



# Migration and the persistence of violence

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Using data on millions of internal US migrants, we document that historical homicide rates follow migrants around the United States. Individuals born in historically safe states remain safer wherever they go, while individuals born in historically dangerous states face a greater risk, including from police violence. This pattern holds across demographic characteristics such as age, gender, and marital status, across migrant groups with different average levels of education, income, and even when comparing migrants from different states who reside in the same county. To help understand why, we conducted a large national survey that oversampled internal White US migrants. The results suggest this persistence may reflect a sociocultural adaptation to dangerous settings. Residents and migrants from historically unsafe states—mainly former frontier states and the deep South—see the world as more dangerous, react more forcefully in aggressive scenarios, value toughness, distrust law enforcement, and say they rely on self and family in violent situations. These adaptations may have kept them safe in historically dangerous states, but may increase their vulnerability to harm in safer states.

violence | migration | persistence

Homicide is a leading cause of death for young men in the United States and many parts of the world, yet there is little consensus on its causes. A striking feature of homicide—and interpersonal violence more broadly—is its tendency to vary regionally, with this variation showing remarkable historical persistence (1–4). For example, Louisiana had about four times more homicides per capita than Massachusetts in the 1800s, and it still has about four times more today (5). In this paper, we show that this persistent regional variation in homicide follows people as they migrate around the United States: Those born in historically unsafe states remain at risk even after moving to safer states, while those born in safe states maintain a comparatively lower risk regardless of where they relocate.

To ensure that these results are not driven by selection—e.g., migrants from historically violent states self-selecting into more dangerous settings—we compare demographically similar White migrants who moved from different states but settled in the same state and county. With millions of migrants in our data, we are able to employ precise fixed effects for geographic and demographic categories. The results reveal that, even within the same county or same demographic group (e.g., 25- to 29-y-old males), those from more violent US states are considerably more likely to be victims of homicide than those from safer states. This heightened risk is evident even among those generally considered at low risk for lethal violence, such as married women, the elderly, and migrant groups with higher education and income. The consistency in the pattern of persistence suggests that it is not merely an artifact of particular types of migrants selecting into particular types of places. It is also not an artifact of gun ownership among migrants from historically unsafe states, as persistence rates are similar for gun and nongun homicides.

We focus on White internal US migrants because they are the only group with sufficient variation in historical homicide rates across states. Historically, Black Americans were concentrated in a small number of states, many of which had high homicide rates. Other groups were similarly concentrated until more recent decades.

Prior research on regional differences in violence suggests that an important reason for its persistence may lie in enduring cultural attitudes, particularly those associated with the “culture of honor” (6–13). This culture emphasizes defensive traits, especially a personal reputation for toughness and a readiness to respond to slights with force. It is a protective strategy against aggression (14, 15). Writing about Icelandic sagas, for instance, one scholar states, “honor, at root, still meant ‘Don’t tread on me’” (16). It has been linked to environments marked by historical violence and, in some cases, weak or mistrusted state institutions (1, 4, 17–21). However, the roots of such cultural traits are complex and contested—they may arise in response to weak state institutions, or alternatively, may themselves contribute to institutional weakness (22). What is clear is that such cultures have been observed in a wide range of historical settings characterized by violence and self-reliance.

## Significance

Why do some regions experience high rates of violence for generations, while others remain safe? This research uncovers a crucial insight: When individuals move from historically dangerous to safer areas, a significant part of their original risk of violent victimization travels with them. This suggests that the roots of violence are not solely determined by a person's current circumstances but also by persistent characteristics—perhaps learned behaviors or cultural adaptations—that migrants carry from their original environments. Our findings, based on millions of US migrants, help explain how high homicide rates can stubbornly endure across different places and times.

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These include Corsican villages (23), Greek mountains (24), medieval Iceland (25), the samurai of Japan (26), and contemporary US inner cities (27).

To examine whether migrants carry such cultural traits with them, we fielded a large preregistered national survey, oversampling White interstate migrants. The survey reveals that migrants from historically violent regions report attitudes and behaviors consistent with descriptions of honor culture even after relocating. They are less trusting of criminal justice institutions like the police and tend to rely on themselves and their families for protection. They are also more likely to report a willingness to respond to slights with violence.

A culture-of-honor framework may also help explain several surprising aspects of the persistent homicide patterns we observe, such as why persistence appears across such a wide variety of groups, from married women to those over 75. This framework also helps explain why persistence occurs with homicide victimization, even when we might expect it to occur only with perpetration. In contexts where justice is handled privately, individuals often shift roles—meting out justice in one moment and being on the receiving end in another. “This private provision of security,” one scholar writes about the culture of honor, “creates a hair-trigger society...prone to unleash violent reprisals” (28). At the same time, we emphasize that identifying mechanisms is inherently difficult—other factors likely contribute to the persistence of homicide rates among migrants—and our results should be interpreted as suggestive of a culture-of-honor mechanism.

## Results

**Does Violence Persist among Interstate Migrants?** How much of the regional variation in the risk of violent victimization do migrants carry with them? Using data from US death certificates, Fig. 1 examines this question at the state level for all White internal migrants, plotting the nonmigrant (*Top*) and migrant (*Bottom*) homicide victimization rate by the birth state homicide rate from 1933–1942, the first decade for which we can measure it. Homicides are rare events, but aggregated to the state of birth, they reveal a clear pattern.

The figure’s top panels indicate strong persistence over time, showing that individuals born and residing in states with high homicide rates in the 1930s, such as Kentucky, continue to face the highest homicide risks in 1959–61, 1979–91, and 2000–17. The figure’s bottom panels show the key result of this paper: Much of that persistence carries over to migrants who leave their birth states and settle somewhere else in the United States. That is, the historical homicide rate in a migrant’s birth state strongly predicts their risk of homicide victimization, even after they relocate to another state. Here, each circle shows the homicide rate of migrants wherever they ended up. For example, the Kentucky data points show the average homicide rate for individuals born in Kentucky—the most violent state for Whites in the 1930s—but who migrated to some other US state. As can be seen from this figure, they retain much of their elevated risk of violent death after migrating, which they mainly did to the safer Midwest states. By contrast, individuals from say Wisconsin—one of the safest states for Whites in the 1930s—maintain a lower risk of violent death even after moving elsewhere.

Table 1 presents formal estimates of persistence by regressing the log of homicide rates (+1) on the log of 1933–42 homicide rates. We weight the estimates by the size of each migrant group. Due to space constraints, we only show the estimates for 1959–61 and 2000–17 and present the 1979–91 estimates in the *SI Appendix, Tables S1 and S2*. For descriptive statistics, see *SI Appendix, Tables S3–S9*. The first row of this table presents the bivariate

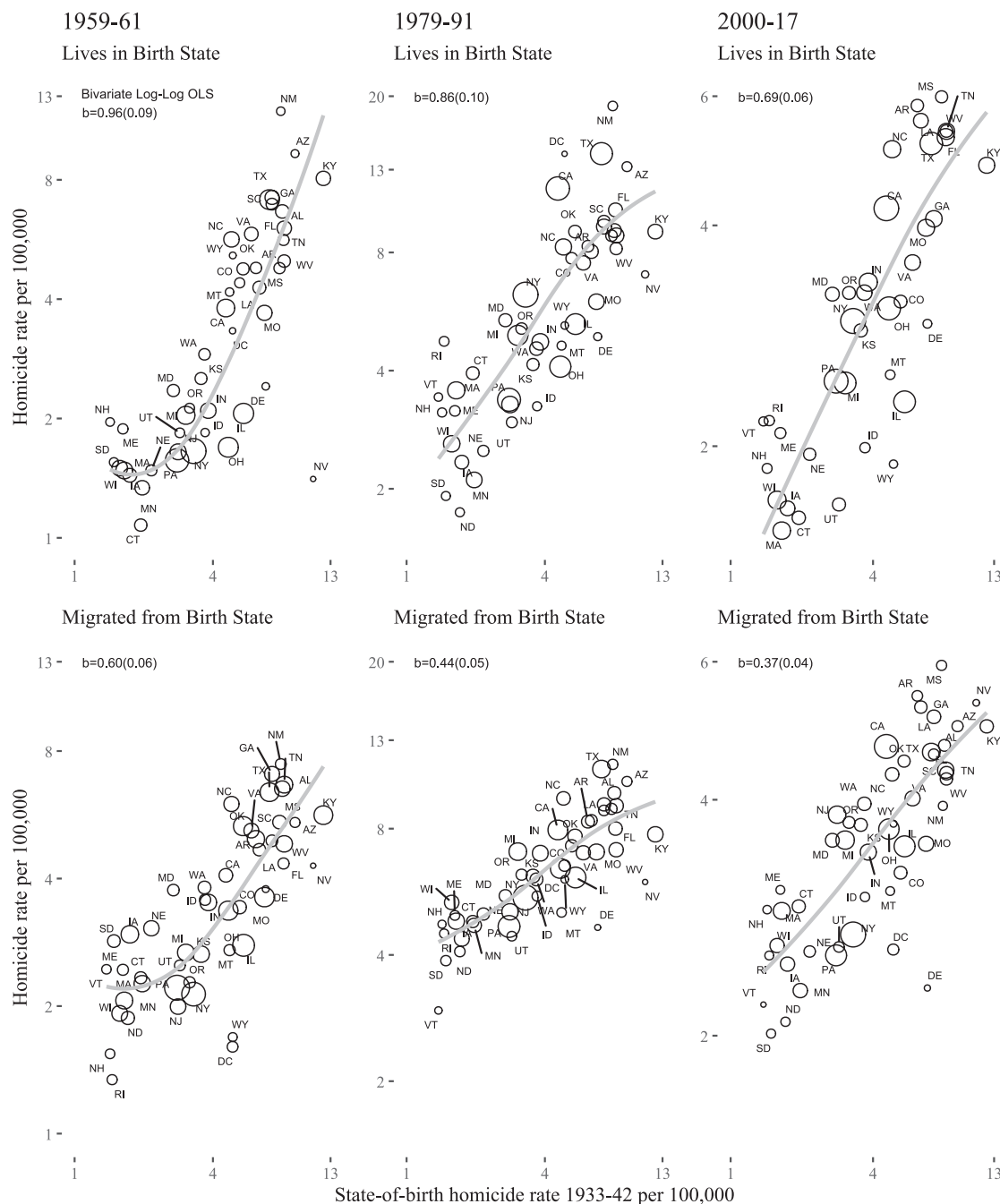
linear regressions corresponding exactly with Fig. 1, with one data point for each state of birth. They reveal that a one-percent increase in the state-of-birth homicide rate corresponds with a 0.96 percent increase for nonmigrants and a 0.60 percent increase for migrants in 1959–61, which implies a  $(0.60/0.96 \times 100 =)$  62% migrant persistence rate. The corresponding coefficients for 2000–17 are 0.69 and 0.37, a 54% persistence rate (for 1979–91, they are 0.86 and 0.44, which implies about a 50% persistence rate).

