally problematic, as we discuss in the next Part.158 A less controversial way to trigger the subsidies would be to make them available any time a neighborhood experiences a turnover of a given percentage of its housing stock within a specified time period—for example, 20% within four years. As the subsidies would be available only after the requisite number of sales, one would hope that black entry into the neighborhood had already become sufficiently established to create an acceptable degree of integration. The magnitude of the subsidies should also be tailored to avoid creating too high an incentive for homeowners to stay in their homes. Like a too-potent poison pill, exaggeratedly large subsidies can deter even desirable transfers of control over the assets. Adjusting the subsidies to the proper level will therefore require continuous monitoring of neighborhood turnover.

Unlike equity insurance, the fund for subsidized community institutions is designed to disburse funds rather than merely to deter realty transactions. Consequently, a funding mechanism for the subsidies is of

156. See Gerald Gamm, Urban Exodus: Why the Jews Left Boston and the Catholics Stayed 263–73 (1999). Gamm’s study notes that other factors, such as stronger territorial attitudes among Catholics, also contributed to the disparity. See id. at 15–16, 237, 259–60. See generally Hillel Levine & Lawrence Harmon, The Death of an American Jewish Community: A Tragedy of Good Intentions passim (1992) (detailing gradual flight of Jews from Boston). Subsidies are currently being used on an ad-hoc basis in several communities throughout the United States, but we know of no comprehensive study of current subsidy methods or their efficacy. See, e.g., Repps Hudson, Cities Scramble to Manage Boom and Decline, St. Louis Post-Dispatch, Feb. 25, 1998, at A1 (discussing stabilization methods used by St. Louis suburbs).

157. This range reflects the expressed preferences of whites for 20% integration and of blacks for 50%. See Massey & Denton, American Apartheid, supra note 2, at 93.

158. See infra Part V.A.
critical importance. One way of raising the necessary capital is to impose a tax on home sales as outlined in the previous section.159

D. Growth Control Measures

Our proposal to utilize growth controls to combat dynamic resegregation may seem, at first blush, counterintuitive. Growth controls on the local level are often attacked as exclusionary measures,160 designed to bar the entry of minorities and indigents into the community.161 In its landmark Mount Laurel decision, the New Jersey Supreme Court even ruled that exclusionary zoning practices may violate constitutionally guaranteed equality rights.162 Nevertheless, we show that regional growth controls—as opposed to local growth controls—can have salutary effects on the housing market in periods of racial change. While growth controls may serve an exclusionary function when applied in small towns and individual suburbs, paradoxically, they can serve the opposite function when applied in large metropolitan areas.

The growth controls we propose do not seek to restrict the number of available residential units in the controlled area. Rather, they are intended to limit the development of new suburbs, thereby restricting the potential for resegregation. Admittedly, even our intended use will restrict housing supply at the margin. In contrast with traditional growth control, which aims to control the supply of all housing, our aim is to restrict the supply of segregated housing. Growth controls discourage resegregation by imposing the cost of undesired density on homeowners fleeing neighborhoods undergoing racial changes.

Consider the following example. Assume that the city of Metropolis has four neighborhoods, each with an equal population of residents. One neighborhood is entirely populated by blacks, while the other three are entirely populated by whites. Assume now that a single black person moves into one of the white neighborhoods and that the white homeowners in that neighborhood find themselves in one of the two games leading to resegregation—the segregation game or the assurance game. If there are no growth controls, the fleeing white homeowners can develop new suburban neighborhoods at will, and by creating a new suburban neigh-

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159. Another possibility is adopting unused premiums from an equity insurance program, as has been done in Chicago’s Southwest Side. See Eig, supra note 156, at A1.

160. See, e.g., Richard Briffault, Our Localism: Part I—The Structure of Local Government Law, 90 Colum. L. Rev. 1, 58 (1990) (positing that local growth-control measures often reinforce “the class and cultural differences that drive communities apart and breed interlocal suspicion, tension and conflict”); Robert C. Ellickson, Suburban Growth Controls: An Economic and Legal Analysis, 86 Yale L.J. 385, 400 (1977) (“Antigrowth measures have one premier class of beneficiaries: Those who already own residential structures in the municipality doing the excluding.”).


bordhood, the whites are able to move into a neighborhood with a density equal to that of the neighborhood they left. This result is shown in the table below.

**Table 18: Neighborhood Population Redistribution**

<table>
<thead>
<tr>
<th>Population</th>
<th>City #1</th>
<th>City #2</th>
<th>City #3</th>
<th>City #4</th>
<th>Suburban #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial distribution</td>
<td>10 blacks</td>
<td>10 whites</td>
<td>10 whites</td>
<td>10 whites</td>
<td>0</td>
</tr>
<tr>
<td>After resegregation</td>
<td>5 blacks</td>
<td>5 blacks</td>
<td>10 whites</td>
<td>10 whites</td>
<td>10 whites</td>
</tr>
</tbody>
</table>

However, if growth controls are in place, whites can only relocate at the expense of greater density, as shown in the table below.

