
Comment

Roland Bénabou, Princeton University and NBER

Theory ahead of Measurement . . .

This is a timely and ambitious paper on an important topic. The phenomenon of social sorting and its role in human capital transmission is one that every parent and homeowner has direct experience with. On the other hand, the economic research tying it to “larger” issues of national inequality, intergenerational mobility, and even aggregate performance may not be immediately familiar to a broad macro audience. For this reason, and to bring out some deeper connections between different types of inequality-mobility mechanisms, I will start with a bit of background.

As the authors explain, between the early 1990s and the early twenty-first century there was a substantial amount of theoretical work on the dynamics of income and wealth inequality, social mobility, and in particular, on their relationships to socioeconomic stratification, which is the topic of this paper. This research, itself following on the pioneering work of Loury (1977, 1981), drew on a few important empirical studies, but the data available at the time was mostly cross-sectional and small-sample. The major trends inspiring it, however, were readily apparent from casual observation: simultaneous increases in income inequality and in the degree of residential segregation by income—best epitomized by the rise of “gated communities”—as well as a host of contentious cases before state supreme courts over wide disparities in school funding.

This mostly theoretical literature led to a general lesson and several specific predictions. The former was part of an even broader message emerging at the time—sadly, the representative agent had died: from

growth takeoffs and failures in emerging countries to stagnation and business cycles in industrialized ones, macro outcomes depend on agent heterogeneity and distributional dynamics through a host of channels, both economic and political. Among them, and of primary interest here, is the manner in which a heterogeneous population sorts itself into distinct communities, neighborhoods, and firms, where human capital is accumulated, shared, and used to produce. As to the specific predictions arising consistently from models of this type (e.g., Bénabou 1993, 1996; Durlauf 1996; Fernandez and Rogerson 1996), there were three main ones:

1. More socioeconomically stratified places will tend to have lower social mobility.
2. More unequal places will tend to be, or become, more socioeconomically segregated.
3. Consequently, greater inequality will be associated with lower mobility.

The last implication, in particular, sharply contrasts with the “benign neglect” view, prevalent in much of earlier economics, that social mobility tends to offset cross-sectional inequality, thereby alleviating the need for redistribution.

... and Vice Versa

This was before the age of Big Data—and Big Media—so these effects did not yet have fancy names like “Great Gatsby Curve,” or get written up and debated by pundits. They were well understood, nonetheless, as were some closely related mechanisms (described below) that also generate a negative relationship between inequality and mobility.

Nowadays, we have massive data sets and amazingly detailed studies (e.g., Chetty et al. 2014), which turn out to strikingly validate the three key predictions. At the same time, relatively little effort is devoted to investigate the exact mechanisms underlying these facts, linking them back to the earlier theories or to newer ones. Thus, after lagging behind theory for some time, measurement has now moved substantially ahead, and a renewed effort at closing the gap is well overdue. This is the endeavor that I see this paper as undertaking, in a manner that is both ambitious in its goals and very open in its assessment of the somewhat mixed nature of the results emerging so far.

I will organize the rest of my discussion in four main parts. First, I will outline some general principles about the types of models that can or cannot account for the major patterns seen in the (national or cross-country) data about what I consider to be an inseparable trinity: inequality, redistribution (whether explicit or implicit), and social mobility. This broader scope will then provide a unified view of a whole class of mechanisms that readily generate a so-called Gatsby Curve, including, of course, the one emphasized in the Durlauf-Sheshadri paper. Next, I will represent these ideas with a simple model and explain how it maps to a reduced form similar to that in the paper. Finally, I will focus on the novel empirical analysis provided by the authors—raising some questions, venturing a few suggestions, and connecting with some other recent evidence.

The Unholy Trinity: Inequality, Redistribution/Mixing, and Mobility

For expositional purposes, I will contrast two main (necessarily simplified) views of this critical politico-social-economic nexus, which I will respectively label “classical” (in the tradition of Becker and Tomes’s [1979] seminal work) and “new ” (that is, post-1990s).