This persistence among migrants could simply reflect self-selection. Migrants from dangerous states may disproportionately choose to settle in higher-risk areas, or perhaps younger individuals or unmarried males—groups at higher risk of violence—are more likely to migrate from violent states. To address these and other potential sources of selection bias, we estimate linear regression models that incorporate a range of geographic and demographic fixed effects and analyze various subgroups. These models allow us to observe persistence patterns within each state or county of residence and within each demographic group. For example, by including county fixed effects, we ensure that comparisons are made between similar contexts—such as Texans living in Los Angeles County compared to New Yorkers living in Los Angeles County—rather than across disparate locations, like Texans in Los Angeles County and New Yorkers in Suffolk County, Massachusetts.

We first address selection on age and into specific destinations by including fixed effects for state of residence and for 5-y age groups. To include these, the models in rows 2 to 14 of Table 1 disaggregate the data to the state-of-residence, state-of-birth, and 5-y age group level and cluster the standard errors on state of birth. The units of analysis for migrants are specific groups, such as 25- to 29-y-old White individuals born in Kentucky and living in Illinois. For nonmigrants, the units are comparable groups—e.g., 25- to 29-y-old White individuals born in Kentucky and still living there. For migrants, the models in these rows include state-of-residence times age-group fixed effects, so all comparisons are within each state-of-residence-age group. The estimates in row 2 show that including these fixed effects decreases estimated persistence among migrants from 0.60 to 0.47 in 1959–61 and from 0.37 to 0.21 in 2000–17, implying that some of the persistence pattern may be attributable to selection on these variables, but much remains. Consistent with selection not fully accounting for the findings, we find that people from historically violent places select into more violent states at lower rates than might be expected (*SI Appendix, Figs. S1 and S2*). In rows 3 to 14, we take exactly the same model, but break the analysis up and reestimate it separately among females, males, married females, married males, unmarried females, unmarried males, individuals under 15 and then in 15-y age groups up to 75+. The estimates are understandably noisy, but they suggest that the persistence pattern holds up across these categories from unmarried females to the elderly. Strikingly, even migrants 75 y and older in 2000–17 and 1979–91 (see *SI Appendix, Table S1*, for the latter) are more at risk of homicide when they originate from more dangerous states. (This pattern is imprecisely estimated in 1959–61, because there were not as many Americans above the age of 75.)

Even after accounting for these forms of selection, the persistence pattern remains large. Based on the row 2 estimate for 1959–61, the increase in homicide rates for White migrants born in the most violent states exceeded the entire decline in rates associated with aging from 20 to 80 by 140%. It also amounted to 50% of the total gap between Black and White nonmigrants (for details on these calculations, see *SI Appendix, section S5*).

To address potential selection into dangerous counties, rows 15 to 17 disaggregate the data to the county-of-residence level and include county-fixed effects, with standard errors clustered at the



**Fig. 1.** US Homicide Victimization Rate 1959–61, 1979–91, and 2000–17 by 1933–42 Historical State-of-Birth Homicide Victimization Rate for Whites Ages 15 to 59 by Interstate Migration Status. The *Top* panels show the scatterplots for nonmigrants while the corresponding *Bottom* panels show the scatterplots for migrants. For migrants, each point shows the homicide rate averaged across the US states those migrants ended up in. Loess lines are weighted and circles are sized by White population. Note that the y-axis scales vary across columns to make states visible. See *SI Appendix, Table S3* for homicide rates for nonmigrants and migrants from each state in each era.

state-of-birth level. We do not disaggregate by age as well due to the limited number of migrants from each state of birth in most counties. Instead, we control for age, age squared, percent female, and the log of group size. Row 15 shows that persistence patterns remain largely consistent when we examine them within each county. Rows 16 and 17 indicate that this persistence occurs in both large and small counties by population.

Overall, these findings suggest that the persistence of violence among migrants is broad-based and not attributable to the age or gender of those migrating, or to where they settle. Whatever drives this persistence appears to operate across demographic groups. Notably, the patterns by age and gender are strikingly similar for

migrants and nonmigrants, implying that comparable forces shape outcomes in both populations. These parallels are difficult to reconcile with explanations based primarily on selection.

Another possible source of selection is that migrants from historically violent states might choose economic activities that put them at greater risk of homicide, or settle in places where they are especially marginalized. While death certificates do not contain socioeconomic information, the census does. We therefore link group-level measures of education and income from the census to our migrant groups. For example, we calculate the average years of schooling among Louisiana-born migrants living in Los Angeles County. Using these averages, we classify migrant groups into

**Table 1. Persistence of homicide victimization rates among White internal US migrants compared to nonmigrants from the 1930s to 1959–61 and 2000–17**

Model	1959–61					2000–17				
	Non-Mig.		Migrants		Persistence	Non-Mig.		Migrants		Persistence
	Coef.	SE	Coef.	SE	%	Coef.	SE	Coef.	SE	%
<i>Analysis at the birth-state level (n = 49 states of birth)</i>										
1. Bivariate reg. on data in Fig. 1	0.96*	0.09	0.60*	0.06	62	0.69*	0.06	0.37*	0.04	54
<i>Analysis at the birth-state * residence-state * age-group level with controls for state-residence * age-group FE for migrants and age-group FE for non-migrants</i>										
2. Baseline reg. at this level	0.94*	0.09	0.47*	0.04	50	0.67*	0.06	0.21*	0.04	31
3. Females	0.42*	0.08	0.29*	0.05	69	0.46*	0.05	0.14*	0.04	30
4. Males	1.23*	0.11	0.53*	0.05	43	0.80*	0.07	0.25*	0.05	31
5. Married females	0.41*	0.09	0.30*	0.04	73	0.38*	0.04	0.08*	0.03	21
6. Married males	1.32*	0.10	0.50*	0.05	38	0.68*	0.08	0.21*	0.04	31
7. Unmarried females	0.34*	0.09	0.10	0.06	30	0.51*	0.08	0.19*	0.06	37
8. Unmarried males	1.09*	0.15	0.36*	0.08	33	0.83*	0.07	0.26*	0.07	31
9. Age less than 15	0.08	0.05	0.01	0.03	16	0.25*	0.04	0.12*	0.03	48
10. Age 15–29	0.86*	0.10	0.49*	0.05	57	0.62*	0.06	0.21*	0.05	34
11. Age 30–44	1.08*	0.10	0.57*	0.05	53	0.73*	0.07	0.27*	0.05	37
12. Age 45–59	0.91*	0.09	0.35*	0.06	39	0.66*	0.06	0.17*	0.04	26
13. Age 60–74	0.68*	0.07	0.27*	0.06	40	0.58*	0.05	0.15*	0.03	26
14. Age 75 and up	0.62*	0.15	0.04	0.06	6	0.48*	0.06	0.12*	0.03	25
<i>Analysis at the county by state-of-birth level controlling for age, age squared, female percent, and log of group size, and county FEs for migrants</i>										
15. Baseline reg. at the county level	0.80*	0.17	0.39*	0.05	49	0.61*	0.09	0.18*	0.03	30
16. Above the median county population	0.91*	0.21	0.43*	0.06	47	0.55*	0.12	0.17*	0.03	31
17. Below the median county population	0.56*	0.14	0.19*	0.05	33	0.51*	0.14	0.20*	0.04	39