**Table 19: Neighborhood Population Redistribution, Modified by Growth Controls**

<table>
<thead>
<tr>
<th>Population</th>
<th>City #1</th>
<th>City #2</th>
<th>City #3</th>
<th>City #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial distribution</td>
<td>10 blacks</td>
<td>10 whites</td>
<td>10 whites</td>
<td>10 whites</td>
</tr>
<tr>
<td>After resegregation</td>
<td>5 blacks</td>
<td>5 blacks</td>
<td>15 whites</td>
<td>15 whites</td>
</tr>
</tbody>
</table>

This additional density places an extra cost on the option of leaving, which can be viewed as an exit cost or exit tax.163

The effect of this exit tax resembles that of the tax we discussed above.164 Depending on the magnitude of the tax (that is, depending on the degree to which homeowners dislike dense housing arrangements), the additional cost may change resegregation games into integration games.165 Because the mechanism of growth control is indirect, however, it is unlikely to send the sort of signal that would alter the outcome of an assurance game.

The growth controls we propose have an additional effect similar to that of a "pac-man defense" in the market for corporate control. Like the pac-man defense, growth controls can change the dynamic of the market by reversing the roles of buyers and sellers. The pac-man defense in the market for corporate control transforms the raiders into targets. Growth controls in the housing market can similarly induce whites (the sellers in

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163. A comprehensive development plan that imposes growth controls on a large metropolitan area exists in Portland, Oregon. While the scheme enacted in Portland was not primarily intended to address the issue of integration, the scheme may produce data regarding racial integration that can be used to test our model. For studies of the Portland experience, see generally Gerrit Knaap & Arthur C. Nelson, The Regulated Landscape: Lessons on State Land Use Planning from Oregon (1992) (describing and analyzing the Oregon land use program and offering policy insights).

164. See supra Part IV.B.

165. See supra note 149.
the resegregation context) to buy realty in black neighborhoods. The key to this effect, once again, is density. To the extent that resegregation causes greater density in segregated white neighborhoods, it creates an incentive for whites to seek housing in the less densely populated black neighborhoods.

E. Supplementary Measures and Issues of Preferences

The four techniques examined so far in this Part do not exhaust the list of mechanisms that can be adapted from the analogous market for corporate control. Indeed, our analysis explains the importance of many techniques implemented to date and raises some cautionary flags regarding government intervention in the housing market. For example, it explains the importance of prohibitions in the Fair Housing Act of certain real-estate broker practices such as the bar on inducement to sell based on "representations regarding the entry or prospective entry into the neighborhood of . . . persons of a particular race . . . ."166 Like the general antifraud provisions of the Williams Act,167 the limitations on brokers' representations prevent the creation of market "noise" that could lead to panic selling and accelerate white flight.168 Brokers in the realty market, like brokers in the stock market, profit from the number of transactions they handle. Thus, they face a strong incentive to "churn" their clients' accounts, or to encourage their clients to engage in transactions that are not to the clients' benefit.169 Our formal game presentation demonstrates that, in some situations, white homeowners' expectations of future price changes, or of their neighbors' decisions, are themselves the trigger for those changes or decisions.

Furthermore, our analysis identifies precautions to take in regulating the housing market. In the market for corporate control, defensive mea-

168. Interestingly, as previously noted, the Fair Housing Act prohibits all inducements based on representations regarding racial entry into the neighborhood, not merely fraudulent inducements. See 42 U.S.C. § 3604(e).
169. The most notorious practice employed by real-estate brokers is widely known as "blockbusting." As one court described it: "Blockbusting is a practice whereby real-estate agents artificially stimulate sales of residential property by making representations to homeowners regarding the migration of a particular racial, ethnic, religious, or social group into the neighborhood." New York State Ass'n of Realtors v. Shaffer, 27 F.3d 834, 835 (2d Cir. 1994). At its prime in the early 1960s, this practice was responsible for a racial change of two or three blocks a week in Chicago, according to one report. See Norris Vitcheck, Confessions of a Block-Buster, Saturday Evening Post, July 14, 1962, at 16. But cf. Dmitri Mehlhorn, A Requiem for Blockbusting: Law, Economics, and Race-Based Real-Estate Speculation, 67 Fordham L. Rev. 1145, 1158-59 (1998) (documenting blockbusting and panic peddling in Chicago in the 1960s and early 1970s, but arguing that such practices no longer exist and that they are unlikely to return). Note that though blockbusting is probably no longer the force it once was, the demise of outright blockbusting does not seem to have significantly slowed the force of dynamic resegregation.
sures sometimes produce their own antidotes. For example, the development of poison pills during the 1980s has spurred a series of proxy fights. Rather than attempt to complete the acquisition under the shadow of the poison pill's terms, potential acquirors in these proxy fights tried to influence shareholders to change the composition of the corporation's board of directors. They could then appoint directors who would cancel the poison pill. There is reason to expect that a similar dynamic may develop in regulating the housing market. Faced with local regulation designed to promote an integrated housing market, segregationists may attempt to capture local political organs to promote their agenda. Consequently, we recommend implementing our integrationist measures on the federal level.