The most basic case of the traditional view is one in which: (a) pretax inequality is either exogenous (reflecting pure talent, preferences, etc.) or resulting from a smooth process of human and/or physical capital accumulation, occurring under complete asset markets and free of any externalities; (b) consequently, the resulting distributional dynamics are independent of initial conditions, and, in particular, of the initial allocation of individual resources. Conversely, any redistributive policy—whether through taxes and transfers, the education system and its financing, interference in the composition of neighborhoods and communities, and so forth—is only a source of deadweight losses; (d) on the political side, as inequality rises the median (or pivotal) voter becomes poorer and imposes more redistribution, in spite of these costs. This reduces post-tax inequality, but has no effect on pretax inequality nor on social mobility, which are largely exogenous.

An amended, more realistic version of this “classical” view replaces assumption (a) with a recognition that human capital investment, particularly early on in life, is often subject to wealth constraints arising from imperfect markets for credit and insurance. This implies that re-

distribution and other progressive policies, such as equalizing educational budgets and resources, now dampen the transmission of wealth and income differences, thus increasing social mobility; they can also have potentially positive effects on efficiency and growth. As long as the traditional political-economy view embodied in (d) is maintained, however, two key implications follow. First, the policy response to inequality shocks (international trade, skill-biased technical progress, etc.) is *stabilizing*. Second, and now directly related to our main concern, greater inequality is associated with *higher* mobility.

Clearly, this class of models cannot generate a so-called Gatsby Curve sloping the way we observe in the data (e.g., Corak 2013). They are also counterfactual in another, even more direct way: a number of studies have now established that increased inequality is typically *not* associated with more redistribution (direct or indirect), but with *less*. For instance, De Mello and Tiongson (2006) show that the share of redistributive transfers in gross domestic product (GDP) during 1981–1999 is negatively related, for about 55 countries, to their Gini coefficient during 1970–1980; Ramacharan (2010) shows that, in the United States over 1890–1930, counties with greater land inequality (instrumented by geographical predictors) had lower spending on public education. Of course, contemporary US developments provide perhaps the clearest illustration that assumption (d) goes very much in the wrong direction.

In what follows I will therefore outline a number of channels through which rising equality inequality leads (over some range) to *less* redistribution and equalization of human-capital investment. First among these is the one studied by Durlauf and Sheshadri, namely an exacerbated sorting by income of households across local communities and schools. All of them, however, share the key property of reversing the classical politico-economic mechanism (d). The policy response to inequality shocks will thus now be *destabilizing*: pretax inequality (e.g., in the next generation) becomes further amplified and greater inequality is now associated with *lower* mobility—Gatsby appears.

If the mechanisms involved are strong enough, we even obtain the possibility of *multiple steady states*—across countries, states, cities, and so forth—which, in the cross-section, will display negative relationships between inequality on the one hand, and redistribution (or integration) and social mobility on the other (Bénabou 2000). Thus, in addition to what Durlauf and Sheshadri label a “dynamic” Gatsby Curve, we get the familiar cross-sectional one as well.

Sources of Gatsby Curves: Negative Inequality-Redistribution Mechanisms

1. *Endogenous Socioeconomic Stratification.* This is the channel that Durlauf and Sheshadri emphasize, confronting to modern data some of the key ideas from the literature of the 1990s. There are two key ingredients in the model.

First, some essential inputs into human capital accumulation and transmission are neither privately nor centrally provided, but have the nature of local public goods or externalities. These include property-tax-financed primary and secondary education, but also peer effects, local culture and norms (including crime and safety) that differ widely across towns, neighborhoods, and schools—as amply documented in the paper. I will also note that, whereas local funding of schools is a key feature of the US system, social spillovers and the residential sorting that comes with them remain highly relevant, even in countries with a national education system—probably now more so than ever.

The second key ingredient is that heterogeneous households endogenously sort themselves into communities, school districts, and other “clubs,” subject to a trade-off between economies of scale, which favor larger, more integrated groups, and the implicit or explicit sharing of human-capital inputs that occurs within each of them, which the better-off classes seek to avoid. As inequality of resources rises due to exogenous shocks, the trade-off shifts toward the second concern, making richer families less willing to pool resources and externalities. Communities and schools thus become more segregated, material and social inputs more unequal, thereby magnifying the persistence of background differences so that intergenerational mobility declines.

2. *Money (or/and Education) Yields Political Influence.* A second and clearly complementary channel arises from the well-documented fact that wealth, both human and financial, translates into political influence: a person’s propensities to turn out at the ballot box, contact their congressman, and, of course, contribute financially to campaigns and causes all rise significantly with their levels of income and education. Moving from inputs to outcomes, research in political science (e.g., Bartels 2008; Gilens 2012) confirms that, across a broad range of domains and time periods, US policy changes are much more responsive to the expressed interests of richer constituents than to those of poorer ones (when the two diverge).