Note: This table shows estimates of the effect of the log of 1933–42 state-of-birth White homicide rate on the log +1 of homicide rates in 1959–61 and 2000–17. Each set of coefficients and SE is from a separate regression. Except for the first row, SE are clustered by state of birth. Data are weighted by population. In row 1, the Ns are 49. In row 2, the Ns for migrants are 49 states of birth (including DC, but excluding AK and HI) within each of 51 states of residence (including DC) separately for nine 5-y age groups (ages 15 to 59), so (49 times (51 – 1) times 9 =) 22,050 groups, though we have missing population data for small migrant groups, especially in small states—1,810 groups in 1959–61 and 15 in 2000–17. It is 51 – 1 in this calculation since each of the 49 states of birth can pair with 51 – 1 possible migrant groups, not 51, because those born in their state of residence cannot be migrants in their own state. For counties in 1959–61, we use all data points for which the 5 percent census files in 1980 and 1990 contain respondents. In 1959–61, this yields an N of 383 nonmigrant counties and 15,936 migrant groups in US counties. In 2000–17, these Ns are 454 and 21,866. For nonmigrants, the models do not include state of residents fixed effects or county fixed effects because these are collinear with the historical state-of-birth homicide rate. Ages 15 to 59 except rows 9 to 14. \* $P < 0.05$  (two-sided, as are all tests). See *SI Appendix, Tables S12 and S13*, for the full models.

quartiles of education and income. We then reestimate the persistence regressions within each quartile. Table 2 shows results for 1959–61 and 2000–17, with state-level results in the top panel and county-level results in the bottom panel. Importantly, nothing in our data is changing in these analyses—the dependent variable, independent variables, and models are the same—we are simply reestimating by migrant group-level characteristics as opposed to, say, reestimating by individual or geographical characteristics. We find evidence of persistence across almost all quartiles of migrant group education and income, though the strength of persistence is somewhat weaker among the most educated and highest-income groups. We also classify migrant groups by their relative position compared to nonmigrants in the receiving area (i.e., quartiles of education and income inequality relative to locals). Persistence is again evident, including among groups who are better educated and more affluent than their new neighbors. Because these estimates rely on migrant group averages, not individual data, we must be wary of drawing inferences about individuals. Nonetheless, the findings suggest that persistence may not be confined to a single disadvantaged segment of the migrant population, but

instead appears across the economic and educational spectrum. Consistent with this, migrants from historically violent states are on average better educated and better off than their new neighbors (*SI Appendix, Figs. S5–S8*).

How much of this persistence arises from migrant groups congregating in large enclaves? Answering this question is beyond the scope of this paper, but we can conduct a preliminary analysis. Table 2 presents estimates for migrant groups above and below the median migrant group size (at the state level and at the county level). The estimates reveal little persistence among below-the-median size groups, but strong persistence in above-the-median size groups. In additional analyses, we find that persistence appears to increase with group size (not plateauing as it should if larger group sizes simply reduce noise, see *SI Appendix, Fig. S9*). However, the estimates are imprecise, and therefore at best suggestive. These signs that larger groups contribute to persistence, though, are consistent with other findings, which show a positive relationship between enclave size and rates of main language acquisition (29–32).

Finally, Table 2 shows that persistence generally holds up across US regions. It implies that people from safe states remain



disproportionately safe even when they migrate to unsafe regions like the South. For example, in 1959–61, the homicide rate for Southern-born migrants living in the South was 5.9 per 100,000 (about the same as that experienced by nonmigrants in the South). By contrast, Northeast-born migrants in the South were much safer with a homicide rate of 2.8. They were not quite as safe as they would have been had they stayed in the Northeast, which had a homicide rate of 1.6, but they were still much safer than Southerners in the South. This pattern holds for 1979–91 and 2000–17. This cannot be attributed to age, sex, or their locations of residence since Table 2 conditions on these and, as already noted, persistence exists among better educated, higher income migrant groups and the elderly.

Another explanation for this persistence is gun ownership. Those from historically violent states may own guns at higher rates and guns can turn disputes into homicides. The death certificate data include information on the instrument, enabling us to isolate gun-related violence. We find considerable persistence for both gun homicides and for nongun homicides (*SI Appendix, Fig. S10*), suggesting that variation in the availability of guns cannot account for our results.

Although we explore the culture of honor explanation in more detail in the next section, one aspect of the results warrants brief comment here—namely, that we find persistence for women. Cultures of honor are often understood as intensely male, so persistence among females may seem at odds with this account. However, real or perceived infidelity by wives or girlfriends is frequently viewed as a serious insult to male partners, prompting violent retaliation as a means of restoring male reputations as not someone to be trifled with (33–35). Women may also help sustain these norms by internalizing reputational logics and discouraging outside intervention. At the same time, while we detect some persistence among female migrants, the elevated risk of violence is primarily found among male migrants (*SI Appendix, Figs. S3 and S4*).

Another important aspect of the results is that the relationship between historical homicide rates and migrant group homicides weakens over time, as reflected in the smaller estimates for later cohorts in Tables 1 and 2. This attenuation likely results from a combination of factors. First, the nationwide decline in homicide and improvements in policing since the early 1990s may have lowered overall violence and narrowed intergroup differences. Second, later migrant cohorts may have experienced greater geographic and social integration, facilitating the assimilation of behavioral norms. Third, selective return migration may have gradually reduced the distinctiveness of those who remained outside historically violent states.

In the analyses above, we examine persistence based on 1933–42 White homicide rates because these are the first 10 y for which homicide rates are available from the death registry for all states, but our findings also do not depend on this decision. In fact, they tend to become stronger if we use later years (*SI Appendix, Figs. S11 and S12*).

The analysis above compares migrants from one state to migrants from another state who end up in the same state or county. We think comparing migrants to other migrants is the stronger design, but we find similar results when we compare migrants to locals. Indeed, in states that disproportionately received migrants from less-safe states (*SI Appendix, Fig. S13*, for a visualization), we find that these migrants experience disproportionately high rates of homicide. For example, 1,385,640 Kentuckians had migrated to Ohio and Indiana by 1959–61 and they died violently at almost 3 times the rate of locals (5.3 vs. 1.8 per 100,000).

To help us understand why historical homicide rates are persistent, we also explored robustness to other historical variables, including historical state income per capita, unemployment, agricultural share, and non-White share, in migrant-only regressions (*SI Appendix, Tables S10 and S11*). Per capita income and agricultural share, though not unemployment, initially predict migrant homicide rates in 1959–61, but their predictive power diminishes by 1979–91 and 2000–17. Although the predictiveness of non-White migrant share also declines over time in these models, it remains significantly predictive through 2000–17. Migrants from states with high non-White migrant shares disproportionately originate from the Deep South—the country's historically most extractive region, characterized by weak state institutions and distinctive conditions that could leave migrants more vulnerable to violence. Importantly, these historical variables are inherently interrelated and vary substantially in measurement quality, influencing how strongly regression analyses will favor one predictor over another and limiting our ability to draw strong inferences. Overall, this analysis highlights the surprising ease of predicting migrants' vulnerability to violent victimization based on their states of origin, which we see as the paper's main contribution. However, it also underscores the difficulty of isolating the mechanism behind this persistence. Thus, while we offer an Occam-style interpretation—that historical homicide rates themselves are intuitively most related to later homicide rates—we readily acknowledge the uncertainty.

Finally, we find similar patterns with police-involved homicides, which are partially observable in death certificate data—estimated to capture 50 to 60% of such incidents (36, 37). Individuals from historically violent states experience higher rates of police violence—even after migrating to new states (*SI Appendix, Fig. S14*).

**Survey.** If the persistence of violence among migrants from unsafe states stems from adherence to norms and behaviors rooted in a culture of honor, we would expect them to have a fundamentally different approach to public safety and criminal justice than those migrating from safer states. To study this prediction, we conducted a national survey of non-Hispanic White migrants and nonmigrants, oversampling migrants so that they composed about half of the sample. We then examine the relationship between the historical homicide rate in the state where these migrants grew up and their beliefs, experiences, attitudes, and values related to public safety. To reduce measurement error, we measured many of these with multiple items (*SI Appendix, sections S6–S9* for details, preregistration, question wording, and construct reliability; Cronbach's alphas were generally 0.7 or higher). Specifically, we expect that individuals from historically high-homicide states will exhibit the following patterns:

First, we expect them to have grown up witnessing more violence (three-item scale) and to hold a heightened perception of personal risk, believing that being mugged, violently attacked, or having their home invaded is more likely (three-item scale). This heightened sense of vulnerability is tied to a broader worldview that sees the world as fundamentally dangerous and unpredictable (two-item scale).