We believe that utilizing the framework developed in this Article would help identify other stock-market techniques that could be imported to the housing market. Notwithstanding the differences between the markets and the assets traded in them, panic and coercion-driven sales in both markets are closely related. Thus, the more mature and well-developed stock market can provide fruitful guidance in combatting the distortions in the housing market that lead to resegregation.

170. Scholars have noted the danger that legislatures will be captured by interest groups. See, e.g., Jonathan R. Macey, Promoting Public-Regarding Legislation Through Statutory Interpretation: An Interest Group Model, 86 Colum. L. Rev. 223, 227–33 (1986) (listing ideas of interest group theory, including the basic idea that “[i]nterest group theory treats statutes as commodities that are purchased by particular interest groups or coalitions of interest groups that outbid and outmaneuver competing interest groups”). Empirical evidence suggests that legislative capture may advance segregation. See Yale Rabin, The Roots of Segregation in the Eighties: The Role of Local Government Action, in Divided Neighborhoods: Changing Patterns of Racial Segregation 208 (Gary A. Tobin ed., 1987) (listing numerous examples of local municipalities abusing their power to promote segregationist preferences). In fact, an increased presence of minorities may even heighten this effect. See Oscar Newman, Fair Housing: The Conflict Between Integration and Nondiscrimination, in Issues in Housing Discrimination, supra note 85, at 172, 195 (1985) (contending that, in New York, there is a correlation between increased black occupancy and decreased political support for public housing).

171. A caveat is in order here. Past experience indicates that federal housing agencies have often been extremely insensitive to the problem of segregated housing and have adopted policies that dramatically exacerbated the plight of various minorities. A case in point is the Fair Housing Agency's (FHA) mortgage-insurance program. For a time, the program’s guidelines discouraged lenders from investing in areas with "inhomogeneous racial groups" or neighborhoods undergoing social changes. Gary Orfield, Federal Policy, Local Power, and Metropolitan Segregation, 89 Pol. Sci. Q. 777, 786 (1974–1975) (quoting FHA Underwriting Manual). For a critical review of the role of the FHA in the preservation of inner-city ghettos and poverty in the past, see Michael H. Schill & Susan M. Wachter, The Spatial Bias of Federal Housing Law and Policy: Concentrated Poverty in Urban America, 143 U. Pa. L. Rev. 1285, 1290–1315 (1995) (describing how federal housing policies and mortgage-assistance programs have concentrated inner-city poverty and destabilized inner-city neighborhoods). However, one can hope that federal agencies, including the FHA, will be far more sensitive now to the problem of racial housing segregation and will appreciate the crucial importance of the need to cure this problem.
V. Addressing Potential Objections

In this Part, we confront four sets of potential objections to our analysis. The first set revolves around the constitutionality of the measures we propose to counteract resegregation. The second involves doubts regarding the limitations of the stock-market analogy and of the assumptions underlying our game-theoretic analysis. The third set addresses the potential perverse effects of the measures we propose and the threat that they will produce the opposite of the results we desire. The fourth and final set questions the efficacy of measures that do not directly confront racial bias.

A. Constitutional Issues

Any legal venture into the area of race relations quickly runs into the muddled constitutional jurisprudence of affirmative action and racial discrimination. In accordance with current Supreme Court doctrine, courts' employment of the Constitution's Equal Protection Clause in reviewing legislation may be summarized as a two-step process. In the first step, the court attempts to determine the type of classification employed by the relevant legislation. The type of classification controls the kind of scrutiny to be employed in the second step. For example, racial classifications generally trigger "strict scrutiny," but economic classifications generally lead only to "rational basis" review. In the second step, the court applies the relevant level of scrutiny to the legislation and determines whether the law passes constitutional muster.

The strict scrutiny applied to racial classifications has been described as "'strict' in theory, fatal in fact." But the fatality of strict scrutiny is not so self-evident when applied to "benign" racial classifications, such as those used in affirmative-action measures. In City of Richmond v. J.A. Croson Co. and its successor Adarand Constructors, Inc. v. Pena, the Supreme Court clarified that benign racial classifications would trigger strict scrutiny, even when employed by the federal government. In each case, however, members of the Court have suggested that the lingering effects of racial discrimination could provide the compelling state interest that would justify the sort of "narrowly-tailored" corrective mea-

172. U.S. Const. amend. XIV, § 1, cl. 2.
177. In the aftermath of City of Boerne v. Flores, 521 U.S. 507 (1997), it is possible that the Enforcement Clause of the Fourteenth Amendment will no longer provide a basis for permitting congressional action to escape strict-scrutiny review.
sures that would survive strict scrutiny. The reach of this remedial power is far from clear. The Supreme Court is perceived to have evinced hostility toward affirmative-action measures in recent years, and it might now strike down any measures in the housing market that explicitly use racial criteria. Lower court decisions evinced some confusion about the issue in pre-Croson and pre-Adarand decisions.

It is for this reason that we eschew any explicit racial criteria in our proposals for rectifying resegregation. Any measures that directly rewarded integrated neighborhoods or punished segregated neighborhoods might founder on the shoals of the Rehnquist Court’s new Equal Protection jurisprudence. We propose a much safer route: to engage only in market regulations of market phenomena without resort to racial criteria. The Court’s review of economic classifications in Equal Protection challenges is forgiving to the point of permissiveness. This means that our remedies should pass constitutional muster so long as the first step of the examining court’s Equal Protection analysis shows a nonracial classification.