On the theory side, Bénabou (2000) shows that, in such a more realistic political system, the relative wealth (and rank in the distribution) of the

pivotal voter will *rise with inequality*, rather than falling as in traditional political-economy models. This means, in turn, that more unequal places and times will be associated with a decline in the extent of redistribution: when incomes start diverging, efficient progressive policies (in education, social or health insurance, urban policy) will increasingly be blocked, and inefficiently regressive ones increasingly promoted. When combined with frictions in human-capital investment, this policy response further amplifies inequality and reduces social mobility.

3. *Inequality Alters Preferences*. The evidence on this channel is still much more limited and tentative than for the previous two, but it is starting to attract interest. The idea is that greater social distance and reduced social contact between different economic classes (compounded by greater physical distance, through the residential and schooling segregation channel) leads to reduced empathy by the better off for the worse off, and thus a reduced willingness to redistribute. Côté, Housea, and Willer (2015) show, using online dictator-game experiments with nationally representative samples, that: (a) controlling for own income, participants from states with greater inequality choose more selfish allocations; (b) when perceptions of inequality in their state are randomly manipulated (by showing them different “pie charts” for the income distribution), participants who now exogenously believe that they live in a more unequal place again behave less altruistically. This kind of “empathic dissociation” mechanism is likely to be even more powerful when income differences correlate with ethnic, national origin, and cultural ones.

4. *Inequality Alters Beliefs*. A related “behavioral” channel concerns the beliefs that people hold concerning the extent of social mobility and its determinants. If, consistent with a lot of experimental evidence, some of the rich “rationalize” (rightly or wrongly) their wealth increases as resulting from meritorious effort, or/and if some of the poor “escape” from their worsening difficulties by focusing on convenient scapegoats and illusory “easy-fix” solutions, then just as in the second mechanism above, redistributive pressure and ultimately social mobility will decline as inequality rises.

A related case is that of a belief in a “just world,” maintained through cognitive dissonance to serve both functional and affective needs (Lerner 1982). As shown in Bénabou and Tirole (2006), where the social safety net and redistribution are limited, agents have strong incentives to uphold, and pass on to their children, beliefs that “effort pays,” people ultimately get what they deserve and deserve what they get;

where such beliefs predominate, in turn, the majority indeed votes for low taxes. With a generous welfare state, just-world beliefs are much less adaptive, so fewer people maintain them, and a majority votes for high taxes and transfers. This leads to the coexistence of: (a) an “American Dream” equilibrium, with excessively optimistic beliefs about social mobility, high inequality, and little redistribution; (b) a “Europessimistic” equilibrium, with more realistic or even overly pessimistic beliefs about the return to effort, and high redistribution.¹ In a recent study, Alesina, Stantcheva, and Teso (2017) compare perceived versus actual income mobility (from the first to other quintiles) across five OECD countries. A key finding is that, on average, Americans are indeed significantly overly optimistic about the degree of social mobility in their country, while Europeans are overly pessimistic.

A Simple Unifying (But Slightly Cheating) Model

Durlauf and Sheshadri present a model, based on Durlauf (1996), capturing the endogenous-sorting and dynamic-transmission mechanisms described under channel (1) above. That is hard to do, so the analytical results obtained are inevitably limited—for example, characterizing only what happens to the poorest dynasty and the richest one in the economy, and this under appropriately selected (“there exist”) current income distributions. I will commit here the opposite sin and outline a bare-bones model that conveys the essence of the idea, brings out the unifying logic discussed above, and yields explicit formulas for income distributions, mobility, and the so-called Gatsby Curve. Nothing comes for free, so the central feature of the Durlauf-Sheshadri framework I will have to give up on is the explicit endogeneization of community formation, which I will instead represent in a very reduced-form manner.