Second, they are likely to display less trust in institutions. This includes having lower confidence in local governments (two items) and viewing the police as less effective in ensuring safety (three-item scale). Instead, they are more inclined to rely on family rather than law and courts when someone in their family is victimized (two-item scale). Additionally, they should have lower trust in other people (two items).

Third, we expect a stronger inclination toward protective behaviors and adherence to an honor-based ideology. They are more

**Table 2. Robustness in the persistence of homicide victimization rates among White internal US migrants from the 1930s to 1959–61 and 2000–17**

Model	1959–61				2000–17			
	Coef.	SE	R2	N	Coef.	SE	R2	N
<i>Analysis at the birth-state level (n = 49 states of birth)</i>								
1. Bivariate regression estimates on data in Fig. 1	0.60*	0.06	0.64	49	0.37*	0.04	0.59	49
<i>Analysis at the birth-state * residence-state * age-group level with controls for state-residence * age-group FE, female %, and log of group size</i>								
2. Baseline regression estimates at this level of disaggregation	0.43*	0.05	0.31	20,240	0.23*	0.03	0.37	22,035
3. 1st quartile years in school among migrant groups	0.35*	0.17	0.50	1,460	0.20*	0.05	0.43	4,286
4. 2nd quartile years in school	0.14*	0.07	0.39	3,951	0.21*	0.04	0.40	4,286
5. 3rd quartile years in school	0.22*	0.06	0.32	5,122	0.23*	0.04	0.35	4,285
6. 4th quartile years in school	0.09*	0.04	0.32	5,065	0.04	0.04	0.34	4,285
7. 1st quartile HH income among migrant groups	0.24*	0.10	0.42	2,581	0.23*	0.04	0.37	5,506
8. 2nd quartile HH income	0.39*	0.07	0.44	5,233	0.24*	0.05	0.39	5,505
9. 3rd quartile HH income	0.38*	0.07	0.36	6,228	0.24*	0.03	0.39	5,506
10. 4th quartile HH income	0.15*	0.06	0.33	6,198	0.11*	0.04	0.35	5,505
11. 1st quartile HH income inequality between migrant group and nonmigrants (migrants best-off)	0.07	0.05	0.20	5,022	0.16*	0.05	0.45	5,312
12. 2nd quartile HH income inequality between migrant group and nonmigrants	0.22*	0.06	0.39	4,872	0.16*	0.03	0.41	5,280
13. 3rd quartile HH income inequality between migrant group and nonmigrants	0.20*	0.06	0.39	4,817	0.16*	0.04	0.43	5,280
14. 4th quartile HH income inequality between migrant group and nonmigrants (migrants worst-off)	0.42*	0.07	0.36	4,722	0.28*	0.04	0.44	5,282
15. 1st quartile education inequality between migrant group and nonmigrants (migrants most-educated)	0.07	0.08	0.36	4,940	0.16*	0.05	0.47	5,312
16. 2nd quartile education inequality between migrant group and nonmigrants	0.06	0.06	0.39	4,787	0.09*	0.04	0.36	5,278
17. 3rd quartile education inequality between migrant group and nonmigrants	0.37*	0.05	0.45	4,786	0.18*	0.04	0.44	5,282
18. 4th quartile education inequality between migrant group and nonmigrants (migrants least-educated)	0.27*	0.06	0.48	4,920	0.24*	0.04	0.43	5,282
19. Above median migrant population	0.46*	0.05	0.30	9,601	0.24*	0.03	0.38	11,016
20. Below median migrant population	0.03	0.02	0.10	10,639	0.09*	0.04	0.13	11,019
21. Only migrants who crossed census regions	0.37*	0.07	0.34	15,216	0.21*	0.04	0.33	16,563
22. Northeastern residence	0.22*	0.07	0.25	3,879	-0.03	0.05	0.39	3,884
23. Midwestern residence	0.57*	0.08	0.30	4,370	0.32*	0.03	0.28	5,177
24. Southern residence	0.39*	0.10	0.30	5,610	0.27*	0.05	0.31	7,341
25. Western residence	0.33*	0.09	0.31	6,381	0.23*	0.05	0.29	5,633
<i>Analysis at the county by state-of-birth level with controls for county fixed effects, age, age squared, female %, and log of group size</i>								
26. Baseline regression estimates at the county level	0.39*	0.05	0.38	15,936	0.18*	0.03	0.43	20,885
27. 1st quartile years in school among migrant groups	0.41*	0.11	0.50	3,992	0.20*	0.07	0.47	5,168
28. 2nd quartile years in school	0.19*	0.06	0.44	3,994	0.18*	0.04	0.46	5,168
29. 3rd quartile years in school	0.17*	0.08	0.45	3,967	0.13*	0.03	0.51	5,168
30. 4th quartile years in school	0.09	0.07	0.30	3,983	0.08*	0.04	0.50	5,167
31. 1st quartile education inequality between migrants and nonmigrants	0.16*	0.06	0.33	4,444	0.15*	0.04	0.48	5,185
32. 2nd quartile education inequality between migrants and nonmigrants	0.04	0.06	0.34	3,985	0.11*	0.04	0.48	5,185
33. 3rd quartile education inequality between migrants and nonmigrants	0.15*	0.06	0.48	3,799	0.14*	0.03	0.53	5,185
34. 4th quartile education inequality between migrants and nonmigrants	0.48*	0.08	0.46	3,534	0.23*	0.06	0.48	5,185
35. 1st quartile HH income among migrant groups	0.12	0.11	0.46	3,984	0.19*	0.06	0.42	5,222

Table 2. (Continued)

Model	1959–61				2000–17			
	Coef.	SE	R2	N	Coef.	SE	R2	N
36. 2nd quartile HH income	0.31*	0.07	0.47	3,984	0.24*	0.04	0.45	5,230
37. 3rd quartile HH income	0.34*	0.08	0.43	3,984	0.10*	0.04	0.48	5,212
38. 4th quartile HH income	0.19*	0.07	0.47	3,984	0.10*	0.03	0.51	5,221
39. 1st quartile HH income inequality between migrants and nonmigrants	0.09	0.10	0.33	4,389	0.12*	0.04	0.51	5,184
40. 2nd quartile HH income inequality between migrants and nonmigrants	0.21*	0.08	0.41	3,860	0.13*	0.04	0.47	5,186
41. 3rd quartile HH income inequality between migrants and nonmigrants	0.23*	0.06	0.46	3,802	0.19*	0.03	0.50	5,185
42. 4th quartile HH income inequality between migrants and nonmigrants	0.12	0.12	0.52	3,711	0.18*	0.05	0.49	5,185
43. Above the median migrant population	0.40*	0.05	0.38	7,863	0.17*	0.03	0.47	10,434
44. Below the median migrant population	0.05*	0.01	0.09	8,073	0.06*	0.03	0.17	10,451

Note: This table shows estimates of the effect of the log of 1933–42 state-of-birth White homicide rate on the log +1 of homicide rates in 1959–61 and 2000–17. The coefficients shown are for the state-of-birth homicide rate for Whites in 1933–42. Each set of coefficients and SE is from a separate regression. Except for the baseline estimate rows, SE are clustered by state of birth. *SI Appendix* shows the estimates for 1979–91 and for homicide count models. See note to previous table for more details. Subgroup Ns do not always add up to the total because of missing census data for small migrant groups. \**P* < 0.05. See *SI Appendix, Tables S14–S17*, for the full models.

likely to own guns for self-defense (two items) and to embrace a belief system where a “real man” never backs down from a fight, is willing to use physical aggression when provoked, and “doesn’t take any crap from anybody” [Honor Ideology in Manhood, (38), three-item scale]. This honor ideology extends to how they view themselves, as they are more likely to describe themselves as hot-headed or having uncontrolled tempers—characteristics that may serve as protective reputations in environments where violence and theft are common [(39), three-item scale].

Finally, in scenarios involving direct threats or provocation—such as having a drink poured on their head in a bar, being scratched repeatedly on a school bus, or being shoved at a movie theater—these individuals are expected to respond more aggressively than others (three-item scale). They are also more likely to perceive that their friends and typical individuals from their community (matched to the gender of the person in the scenario) would respond aggressively in similar situations (three items each). Walking away from such confrontations, in their view, would not only make them appear weak but also diminish their sense of being a “real man” (two items each).