It is true that courts may look beyond the explicit classifications employed by legislation to see whether a racially discriminatory motive should trigger strict scrutiny. However, the evidence of racially discriminatory motivation must be quite strong before the courts will invalidate legislation that does not explicitly employ racial classifications. Thus, for example, in Village of Arlington Heights v. Metropolitan Housing

178. See Croson, 488 U.S. at 486-93 (O’Connor, J., plurality opinion); Adarand, 515 U.S. at 235-37 (O’Connor, J., opinion of the court, joined at this section by a plurality of four Justices). While O’Connor wrote for the Court in Adarand in most respects, Justice Scalia added in a concurring opinion that he joined with the opinion only insofar as it concurred with his belief that “government can never have a ‘compelling interest’ in discriminating on the basis of race in order to ‘make up’ for past racial discrimination in the opposite direction.” Id. at 239 (Scalia, J., concurring).

179. See, e.g., Erwin Chemerinsky, Access To Justice: The Rehnquist Court of Justice: An Oxymoron, Wash. U. J.L. & Pol’y 37, 46 (1999) (arguing that “the Court has been consistently hostile to currently existing suspect classifications when such involves affirmative action efforts”).

180. Compare United States v. Starrett City Assocs., 840 F.2d 1096, 1102 (2d Cir. 1988) (finding a program limiting black entry in order to achieve racial balance illegally discriminatory), with Otero v. New York City Hous. Auth., 484 F.2d 1122, 1140 (2d Cir. 1973) (finding a program limiting white exit from racially mixed neighborhood constitutional).

181. See, e.g., Neil K. Komesar, Imperfect Alternatives: Choosing Institutions in Law, Economics, and Public Policy 233 (1994) (“[G]overnment actions broadly lumped into the category of ‘economic and social’ have been subjected to very little judicial attention.”). The classic example of this level of review is found in Williamson v. Lee Optical Co., 348 U.S. 483, 487-88 (1955) (holding that discrimination against opticians in favor of ophthalmologists and optometrists is constitutionally acceptable since the “law need not be in every respect logically consistent with its aims to be constitutional”).


Development Corp., the Court decided not to strike down the Chicago suburb of Arlington Heights's refusal to grant a zoning variance despite allegations that the intent of the refusal was to block the entry of black families.\textsuperscript{184} Our measures are designed to counter distortions in economic incentives in times of high turnover in the housing market, and might therefore be justified to the court on nonracial grounds.\textsuperscript{185} Additionally, it is not clear that even if the court discerned a "benign" racial motive, strict scrutiny would be triggered. Consequently, we expect that legislation to enact our measures would avoid being subjected to strict scrutiny as motivated by invidious racial discrimination.

B. The Limitations of the Stock Market Analogy and Our Game-Theoretic Model

1. The Usefulness of the Market for Corporate Control Analogy. — One might argue that the stock market is an imperfect analogy for the housing market. This objection consists of seven claims.\textsuperscript{186} The first is that the aggregated assets of actors in the market for corporate control themselves are an important asset—the target corporation. In the market for corporate control, there are special qualities that inhere in majority control of the units (shares) being sold that do not obtain in the housing market. The aggregated assets of various homeowners—the neighborhood comprising their houses—are not and cannot be a single asset controlled by a

\textsuperscript{184} 429 U.S. at 270.

\textsuperscript{185} Cf. Linmark Assoc. v. Township of Willingboro, 431 U.S. 85, 95 (1977) (stating that First Amendment bars ban on "For Sale" signs intended to prevent "white flight"); Dom Bishop, Comment, Fair Housing and the Constitutionality of Governmental Measures Affecting Community Ethnicity, 55 U. Chi. L. Rev. 1229, 1246–68 (1988) (presenting criteria which "measures affecting community ethnicity" would need to satisfy, in order to be constitutional); Thomas, supra note 61, at 965–66 (arguing that racially explicit programs to enhance minority demand in white neighborhoods should be examined under intermediate scrutiny). The Linmark Court added, in dictum, that the township "surely can endeavor to create inducements to retain individuals who are considering selling their homes." 431 U.S. at 97. It is not clear that the dictum considered possible Equal Protection objections, nor that it would survive Croson and Adarand.

\textsuperscript{186} An eighth potential claim, which we do not address fully, focuses on the suggestion that people perceive their realty ownership differently than their ownership of corporate shares. For example, many of the most important values of home ownership are psychic and immeasurable, while the primary element of stock ownership is pecuniary and unsentimental. See generally Jane Radin, Market-Inalienability, 100 Harv. L. Rev. 1849, 1905–06 (1987) (arguing that "context can be integral to self-development," and that "those attributes and things identified with the person cannot be treated as completely commodified"). Here, too, the differences should not be overstated. People do develop emotional attachments to stocks, and therefore place a premium on ownership of certain "brand-name" stocks. Conversely, the emotional element associated with home ownership does not alter the fact that real-estate is also an economic investment. In any event, our model does not depend upon home ownership being viewed solely in economic terms.
In the housing market, the various purchased units remain discrete, rather than representing segments of a larger asset.