The model, which is a highly stripped-down version of that in Bénabou (2000, 2006), starts with fairly standard production and accumulation equations:

$$y_i^i = \xi h_i^i, \quad (1)$$

$$h_{i+1}^i = \kappa \varepsilon_{i+1}^i (h_i^i)^\alpha (E_i^i)^{\alpha_1} (H_i^i)^{\alpha_2}, \quad (2)$$

$$E_i^i = s Y_i^i, \quad (3)$$

leading to

$$h_{i+1}^i = \kappa s^{\alpha_1} \varepsilon_{i+1}^i (h_i^i)^\alpha (H_i^i)^\beta, \text{ where } \beta \equiv \alpha_1 + \alpha_2, \quad (4)$$

In the first two equations, h_i^i and y_i^i are the human capital and pretax income of generation t of dynasty i , coinciding for simplicity; ε_{i+1}^i is child ability (i.i.d. for simplicity), E_i^i is education expenditures, h_i^i captures direct in-home learning, and the average human capital in the community H_i^i represents the influence of peer effects, role models, and other local social spillovers. In the third equation, the constant share of income devoted to educational investment, $E_i^i = sY_i^i$, will result from Cobb-Douglas parental preferences, absent credit markets. Note, finally, the close similarity between equation (4) and the accumulation equation in the Durlauf-Sheshadri model, labeled (16).

Turning now to social-residential structure, and/or education finance policy, I denote by $\tau_i \in [0, 1]$ the economy's degree of socioeconomic integration, mapping into a degree of equalization of investment resources across dynasties (explicit or implicit redistribution). Thus, each individual i lives in a community where average human capital is

$$H_i^i = (h_i^i)^{1-\tau_i} (\tilde{H}_i^i)^{\tau_i}, \quad (5)$$

where \tilde{H}_i^i is an economy-wide aggregate (CES index) such that the H_i^i 's sum back to the economy-wide average, H_t . A similar relationship naturally holds for incomes, and indeed it is easy to see that the model is quasi-isomorphic to one in which communities are perfectly segregated ($H_i^i = h_i^i$) but incomes, or alternatively educational expenditures, are centrally redistributed according to a progressive scheme of the form $\hat{y}_i^i = (y_i^i)^{1-\tau_i} (\tilde{Y}_i^i)^{\tau_i}$ or $\hat{E}_i^i = (E_i^i)^{1-\tau_i} (\tilde{E}_i^i)^{\tau_i}$.

Taking the τ_i 's as exogenous for the moment, and assuming log-normal distributions of shocks and initial endowments, yields simple human capital or income dynamics

$$\ln y_{i+1}^i = \ln \varepsilon_{i+1}^i + \ln \kappa + \alpha_1 \ln s + (\alpha + \beta(1 - \tau_i)) \ln y_i^i + \beta \tau_i \ln \tilde{Y}_i^i, \quad (6)$$

from which we readily see that the *intergenerational elasticity* (IGE),

$$\frac{\partial \ln y_{i+1}^i}{\partial \ln y_i^i} = \alpha + \beta(1 - \tau_i), \quad (7)$$

is increasing in the degree of social sorting τ_i , and more generally declining in the degree τ_i of implicit or explicit redistribution. The dynamics of inequality (variance of log-incomes Δ_i) also readily follow, as does its limit whenever the sequence of τ_i converges to some limit τ_∞ :

$$\Delta_{i+1}^2 = (\alpha + \beta\gamma(1 - \tau_i))^2 \Delta_i^2 + \sigma_\varepsilon^2, \quad (8)$$

$$\Delta_{\infty}^2 = \frac{\sigma_{\varepsilon}^2}{1 - (\alpha + \beta(1 - \tau_{\infty}))^2} \equiv D^2(\tau). \quad (9)$$

Finally, we come to the key question of endogenizing τ_t as a function of the state of the economy at date t . In the classical view described earlier, greater inequality leads to more redistribution, corresponding to an upward-sloping relationship $\tau_t = T(\Delta_t)$; we can now read off from equations (7)–(8) how this *dampens* the transmission of inequality and makes the (dynamic) Gatsby Curve slope the “wrong” way. This also applies to the long run, for example, cross-sectionally: the two curves $\Delta = D(\tau)$ and $\tau = T(\Delta)$ will have a unique intersection, such that an exogenous increase in inequality (σ_{ε}^2) will result in a higher τ_{∞} and consequently a lower intergenerational elasticity.