We find support for these predictions: The historical homicide rate from where respondents grew up consistently predicts responses to the scales in the expected direction for migrants and nonmigrants. Fig. 2 shows state-level scatterplots for a selection (for more outcomes, see *SI Appendix, Fig. S15*). Table 3 presents our individual-level regression models controlling for gender, education, 5-y age-group fixed effects and state of residence fixed effects for migrants. If we group together related estimates with precision weighted averages, we find that all but one are statistically significant at conventional levels. One might think that these differences in views of criminal justice simply reflect partisanship, but controlling for party identification leaves these relationships unchanged.

The effect sizes are not large, but we think it is notable that, almost a century later, we can still detect reverberations of historical homicide rates in online surveys.

The culture of honor appears to be more prevalent in rural areas than in urban areas (40). Indeed, we find that the associations between our survey measures and historical homicide rates more than double among rural respondents. In *SI Appendix, Table S19*, we show the estimates for each item for rural respondents, and in

*SI Appendix, Fig. S16*, we show a precision weighted average for rural respondents (before and after a preregistration update).

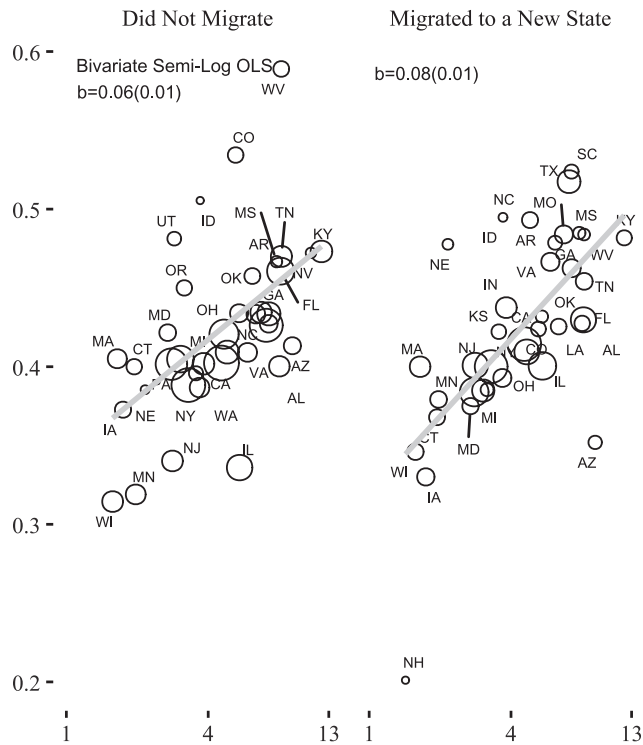
Our survey focused on the culture of honor, as it aligned with our observational findings. We did include, however, a few measures to assess economic, legal cynicism, and social disorganization mechanisms, but found mixed support for these (see bottom of Table 3). Future studies should further explore these mechanisms.

Discussion

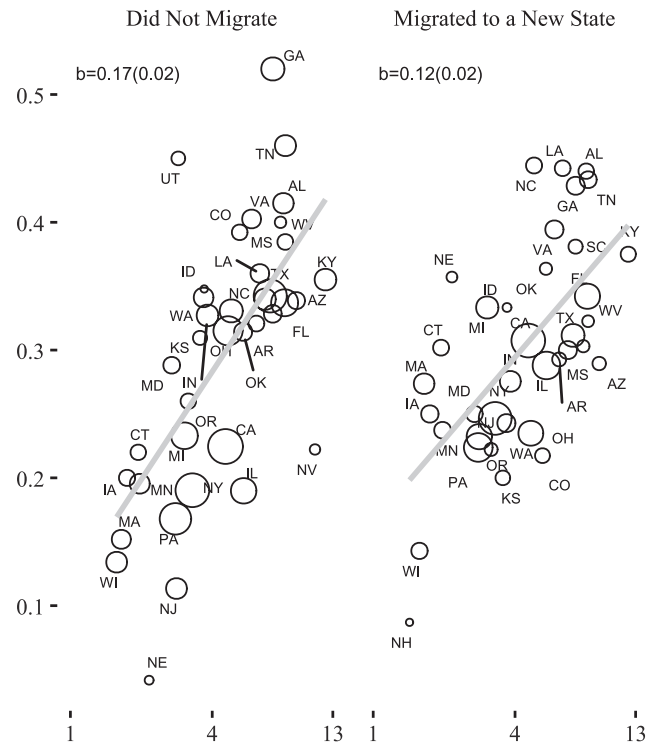
Focusing on White interstate migrants who move between safer and less safe states, we find that migrants from historically unsafe states carry the shadow of homicide victimization with them to their new states. We replicate this finding across three distinct periods in US homicide history, observing that approximately 50% of White migrants’ homicide risk from their birth states persists in their new states of residence in 1959–61, around 40% persists in 1979–91, and about 30% persists in 2000–17. Our results are not inconsistent with prior studies showing no direct link between migration and crime or delinquency (41–43). These studies emphasize that migrants are not inherently more or less prone to violence simply by virtue of moving. Our findings align with this view: we do not claim that migration itself increases violent behavior. Rather, we show that among migrants, those from historically violent places carry with them elevated risks—suggesting persistence of norms or environmental influences, not a general effect of migration.

Why does this persistence occur? This remains a challenging question that we cannot resolve, especially given the complexity of historical variables that are inherently interrelated and vary in measurement quality. Nevertheless, research suggests enduring cultural norms shaped by long-term exposure to violence may contribute. In particular, cultures of honor—where individuals emphasize personal reputation for toughness and readiness to respond to threats—might help explain why migrants from historically violent regions remain at higher risk even after relocating. These cultural norms could develop in response to weak or mistrusted institutions or arise for other reasons connected to historical patterns of conflict and self-reliance. Supporting this interpretation of our persistence findings, our large-scale survey

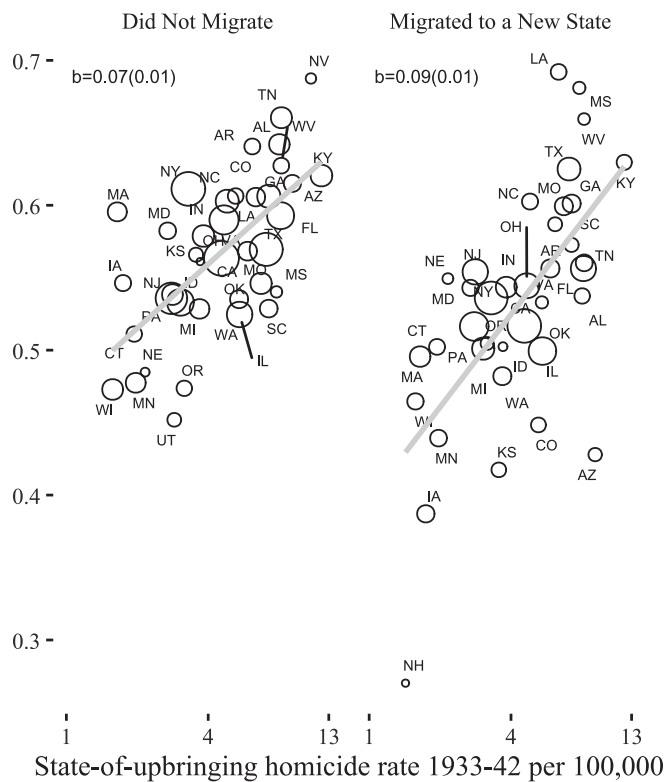
## A Trust Family over the Police



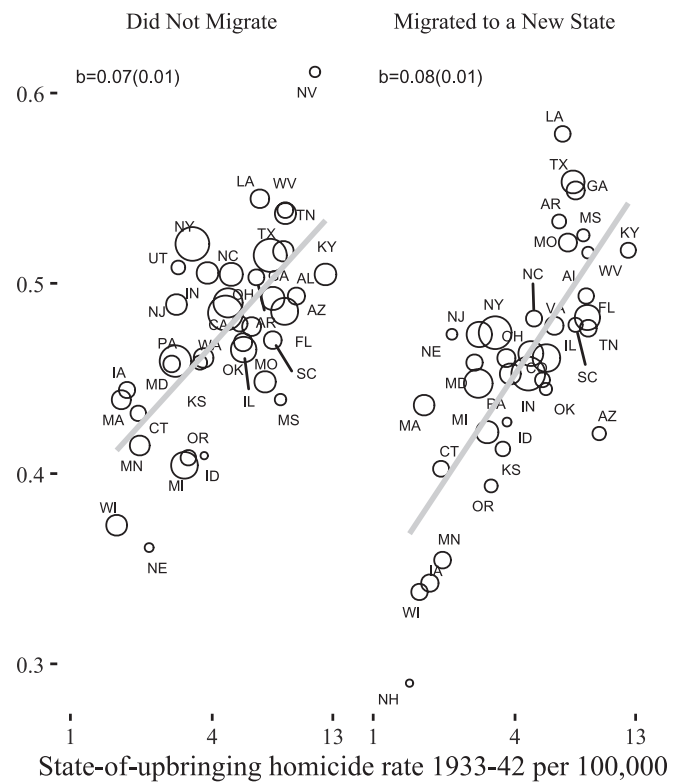
## B Own Gun Mainly for Protection



## C Aggressive Scenario Response for a "Typical Person"



## D Honor Ideology in Manhood



**Fig. 2.** Selected survey measures (A–D) by historical state-of-upbringing homicide victimization rate for Whites by migration status. Linear best-fit lines are weighted and circles are sized by the number of respondents. For the figure only, we exclude states with 20 respondents or fewer. All respondents are non-Hispanic White. Note that y-axis ranges vary for each figure. All dependent variables are scaled from 0 to 1.