A second and related objection notes that the players in the two markets cannot precisely be analogized. In the market for corporate control, measures are aimed at altering the motivations of a large set of shareholders (the sellers) and a single potential acquiror of the corporation (the buyer). In the housing market, there is no single buyer, and, consequently, demand-side measures cannot be incorporated in their original form if at all.

The third claim relates to the relative financial importance of a house to most middle- and lower-income homeowners. Most investors in the stock market are able to diversify their investments, and therefore are not drastically affected by the performance of a single stock. By contrast, a house ordinarily represents an enormous portion of the investment portfolio of most homeowners, and changes in home values have a much larger relative impact on the value of the investor’s portfolio.

Fourth, while shareholders are motivated primarily by the expectation of pecuniary profit, homeowners look to their houses to provide much more. Homes are the repositories of people’s lives. The decision to buy or sell a home is motivated not only by expectations of monetary profit, but also by such factors as leisure, aesthetics, availability of services, and preferences as to neighborhood character, including racial preferences. While all these factors are reflected in market price, they are highly idiosyncratic and, therefore, do not uniformly affect all market transactions.

Fifth, the stock market suffers from fewer imperfections than the housing market. The stock market is informationally superior, because most information about publicly traded stocks is widely known and inexpensive, while homeowners must often rely on gossip and anecdotes. In the stock market, there are many buyers and sellers and frequent transactions; consequently, market prices are generally readily ascertainable. In the housing market, there are fewer buyers and sellers, and market valua-

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187. The differences should not be overstated. While it is true that control over a majority of shares grants a control over the corporation in a way that control of a majority of houses cannot grant control over the neighborhood, the value of majority control is not complete. For example, if the corporate charter specifies that: for decision x, a majority of 90% + 1 is required; for decision y, a majority of 75% + 1 is required; and for decision z, a majority of 50% + 1 is required; then each of 10%, 25%, 50%, 50% + 1, 75% + 1, and 90% + 1 would be levels of control of significance. Given varying degrees of voter participation in any given shareholder decision, the talismanic significance of the first share beyond 50% is further reduced. The independent decisionmaking power of each homeowner is also incomplete. While there is no formal institution called the neighborhood over which a group of homeowners can gain control, there are various community institutions (such as local school councils) in which majority groups of homeowners can take power. Thus, in both directions, the differences between the nature of the assets are not as stark as they might seem at first glance.
tions are often subjective and speculative. Real-estate valuations are further complicated by the fact that houses are not fungible like stocks.\textsuperscript{188}

Sixth, real-estate transactions often entail higher transactions costs. Of particular importance is the role of real-estate brokers. Not only do brokers create market "friction" by raising the cost of buying and selling, but they also create market "noise" by abusing their unique access to information to generate sales commissions.

Finally, the market distortions evidenced in the housing and stock markets do not precisely correspond. In the market for corporate control, market distortions tend to place shareholders in a prisoners' dilemma. The payoff structures in a racially changing housing market are more varied.

These differences between the two markets, while important, do not undermine the central insights of our model. The stock market is a highly developed and sophisticated market, which has provided an excellent laboratory for the development of antidotes for market distortions. Distorted choice is the central concern of the stock market techniques that we adapt to the housing market, and it is the primary force behind resegregation in a society in which most homeowners prefer integration. The stock market techniques that we examine all have the ability to alter the payoff structure for market players, and, thereby, to change the players' incentives to engage in certain transactions. That is the feature we borrow in creating market mechanisms for countering pressures toward resegregation. Indeed, to the extent that homeowners have a larger portion of their portfolio invested in their houses, they are more sensitive to changes in realty values and, therefore, more easily panicked.

Though we borrow the back-end defensive mechanisms from corporate law, we must alter the mechanisms somewhat to achieve our goals in the housing context. Regulation of tender offers and defensive measures adopted by corporations both aim at completely blocking certain takeovers and allowing others to succeed in their entirety. By contrast, our aim in the housing market is to encourage and permit partial takeovers in all cases. To address this difference, we structure our defensive techniques to become operative only after initial penetration of blacks into previously segregated white neighborhoods. Indeed, it is only after a sufficient number of blacks have entered that we desire to discourage mass white exit. Additionally, in order to achieve full integration we must also encourage initial black entry into white neighborhoods. We address this concern in the next section.