Suppose now, on the contrary, that the social-structure-or-policy locus $T(\Delta_t)$ slopes up (at least over some range)—for instance, if greater inequality at date t leads households to sort even more assortatively across local communities, as occurs *endogenously* in the Durlauf framework. We then obtain the “new” view lining up much better with the facts: an increase in Δ_t (e.g., from σ_{ε}^2) leads to a decline in τ_t , and therefore in social mobility (causal and dynamic Gatsby Curve), thereby *amplifying* the transmission of inequality. When the downward-sloping $\Delta = D(\tau)$ and $\tau = T(\Delta)$ curves intersect more than once, moreover, we obtain multiple stable regimes—metropolitan areas, states, countries—all arranged along a very familiar-looking Gatsby Curve.

Empirical Analysis of the Inequality-Segregation-Mobility Nexus

Having emphasized the thread that runs through several mechanisms potentially delivering a Gatsby-type curve, as well as the natural complementarities between them, I now focus again on the one studied by Durlauf and Sheshadri, discussing the new evidence they bring to bear on it. As acknowledged by the authors, the challenges involved are many, so not surprisingly the results of the different empirical exercises are mixed. Overall they do suggest a picture consistent with the theory, but more work will be needed to sharpen it.

A first remark is that the emphasis in the first and theoretical parts of the paper is on the “dynamic” Gatsby Curve—that is, how changes in inequality induce changes in social mobility. Yet the empirical analysis of the intergenerational elasticity of child to parental income (IGE), reported in tables 4–6, appears to use only cross-sectional variations in

state or/and census-tract inequality. I thus wonder whether fixed effects could also have been included, or if there is not enough time variation in the relevant series for such estimations to be meaningful? In the latter case, the claims about shifting away from the cross-sectional focus in the preexisting empirical studies should perhaps be tempered somewhat.

A second observation is that some of the results vary a fair amount across specifications —both between tables 4 to 6 and within each of them. When focusing on the key effect of inequality on social mobility (the coefficient on the interaction of parental income with the variance of local incomes), a pattern does emerge that is worth pointing out. Namely, the effect of state-income variance on the IGE (table 5) appears much more stable and robust, in sign and significance, than that of census-tract (about 4,000 people) income variance (table 4). This is consistent with the idea that, at the state level, socioeconomic sorting operates both through unequal school funding across communities and through more localized peer effects, whereas at the census-tract level there is much less flexibility and variation on the school-resources margin, leaving only the peer effects and related local externalities in human capital. In table 6, similarly, when both variances are included, it is that of state incomes that tends to survive.

Where I have more trouble interpreting the empirical exercise is going from tables 4–6 to the inequality-mobility curves plotted in figures 15–20. First, we note again an instability: some of these curves slope down, others up, others yet are relatively flat (perhaps they should also have some kind of error band around them). This naturally reflects their being based on estimates from different tables and different columns in each one, given the variations noted above. It would be useful to discuss some more how a specific column was picked in each table (not always the last one), and especially what difference that makes, if any. More puzzling yet is the way in which the pattern noted above for the IGE's estimated dependence on inequality (which I tend to see as the closest counterpart to the theory) appears to be reversed when an "overall" Gatsby Curve is constructed, from each table, by scaling every family's income by a fixed percentage. Thus, whereas the key coefficient was generally zero in table 4 (census-tract level) and positive in table 5 (state level), in the corresponding figures 16 and 17 the constructed curves respectively slope up and sharply down. This made it a bit difficult for me to understand how these curves map back to the model.

Going forward, one possible way of identifying some of the effects involved, and linking the empirical analysis even more closely to the theory, would be to examine the effects of state-income inequality on the mean and variance of public-education spending across communities. As mentioned earlier (Ramacharan 2010), the historical relationship demonstrated regressive effects of (land) inequality, but what is the picture in recent times, both in levels and in changes?

Lest readers be left with the impression that the evidence provided in these IGE regression is too tentative (perhaps due to the “reflection problem”), let me note first that the paper also provides a calibrated structural model, which the authors use to simulate the effects of increasing (by 20%) the variances of key regressors. The most interesting result, shown in figure 24, is that it is dispersion in parental human capital, more than dispersion in parental income, which has the stronger effect in raising intergenerational persistence. This suggests a greater importance of family and/or local peer effects than of purchased educational inputs. That is certainly plausible, though it would be worth discussing how this fits with the patterns noted above across the regression tables for inequality at different levels.