**Table 3. Survey findings on the persistence of violent victimization among White, Non-Hispanic internal US migrants and nonmigrants**

	Effect of historical homicide rate				
	Non-Mig.		Migrants		Persistence
	Coef.	SE	Coef.	SE	%
Culture of honor DVs					
<i>Do high hist. hom. state respondents see violence as a constant presence?</i>					
1. Witness violence growing up (three-item scale)	0.048*	0.020	0.040*	0.020	84
2. Assault risk (three-item scale)	0.065*	0.023	0.094*	0.027	144
3. Belief in a dangerous world (two-item scale)	0.072*	0.014	0.103*	0.021	143
(precision weighted average)	0.064*	0.010	0.076*	0.013	118
<i>Do they distrust institutions?</i>					
4. Distrust local government where they grew up (one-item scale)	0.027	0.023	0.035	0.023	
5. Distrust local government where they live now (one-item scale)	0.029	0.022	−0.010	0.024	
6. Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.060*	0.019	0.019	0.018	31
7. Trust family over the police (two-item scale)	0.070*	0.019	0.066*	0.028	95
(precision weighted average)	0.050*	0.010	0.024*	0.011	48
<i>Do they distrust other people?</i>					
8. Distrust other people where they grew up (one-item scale)	0.057*	0.019	0.094*	0.028	163
9. Distrust other people where they live now (one-item scale)	0.033	0.029	0.031	0.027	92
(precision weighted average)	0.050*	0.016	0.062*	0.019	123
<i>Do they own a gun for defense?</i>					
10. Own gun mainly for protection	0.274*	0.040	0.114*	0.037	42
11. Own gun partly for protection	0.043	0.038	0.007	0.034	17
12. Own gun not for protection	−0.082*	0.017	0.004	0.020	−4
<i>Do they especially value manliness in men?</i>					
13. Honor ideology in manhood (three-item scale)	0.092*	0.024	0.109*	0.025	31
<i>Do they see themselves as fiery and quick tempered?</i>					
14. Hotheadedness (three-item scale)	0.047*	0.014	0.015	0.020	31
<i>Do they respond more forcefully to insults and provocations in three scenarios?</i>					
15. Aggressive self-response in the three threatening scenarios (three-item scale)	0.100*	0.031	0.052	0.029	52
16. Aggressive response by friends where they grew up (three-item scale)	0.110*	0.024	0.091*	0.028	83
17. Aggressive response by typical male/female where they grew up (three-item scale)	0.088*	0.024	0.105*	0.032	120
(precision weighted average)	0.099*	0.015	0.081*	0.017	82
18. Aggressive response average in Kevin scenario (three-item scale)	0.107*	0.025	0.071*	0.026	67
19. Aggressive response average in Emma scenario (three-item scale)	0.090*	0.028	0.084*	0.031	93
20. Aggressive response average in Doug scenario (three-item scale)	0.075*	0.033	0.098*	0.030	130
<i>Do they see backing down as costly?</i>					
21. If Kevin and Doug walked away, they would look weak (two-item scale)	0.053*	0.024	0.032	0.030	61
22. If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.053*	0.022	0.047	0.028	88
(precision weighted average)	0.053*	0.016	0.040*	0.020	76
Other potential mechanism DVs					
<i>Do they disregard the law?</i>					
23. Legal cynicism (three-item scale)	−0.029	0.019	0.028	0.021	
<i>Do they report lower living standards?</i>					
24. Living standard (two-item scale)	−0.001	0.020	−0.02	0.025	
<i>Did they experience one possible form of social disorganization?</i>					
25. Raised by both parents	−0.079*	0.029	−0.122*	0.033	154

Note: Each row shows a separate regression where the survey measure (DV) is regressed on the log of the historical homicide rate in the state where respondents grew up, an indicator for whether the respondent is an internal US migrant, the interaction of these two variables, and the number of years in school, with state-of-residence fixed effects for migrants and gender and 5-y age group fixed effects for all respondents. We calculate the migrant coefficient with the main effect and the interaction. Analysis is conducted at the individual level. All variables are rescaled to vary from 0 to 1.

SE are clustered by the state where the respondent grew up. We calculate the persistence percentage as migrant coefficient over nonmigrant coefficient multiplied by 100, only showing those with migrant coefficients above 0.03. \* $P < 0.05$ .

See *SI Appendix, Table S18*, for the full models.

of interstate migrants shows traits and behaviors associated with a culture of honor—such as gun ownership for protection, aggressive responses to personal slights, and mistrust of criminal justice institutions—persist even after citizens relocate. However, due to the inherent difficulty of determining mechanisms, any interpretation should be made cautiously.

## Materials and Methods

This section provides an overview of the materials and methods used. Please consult *SI Appendix* for more details. We measure the historical homicide rate for Whites at the earliest point possible. After a several-decade effort, the US Census successfully collected death certificates for nearly all US deaths starting in 1933. We digitized these early state-level counts of homicides from the Census and use the simple average of the first decade of available data, 1933–42, to measure the historical state homicide rate for Whites (44, 45). 1937–41 were already digitized (46). We must rely on state-of-birth homicide rates as our key independent variable, not county or city of birth rates, because we use death certificates to track homicide persistence and they only contain birth states. In part because of the Census's focus on data quality, early death certificate data appear to accurately measure homicides (47, 48). We observe these early state homicide rates for all states and the District of Columbia, except for Alaska and Hawaii as these were not states at the time.

We relate the historical homicide rate in migrants' states of birth to several outcomes. The first is migrants' risk of homicide victimization in the state and county they move to, excluding police homicides. We can track the homicide rate of internal US migrants in 1959–61, because death certificates included state of birth in this period (49). For each homicide victim, we therefore observe state and county of residence, state of birth, race, age, sex, and marital status. The 5% samples from the decennial US Census (50) also record state of birth, allowing us to calculate homicide victimization rates for different migrant groups. The data available in the death certificates allow us to calculate the homicide rates for migrant groups by age group, e.g., 25- to 29-y-olds born in Kentucky and living in Ohio. State of birth is first available in the death registry in 1959–61 and again in 1979 onward (see *SI Appendix, section S4* for details). In the Census, we also observe education, family income, etc., for each of the migrant groups. We use regression models with logarithmic transformations to study the relationship between historical and present-day homicide rates, as they effectively capture proportional relationships and allow for the interpretation of elasticities; however, count models and other robustness checks reveal similar findings (*SI Appendix, Tables S21–S26*). We cluster our standard errors by state of birth, because this is the level at which our "treatment," i.e., being born in a safe or unsafe state, operates.

Ideally, we would measure perpetration rates, not just victimization rates, but we lack reliable data on perpetration. However, given the high proportion of homicides that result from interpersonal conflicts, perpetration and victimization rates are usually highly correlated (51–53).

We conduct our analysis of migrant homicide rates in three distinct periods: 1959–61, 1979–91, and 2000–17. As noted above, the earliest of these periods corresponds with the first 3 y in which state of birth is available in the death registry. These data are again available beginning in 1979, so we examine 1979–91 to capture a particularly violent period in the United States. Finally, we examine 2000–17 to investigate whether patterns of violent victimization persist further into history and into another lower-violence period (non-Hispanic Whites). In 1959–61, our data include 181.9 million nonmigrant person-years, 90.9 million migrant person-years, 11,269 nonmigrant homicides, and 7,807 migrant homicides. For the other two periods, these numbers are 962.1 M, 510.4 M, 63,733, and 33,895, and 1,308.4 M, 741.2 M, 44,807, and 26,893, respectively.

Although death certificates do not contain socioeconomic information, the census allows us to measure education and income at the migrant group level. For each group defined by state of birth, destination, age, and sex (e.g., 25- to 29-y-old men born in Kentucky and living in Ohio), we calculate average educational attainment

and family income from the census. We then use these averages to classify groups into quartiles of education and income. In these analyses, the dependent variable is unchanged: it is always the homicide mortality rate of each migrant group, calculated from death certificates relative to census population counts. What differs is the set of groups we analyze. For example, when estimating persistence among the top quartile of educational attainment, we restrict attention to the 25 percent of migrant groups with the highest average schooling. In the same way, we can examine persistence among groups with lower education, higher or lower incomes, or relative standing compared to nonmigrants in the receiving area. Because these measures are based on group averages, they cannot reveal which individuals within each group drive the patterns, but they allow us to assess whether persistence is confined to disadvantaged subgroups or extends across the socioeconomic spectrum.