2. Limitations of Our Game-Theoretic Model. — The game-theoretic model that we employ is a highly stylized one. It includes only two players and two strategies, with no communication between the players. Reality

\textsuperscript{188} It may also be noted that the stock market is relatively less price inelastic. See Sidak & Woodward, supra note 115, at 817 (noting that degree of inelasticity for stocks is "small if not trivial").
is of course more complex. Nonetheless our model captures the basic
dynamics of resegregation. Selling one's home is ultimately a binary
choice between leaving or staying, irrespective of the large number of
factors that influence this choice. Although there are more than two
players in the housing market, the two-player model embodies the es­
sence of the dilemma each homeowner must face. In making her choice
between selling and staying, each homeowner must ask herself what her
neighbors will decide. The choices of the neighbors may be viewed in the
aggregate, and represented in a two-player game format.¹⁸⁹

We assumed lack of communication among white homeowners in
our initial model. Our techniques, however, introduced an element of
signaling, which constitutes a form of communication between players.
Also, we designed our supplementary measures to prevent the dissemina­
tion of misleading information to homeowners. In certain respects, our
initial assumption of no coordination not only reflects reality, but is also
desirable. As particularly apparent from a comparison with the stock
market, information in the housing market is spotty and anecdotal.
Moreover, past experience indicates that when white homeowners are al­
lowed to coordinate their buying and selling decisions—for instance, by
means of restrictive covenants or zoning—they have used this power to
exclude blacks.¹⁹⁰ Why this should happen in a world in which most
whites prefer integration is a question beyond the scope of this Article.
However, the answer may lie in the group dynamics that permit a strongly
committed minority of segregationists to control the decisionmaking
process.¹⁹¹

Another salient feature of our game-theoretic model is its exclusive
focus on the seller's side. Resegregation in the housing market can stem
from two dynamics: black entry accompanied by white exit or white entry
accompanied by black exit.¹⁹² Empirical studies point to the first of these

¹⁸⁹. Randy Picker has done important work on extending game-theoretic analysis of
legal issues beyond the standard two-player format. See Randal C. Picker, Simple Games in
a Complex World: A Generative Approach to the Adoption of Norms, 64 U. Chi. L. Rev.
1225, 1226 (1997) (using computer models to simulate large numbers of simultaneous,
multi-player games). His approach would provide the natural next step for extending our
model as well, although his work to date has not addressed this precise issue. Another
fruitful line of inquiry for extending our model might emerge from relaxing our
assumption of owner-occupied housing in order to consider the choice dynamics of
renters.

¹⁹⁰. It is certainly possible that norms have changed during the past several decades
and that coordination among white homeowners would consequently lead to greater
integration, or, more precisely, would result in the implementation of the expressed
integrative preferences of most white homeowners. However, there is no empirical data to
support such a hypothesis at the present time.

¹⁹¹. See Reinhold Niebuhr, Moral Man and Immoral Society 257–77 (1960) (arguing
that people allow their individual moral inclinations to be subjugated by group
decision-making).

¹⁹². The recent revitalization of inner cities has given rise to the question as to
whether white entry into predominantly black neighborhoods will in fact lead to complete
two dynamics as the paramount cause of resegregation, and to white exit as the driving force behind this dynamic. For these reasons, our analysis revolves around the seller's side of this dynamic. We do not intend to belittle the importance of static segregation—the phenomenon of erecting barriers to the initial entry into a segregated neighborhood. That problem has been a central focus of the housing debate for several decades, and it spurred the enactment of the Fair Housing Act. Empirical evidence suggests that the attempt to defeat static barriers to integration has not been entirely successful. Although this subject is extremely important, it lies beyond the scope of this Article. Notwithstanding the fact that resegregation, rather than static segregation, is the focus of our study, we recognize the intimate relationship between these two problems and we therefore tailored our remedies to resegregation so as not to contribute to the problem of static segregation. In particular, we designed all our proposed measures to take effect after initial entry has occurred.

C. The Threat of Perverse Effects

A third set of objections might focus on the potentially perverse effects of the remedies we choose for rectifying distortions in homeowners' choices. First, one might charge that by bringing the remedies into play only in neighborhoods already experiencing high turnover or otherwise perceived of as "at risk," we are actually signaling to homeowners in such neighborhoods that resegregation is considered likely. If indeed our measures were to produce such unhelpful signals, the result might be to increase resegregation in cases in which homeowner choice is properly characterized as an assurance game. Second, one might argue that some of our measures, by increasing the cost of leaving once areas are perceived as being "at risk," will actually accelerate the process of resegregation as homeowners rush to exit a neighborhood prior to its being declared "at risk."

We recognize the force of this criticism and therefore stress the importance of carefully tailoring the magnitude and the timing of the cor-

resegregation. For a discussion of the process of gentrification and its effects, see generally Molly S. McUsic, Note, Reassessing Rent Control: Its Economic Impact in a Gentrifying Housing Market, 101 Harv. L. Rev. 1835, 1838–41 (1988). The empirical picture is not yet complete and an examination of this phenomenon is beyond the scope of this Article.

195. See Cutler et al., supra note 5, at 487; see also supra notes 16 & 66.

194. Sander has suggested addressing the problem of static segregation by subsidizing black entry into white neighborhoods. See, e.g., Sander, The Problem of Fair Housing, supra note 5, at 931–32 (proposing "housing vouchers," which would operate analogously to food stamps, as a means to desegregate housing); Thomas, supra note 61, at 943 (discussing mortgage subsidies for minorities as a strategy to desegregate housing). The suggestion is intriguing and warrants further investigation, particularly with respect to its constitutionality.