Second, there is concurrent evidence about the central mechanisms emphasized in the paper and the literature on which it draws. Studying the evolution of US Metropolitan Standard Areas (MSAs), Fogli and Guerrieri (2017) document that: (a) between 1970 and 2000, the United States experienced sharp and parallel increases in the average MSA Gini coefficient and segregation index; (b) during 1980–2000, larger changes in residential income segregation at the MSA level were associated to (significantly) larger changes in MSA income inequality, in line with the theoretical prediction (2) discussed at the start of this comment; (c) the more segregated MSAs display divergence in their trend for income inequality, whereas the less segregated ones display convergence, consistent with prediction (3).

Concluding Thoughts

Naturally, much work remains to be done, both on the social-segregation channel and on the other potential (but highly complementary) sources of a negative inequality-mobility relationship—the so-called Gatsby Curve. This rich paper by Durlauf and Sheshadri is an important and valiant first step in this long overdue reconnection of data with theory.

Endnotes

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1. In contrast, the multiple steady states in Alesina and Angeletos's (2005) model based on "fairness preferences" are rational-expectations equilibria: all agents in each country understand exactly the (endogenously country-specific) mobility process they face and the role played in it by effort versus luck.

References

- Alesina, A., and G.-M. Angeletos. 2005. "Fairness and Redistribution." *American Economic Review* 95 (4): 960–80.
- Alesina, A., S. Stantcheva, and E. Teso. 2017. "Intergenerational Mobility and Preferences for Redistribution." NBER Working Paper no. 23027, Cambridge, MA.
- Bartels, L. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton, NJ: Princeton University Press and Russel Sage Foundation.
- Becker, G., and N. Tomes. 1979. "An Equilibrium Theory of the Distribution of Income and Intergenerational Mobility." *Journal of Political Economy* 87: 1153–89.
- Bénabou, R. 1993. "Workings of a City: Location, Education, and Production." *Quarterly Journal of Economics* 108:619–52.
- . 1996. "Heterogeneity, Stratification and Growth: Macroeconomic Implications of Community Structure and School Finance." *American Economic Review* 86:584–609.
- . 2000. "Unequal Societies: Income Distribution and the Social Contract." *American Economic Review* 90:96–129.
- . 2006. "Inequality, Technology, and the Social Contract." In *Handbook of Economic Growth*, ed. P. Aghion and S. Durlauf. Amsterdam: North-Holland.
- Bénabou, R., and J. Tirole. 2006. "Belief in a Just World and Redistributive Politics." *Quarterly Journal of Economics* 121 (2): 699–746.
- Chetty, R., N. Hendren, P. Kline, and E. Saez. 2014. "Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States." *Quarterly Journal of Economics* 129:1553–623.
- Corak, M. 2013. "Income Inequality, Equality of Opportunity, and Intergenerational Mobility." *Journal of Economic Perspectives* 27:79–102.
- Côté, S., J. Housea, and R. Willer. 2015. "High Economic Inequality Leads Higher-Income Individuals to Be Less Generous." *Proceedings of the National Academies of Sciences* 112 (52): 15838–43.
- De Mello, L., and E. Tiongson. 2006. "Income Inequality and Redistributive Government Spending." *Public Finance Review* 34 (3): 282–305.
- Durlauf, S. 1996. "A Theory of Persistent Income Inequality." *Journal of Economic Growth* 1:75–93.
- Fernandez, R., and R. Rogerson. 1996. "Income Distribution, Communities, and the Quality of Public Education." *Quarterly Journal of Economics* 111:135–64.
- Fogli, A., and V. Guerrieri. 2017. "The End of the American Dream? Inequality and Segregation in US Cities." Manuscript, University of Chicago Booth School of Business.

- Gilens, M. 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton, NJ: Princeton University Press.
- Lerner, Melvin J. 1982. *The Belief in a Just World: A Fundamental Delusion*. New York: Plenum Press.
- Loury, G. 1977. "A Dynamic Theory of Racial Income Differences." In *Women, Minorities, and Employment Discrimination*, ed. P. Wallace and A. Lamond. Lexington, MA: Lexington Books.
- . 1981. "Intergenerational Transfers and the Distribution of Earnings." *Econometrica* 49:843–67.
- Ramacharan, R. 2010. "Inequality and Redistribution: Evidence from US Counties and States, 1890–1930." *Review of Economics and Statistics* 92 (4): 729–44.