Our survey interviewed non-Hispanic Whites, with an oversample of internal US migrants. To develop the survey measures, we conducted several large pilot studies in 2022 and 2023. We then preregistered and administered the final version of the survey in September 2023 on Lucid Marketplace, sampling only non-Hispanic Whites and oversampling migrants. Before starting the survey, all respondents consented to take the survey and all took the survey voluntarily. All were compensated through the Lucid standard procedures (over which we have no control or knowledge). The survey was approved by UC Berkeley's Committee for the Protection of Human Subjects (protocol number 2022-02-15068). To maximize our sample size, our analysis combines 3,416 pilot study respondents and 4,078 final version respondents for a total of 7,494, with 3,312 migrants and 4,182 nonmigrants. The results for the pilot and final samples are similar and the sample is broadly demographically representative of non-Hispanic White migrants and nonmigrants, though more female and lower income (*SI Appendix, Table S27*). *SI Appendix, Tables S28 and S29* present descriptive statistics. Please see *SI Appendix* for survey questions and for the preregistered analysis, which deviates only slightly from the analysis here.

In our analyses of both survey and victimization outcomes, we use the 1933–42 homicide rates. It is important to note that—especially in the later periods of the victimization analyses and for our survey sample—nearly all individuals we analyzed were not yet born. For 1959–61, we explored whether generational models might fit the victimization data better than the persistence models presented here—for instance, linking migrants to the birth-state homicide rate in their youth rather than the historical birth-state rate—but preliminary analysis found that the historical birth-state homicide rate consistently provided a stronger prediction of migrants' risk of violent death than does the birth-state rate from their youth. Nevertheless, further research on generational models is warranted.

**Data, Materials, and Software Availability.** Data and code to replicate all results can be found on the project's OSF page (<https://osf.io/pr97f>) (54) with the exception of the last period we examine with the death registry data, 2000–17. Although death certificates are public record, the CDC restricts access to recent death certificate data, requires a data user agreement, and prohibits most redistribution. We are allowed to make highly aggregated data available for replication, but full replication of the 2000–17 findings will require a CDC agreement and specialized data protective services from one's institution. It is important to note that the findings in this third period simply replicate the findings in the two earlier periods we examined with death certificate data, and these earlier data are publicly available.

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# Supplementary Information

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## **S1   Supplementary Information Tables**

Table S1: Persistence of Homicide Victimization Rates among White Internal US Migrants Compared to Non-Migrants 1979-91

Model	1979-91				
	Non-Mig.		Migrants		Persistence
	Coef.	SE	Coef.	SE	%
<i>Analysis at the birth-state level (n=49 states of birth)</i>					
Bivariate regression estimates on data in Figure 1	0.86	0.10	0.44	0.05	51
<i>Analysis at the birth-state * residence-state * age-group level with controls for state-residence * age-group FE for migrants and age-group FEs for non-migrants</i>					
Baseline regression estimates at this level of disaggregation	0.85	0.11	0.34	0.05	40
Females	0.53	0.07	0.21	0.04	40
Males	1.01	0.14	0.42	0.06	42
Married females	0.52	0.07	0.19	0.04	36
Married males	1.09	0.13	0.46	0.05	43
Unmarried females	0.54	0.09	0.23	0.07	43
Unmarried males	0.95	0.14	0.41	0.08	43
Age less than 15	0.17	0.05	0.02	0.03	12
Age 15-29	0.79	0.11	0.30	0.05	39
Age 30-44	0.93	0.12	0.34	0.05	37
Age 45-59	0.82	0.11	0.38	0.04	46
Age 60-74	0.68	0.08	0.26	0.05	39
Age 75 and up	0.46	0.09	0.17	0.06	36
<i>Analysis at the county by state-of-birth level controlling for age, age squared, male %, and log of group size age-group for county FEs for migrants</i>					
Baseline regression estimates at the county level	1.02	0.20	0.35	0.06	34
Above the median county population	1.02	0.23	0.36	0.06	35
Below the median county population	0.97	0.13	0.24	0.05	25

Note: This table shows estimates of the effect of the log of 1933-42 state-of-birth white homicide rate on the log +1 of homicide rates in 1979-91. Each set of coefficients and standard errors is from a separate regression. In row 1, the Ns are 49. In rows 2-13, the Ns for migrants are 49 states of birth within each of 48 states of residence (including DC minus one) separately for nine five-year age groups (ages 15-59), so (49 times 8 times 9=) 21,168 groups, though we have some missing population data for 190 small migrant groups in small states. The N for non-migrants is 49\*9=441. The Ns for the counties are 19,966. The models do not include state of residents fixed effects or county fixed effects for non-migrants because these are colinear with historical homicide rates.

Table S2: Persistence of Homicide Victimization Rates among White Internal US Migrants 1979-91

Model	1979-91			
	Coef.	SE	R2	N
<i>Analysis at the birth-state level (n=49 states of birth)</i>				
Bivariate regression estimates on data in Figure 1	1.28	0.08	0.66	49
<i>Analysis at the birth-state * residence-state * age-group level with controls for male %, log of group size, and state-residence * age-group FE</i>				
Baseline regression estimates at this level of disaggregation	0.34	0.04	0.43	21,842
Only migrants who crossed census regions	0.27	0.06	0.42	16,569
Northeastern residence	0.22	0.07	0.26	4,669
Midwestern residence	0.48	0.06	0.34	4,690
Southern residence	0.31	0.05	0.38	6,447
Western residence	0.30	0.08	0.36	6,036
Above median migrant population	0.36	0.05	0.43	10,917
Below median migrant population	0.11	0.03	0.17	10,925
1st quartile years in school among migrants ages 25-59	0.38	0.05	0.49	4,241
2nd quartile years in school	0.22	0.05	0.52	4,241
3rd quartile years in school	0.17	0.06	0.45	4,241
4th quartile years in school	0.12	0.05	0.43	4,240
1st quartile HH income among migrants	0.26	0.04	0.46	5,461
2nd quartile HH income	0.30	0.05	0.45	5,460
3rd quartile HH income	0.33	0.05	0.45	5,461
4th quartile HH income (highest)	0.25	0.06	0.44	5,460
1st quartile HH income inequality between migrant group and non-migrants (migrants relatively best-off)	0.20	0.07	0.46	5,232
2nd quartile HH income inequality between migrant group and non-migrants	0.21	0.05	0.48	5,245
3rd quartile HH income inequality between migrant group and non-migrants	0.19	0.06	0.48	5,228
4th quartile HH income inequality between migrant group and non-migrants (migrants relatively worst-off)	0.42	0.06	0.49	5,259
1st quartile education inequality between migrant group and non-migrants (migrants relatively most-educated)	0.18	0.05	0.49	5,247
2nd quartile education inequality between migrant group and non-migrants	0.23	0.05	0.52	5,211
3rd quartile education inequality between migrant group and non-migrants	0.27	0.07	0.53	5,226
4th quartile education inequality between migrant group and non-migrants (migrants relatively least-educated)	0.34	0.08	0.45	5,280
<i>Analysis at the county by state-of-birth level with controls for county FEs, age, age squared, male %, and log of group size</i>				
Baseline regression estimates at the county level	0.35	0.06	0.47	19,966
Above the median migrant population	0.35	0.06	0.46	9,964
Below the median migrant population	0.08	0.04	0.12	10,002
1st quartile years in school among migrants	0.35	0.08	0.64	4,992
2nd quartile years in school	0.29	0.04	0.50	4,991
3rd quartile years in school	0.16	0.06	0.48	5,024
4th quartile years in school	0.19	0.06	0.47	4,959
1st quartile education inequality between migrants and non-migrants	0.20	0.06	0.45	4,955
2nd quartile education inequality between migrants and non-migrants	0.13	0.05	0.50	4,955
3rd quartile education inequality between migrants and non-migrants	0.29	0.05	0.54	4,955
4th quartile education inequality between migrants and non-migrants	0.33	0.06	0.58	4,955
1st quartile HH income among migrants	0.22	0.05	0.43	4,992
2nd quartile HH income	0.26	0.05	0.46	4,991
3rd quartile HH income	0.30	0.05	0.54	4,992
4th quartile HH income	0.26	0.07	0.55	4,991
1st quartile HH income inequality between migrants and non-migrants	0.22	0.06	0.44	4,955
2nd quartile HH income inequality between migrants and non-migrants	0.28	0.05	0.50	4,955
3rd quartile HH income inequality between migrants and non-migrants	0.32	0.06	0.49	4,955
4th quartile HH income inequality between migrants and non-migrants	0.07	0.06	0.28	4,955

Note: This table shows estimates of the effect of the log of 1933-42 state-of-birth white homicide rate on the log +1 of homicide rates in 1979-91. Each set of coefficients and standard errors is from a separate regression. Except for the first row, SEs are clustered by state of birth.