195. Concerns of constitutionality present the major obstacle to more explicitly tying the onset of our remedies to the racial makeup of the neighborhood undergoing change. See supra Part V.A.
rective measures. Insufficiently large subsidies for community institutions might produce perverse signaling effects by failing to improve the quality of life for homeowners in the community while letting homeowners know that their neighborhood is considered at risk. Imposition of realty transaction taxes at too late a time could produce a similar rush of resegregation in anticipation of the soon-to-be-imposed taxes. Consequently, our proposed measures must be implemented with an eye toward those risks. Haphazard application of these measures—such as the implementation of equity insurance at levels that are too low—can be counterproductive. Furthermore, the implementing authority must be truly committed to investing the requisite funds at the right time in order to be successful. Half-measures and political pretense will backfire. Those pitfalls can be avoided by ongoing monitoring of the impact of the chosen measure in each particular community. Thus, bona fide implementation and continuous monitoring are necessary for the successful attainment of stable integration.

D. The Effect of Our Remedies on Racial Attitudes

A final criticism that may be leveled against our proposal posits that our remedies treat the symptoms rather than the disease. Under this view, racism per se, not economics, prompts white homeowners to repeatedly resegregate themselves from their black neighbors.196 Economics and real-estate prices have nothing to do with it.197 Thus, changing the economic incentives of white homeowners would be of very little, if any, utility in encouraging integration.

While our model recognizes the centrality of racial attitudes to successful integration, and, indeed, we accept the claim that certain white homeowners would elect to resegregate themselves when black entry occurs regardless of the price effects of black entry, we unequivocally reject the claim that our model would be ineffective in promoting housing integration. Our response to this criticism is two-pronged. First, we argue that adoption of our proposed measures would foster "educated preferences" among white homeowners, which, in turn, would make integration more easily attainable. Second, we demonstrate that implementation of our proposal would result in a separating equilibrium in which white segregationists would have to disclose their true colors and bear the consequences of their racism.

1. Issues of Preference. — The developing field of behavioral law and economics198 has shown that preferences cannot be treated as immutable

196. See generally supra notes 66–69 and accompanying text.
197. Surprisingly, perhaps, this view is adopted by Kenneth Arrow. See, e.g., Arrow, supra note 2, at 97 (suggesting that "market-based theories give an inadequate account of the effects of racial discrimination on economic magnitudes and the effects of the economic system on racial discrimination").
198. Behavioral law and economics is a relatively new field aimed at incorporating more sophisticated understandings of behavior and choice to modify the traditional
as in traditional law and economics.\footnote{199}{For a discussion of preferences and how they are formed, see Cass R. Sunstein, Legal Interference with Private Preferences, 55 U. Chi. L. Rev. 1129, 1158-69 (1986). Sunstein divides preferences affected by legal rules into three categories: adaptive preferences, endowment effects, and ideology. However, Sunstein emphasizes that adaptive preference may not necessarily be the product of legal rules. Rather, they may be born of social norms or preexisting distribution of wealth. See id. at 1146.} In the present context, two of behavioral law and economics' insights are of particular importance—first, the possibility of the development of educated preferences, and, second, the status quo bias in preferences. Studies in behavioral law and economics have demonstrated that individual preferences are adaptive and constructed rather than innate, and that they shift in response to the context in which the preference is being elicited and the baseline entitlements set out by the law. Frequently people will express a preference for option A over option B because they lack sufficient information about option C. However, once additional information about C is disclosed, B may become the preferred option.\footnote{200}{See Mark Kelman et al., Context-Dependence in Legal Decision Making, 25 J. Legal Stud. 287, 287-88 (1996).} In the same vein, many of the racial perceptions of whites are rooted in misconceptions and prejudices. Living in integrated neighborhoods may therefore "educate" a new set of preferences more amenable to integrated communities.

Another phenomenon affecting the shaping of preferences is a widely observed bias in favor of the status quo.\footnote{201}{See William Samuelson & Richard Zeckhauser, Status Quo Bias in Decision Making, 1 J. Risk & Uncertainty 7, 8 (1988) (presenting a study showing that individuals exhibit a preference for the status quo across a range of decisions); cf. Cass R. Sunstein, Behavioral Analysis of Law, 64 U. Chi. L. Rev. 1175, 1180 (1997) (arguing that preferences can be manipulated by changing individuals' perception of the status quo).} This bias is often seen in the endowment effect—a psychological quirk that leads people to value an object more highly if it is in their possession.\footnote{202}{See Sunstein, supra note 199, at 1150–52; Richard H. Thaler, Illusions and Mirages in Public Policy, 75 Pub. Interest 60, 64 (1983).} It can also be seen in the greater aversion people express for losses than the appetite they express for gains of equivalent magnitude. In a society in which most housing options are segregated, homeowners come to incorporate rational choice models employed by the economic analysis of law. See Cass R. Sunstein, Introduction, in Behavioral Law and Economics 1, 1 (Cass R. Sunstein ed., 2000). Behavioral law and economics rejects the typical assumption of law and economics that "all human behavior can be viewed as involving participants who [1] maximize their utility [2] from a stable set of preferences and [3] accumulate an optimal amount of information and other inputs in a variety of markets." Christine Jolls et al., A Behavioral Approach to Law and Economics, 50 Stan. L. Rev. 1471, 1476 (1998) (quoting Gary S. Becker, The Economic Approach to Human Behavior 14 (1976)). Instead, behavioral law and economics proposes that rationality is "bounded," as are willpower and self-interest. See Jolls et al., supra, at 1476–79. The field's approach is not without its detractors. See, e.g., Richard A. Posner, Rational Choice, Behavioral Economics, and the Law, 50 Stan. L. Rev. 1551 (1998) (arguing that behavioral law and economics is not inconsistent with rational choice theory, not a unified theoretical model, and incapable of supporting productive future study).
that status quo into their preferences. Thus, in a highly segregated neighborhood, white homeowners are likely to develop a bias against integration and concoct a justification for this bias in order to diminish the cognitive dissonance between the reality in which they live and their preferences. This, however, may not be their true preference. Presented with a reality of an integrated neighborhood, white homeowners who previously harbored an aversion towards black neighbors are likely to open up to blacks and other minorities and fully accept them as neighbors. This, in turn, would dramatically reduce the magnitude of dynamic resegregation and facilitate integration.

2. On Pooling and Separating Equilibria. — Since we explicitly recognize the centrality of racial fixations to the process of dynamic resegregation, we do not argue that enacting our proposed measures will result in universal integration in the housing market. It is highly likely that certain whites would prefer to forego the benefits associated with integration and live instead in separate white communities. This, however, does not undermine our remedial framework. An important virtue of our proposed measures is the information disclosure function they serve. At present, it is impossible to isolate the racist factor from the economic factor in analyzing the cause of dynamic resegregation. Specifically, the current legal regime has created a pooling equilibrium, in which segregationist white homeowners can mask their racist attitude as a pure economic con-

203. People often have two sets of preferences: first order preferences and second order preferences. While expressed preferences reflect the actor's second order preferences, they do not always reflect her true, or first order, preferences. For example, a smoker's decision to smoke often does not represent the true desire of many smokers to quit. See generally Cass R. Sunstein & Edna Ullmann-Margalit, Second-Order Decisions, in Behavioral Law and Economics 187, 200 (Cass R. Sunstein ed., 2000); see also Jon Elster, Ulysses and the Sirens 112–53 (1979) (exploring the implications of contradictory beliefs and desires for the theory of rational behavior). The distinction between first and second order preferences may provide another explanation for the paradox noted at the outset of this Article—the fact that most whites say they prefer integrated housing while they live in segregated neighborhoods.

It should be noted that in addition to first- and second-order preferences, alternative explanations may exist for the disparity between attitudes and behavior. For example, a body of work in social psychology, which addresses the phenomenon of "subtyping," may explain why whites might dislike blacks generally while liking particular blacks (or vice versa). For a brief explanation of this school, see Patricia W. Linville et al., Stereotyping and Perceived Distributions of Social Characteristics: An Application to Ingroup-Outgroup Perception, in Prejudice, Discrimination, and Racism 165, 166 (John F. Dovidio & Samuel L. Gaertner eds., 1986).

cern. This, in turn, makes the collection of information about the racist attitudes of white homeowners virtually impossible. Under the existing state of affairs, it is simply impossible to discern the true motivation of white homeowners who engage in dynamic resegregation. The partial information we have adversely impacts our ability to craft effective remedies to the problem.

Adoption of our proposed measures will solve this problem. The implementation of our scheme will sever the existing coupling of racial and economic motivations, and will thus force segregationist whites to separate themselves from integrationist white homeowners. Once the economic incentive to resegregate has been neutralized, only white homeowners who harbor racial bias will continue to engage in resegregation whenever a minority group enters their neighborhood. The resulting separation would enable policymakers to gain a correct assessment of the magnitude of the problem, and more importantly tailor remedies to address it. Such remedies may take the form of targeted education but may also come in the form of increased taxation. In addition, the segregationist will have to cope with the extralegal sanctions associated with their preferences, which they now can conveniently avoid by seeking refuge in economic rhetoric. Therefore, even if implementation of our scheme does not result in integration, it will constitute an important step toward this goal.

Conclusion

Solving the problem of housing resegregation is of undeniable importance to the achievement of full equality between the races in the United States. The three-game model we develop in this Article demonstrates the complex web of motivations that underlie resegregation even in neighborhoods where white homeowners no longer harbor racial animus, or a preference for segregated housing. By combining this analytic framework with insights from the market for corporate control we devise techniques that alter the payoff structure of white homeowners in racially changing neighborhoods. We demonstrate that neutralizing the economic incentive to resegregate is a necessary remedial step toward eliminating segregated housing arrangements.

We submit that implementation of our techniques—home-equity insurance, realty sales taxes, subsidies for community institutions, and regional growth controls—can effectively diminish the scope of resegregation as well as place the cost of this dynamic on the parties that most strongly oppose housing integration. Moreover, our analysis can be extended to produce other techniques for combatting the economic distortions that stand in the way of a more egalitarian society.

rules proposed by Ayres and Gertner's analysis will not lead to perfect separation among various types of contractors).