Table S3: Average Annual Homicide Victimization Rate by State of Birth among Whites in 1933-42, 1959-61, 1979-91, and 2000-17.

	Homicide rate (per 100,000)						
	1933-42	1959-61		1979-91		2000-17	
	All	Non-migrants	Migrants	Non-migrants	Migrants	Non-migrants	Migrants
AL	8.02	6.66	6.52	9.09	9.73	6.18	4.69
AR	6.16	4.80	4.96	8.30	8.32	5.83	5.43
AZ	9.11	9.32	5.43	13.23	10.37	6.66	4.97
CA	4.55	3.80	4.07	11.64	7.94	4.22	4.68
CO	5.23	4.40	3.42	7.73	7.28	3.15	3.23
CT	1.94	1.08	2.33	3.94	4.80	1.60	2.92
DC	4.87	3.33	1.60	14.27	6.53	7.10	2.58
DE	6.79	2.41	3.78	4.88	4.65	2.94	2.30
FL	8.12	5.64	4.34	10.27	8.00	5.28	4.36
GA	7.23	7.22	7.07	9.31	9.14	4.08	5.10
IA	1.74	1.44	2.95	2.34	4.37	1.65	2.47
ID	3.70	1.84	3.56	3.25	5.53	1.99	3.01
IL	5.44	2.06	2.78	5.25	6.12	2.30	3.49
IN	3.82	2.09	3.51	4.73	6.99	3.35	3.43
KS	3.55	2.52	2.65	4.15	6.17	2.88	3.72
KY	12.10	8.07	5.65	9.04	7.76	4.83	4.96
LA	6.37	4.28	4.68	8.04	8.37	5.56	5.25
MA	1.64	1.48	2.06	3.56	4.81	1.53	2.89
MD	2.69	2.35	3.76	5.38	5.53	3.22	3.55
ME	1.62	1.88	2.44	3.16	4.97	2.08	3.07
MI	3.05	2.04	2.68	4.92	7.05	2.44	3.55
MN	1.97	1.34	2.26	2.11	4.71	1.45	2.28
MO	6.70	3.69	3.62	5.99	7.04	3.97	3.51
MS	7.80	4.79	5.44	8.83	8.92	5.99	5.94
MT	4.73	4.17	2.71	4.63	5.05	2.50	3.06
NC	4.82	5.66	6.00	8.26	9.45	5.08	4.31
ND	1.71	0.94	1.88	1.74	4.07	1.04	2.08
NE	2.16	1.48	3.05	2.50	5.01	1.95	2.56
NH	1.43	1.96	1.54	3.13	4.73	1.87	2.90
NJ	2.82	1.65	1.99	3.28	5.07	1.43	3.83
NM	7.90	11.92	7.45	18.89	11.39	7.08	3.93
NV	10.92	1.41	4.29	7.03	5.97	6.28	5.32
NY	3.29	1.66	2.13	6.25	5.48	2.96	2.69
OH	4.67	1.69	3.36	4.09	6.43	3.08	3.67



Table S3: Average Annual Homicide Victimization Rate by State of Birth among Whites in 1933-42, 1959-61, 1979-91, and 2000-17. (*continued*)

	Homicide rate (per 100,000)						
	1933-42	1959-61		1979-91		2000-17	
	All	Non-migrants	Migrants	Non-migrants	Migrants	Non-migrants	Migrants
OK	5.41	4.77	5.32	9.04	7.67	6.51	4.48
OR	3.17	2.12	2.28	5.12	6.21	3.24	3.74
PA	2.79	1.57	2.21	3.37	4.68	2.45	2.53
RI	1.46	0.89	1.34	4.75	4.50	2.17	2.53
SC	7.23	6.95	4.91	9.59	8.84	6.10	4.57
SD	1.48	1.55	2.85	1.92	3.88	1.08	2.01
TN	8.18	6.04	6.66	8.84	9.07	5.37	4.32
TX	7.05	7.13	6.40	14.28	11.10	5.17	4.60
UT	2.87	1.84	2.50	2.95	4.43	1.67	2.60
VA	5.88	5.84	5.19	7.52	7.01	3.56	4.02
VT	1.38	0.71	2.44	3.43	2.95	2.16	2.19
WA	3.68	2.90	3.81	4.55	6.05	3.24	3.95
WI	1.57	1.50	1.92	2.60	5.34	1.69	2.61
WV	8.17	4.99	4.83	8.18	7.13	5.38	4.25
WY	4.88	5.16	1.69	5.21	6.06	1.89	3.73

*Note:*

This table presents the values shown graphically in Figure 1.

Table S4: Descriptive statistics for 1959-61 at the state-of-birth, state-of-residence, and five-year age-group level. For non-migrants, each row of the data is a state-of-residence age group, e.g., 50-54 year-old Kentuckians. For migrants, each row of data is migrants from a particular state of birth in their current state of residence, e.g., 50-54 Kentuckians living in Illinois. With the 5% Census sample, we lack data smaller migrant groups, e.g., Montanans ages 20-24 living in Vermont. W. Mean stands for weighted mean. White respondents born in the US ages 15-59.

	Lives in Birth State						Migrated from Birth State					
	Mean	W. Mean	SD	Min	Max	N	Mean	W. Mean	SD	Min	Max	N
Homicide count	12.01	22.34	14.72	0.00	102.00	441	0.14	1.25	0.61	0.00	14.00	20240
Homicides per 100,000	3.64	3.20	3.29	0.00	18.87	441	2.85	3.69	23.36	0.00	1666.67	20240
Pop. in 100K	3.75	8.51	4.23	0.04	24.43	441	0.04	0.32	0.11	0.00	1.73	20240
Age	36.95	35.01	12.94	16.61	57.12	441	36.55	36.90	12.76	15.00	59.00	20240
Female	0.51	0.51	0.02	0.42	0.60	441	0.48	0.50	0.22	0.00	1.00	20240
Married	0.74	0.70	0.24	0.05	0.94	441	0.76	0.78	0.29	0.00	1.00	20240
Education in years	12.40	12.46	1.06	8.27	14.33	441	13.65	13.19	1.76	0.00	20.00	20240
Income in \$1000s	5.73	6.08	1.10	2.82	9.33	441	7.08	6.70	2.78	-4.34	46.51	20240
Nonmig. minus mig. edu. in years						0	-1.23	-0.55	1.20	-7.79	3.78	19433
Nonmig. minus mig. income in \$1000s						0	-1.10	-0.40	1.28	-15.79	3.37	19433
Migrants who crossed census regions	0.00	0.00	0.00	0.00	0.00	441	0.75	0.57	0.43	0.00	1.00	20240
Northeastern residence	0.20	0.31	0.40	0.00	1.00	441	0.19	0.18	0.39	0.00	1.00	20240
Midwestern residence	0.22	0.30	0.42	0.00	1.00	441	0.22	0.23	0.41	0.00	1.00	20240
Southern residence	0.29	0.29	0.45	0.00	1.00	441	0.28	0.25	0.45	0.00	1.00	20240
Western residence	0.29	0.10	0.45	0.00	1.00	441	0.32	0.34	0.46	0.00	1.00	20240

Table S5: Descriptive statistics for 1959-61 at the state-of-birth, county-of-residence level. For non-migrants, each row of the data is a county. For migrants, each row of data is migrants from a particular state of birth in a particular county. Given the low likelihood of a migrant from each state appearing in the 5% census sample in every county outside her birth state, we only observe a small subset of all potential county-birth state combinations. The higher number of maximum homicides in the county data occurs because we are aggregating all homicides across age groups in the county. W. Mean stands for weighted mean. White respondents born in the US ages 15-59.

	Lives in Birth State						Migrated from Birth State					
	Mean	W. Mean	SD	Min	Max	N	Mean	W. Mean	SD	Min	Max	N
Homicide count	7.33	25.11	17.99	0.00	171.00	730	0.27	6.08	2.71	0.00	224.00	21467
Homicides per 100,000	13.04	5.51	24.58	0.00	185.19	730	10.38	9.49	84.09	0.00	3333.33	21467
Pop. in 100K	1.33	8.49	3.09	0.00	45.87	730	0.03	0.57	0.12	0.00	5.16	21467
Age	32.93	34.64	4.00	15.00	54.00	730	35.33	36.96	7.33	15.00	59.00	21467
Education in years	11.95	12.64	1.40	0.00	18.50	730	13.21	12.96	2.28	0.00	20.00	21467
Income in \$1000s	5.77	7.41	1.89	1.17	15.34	730	6.82	7.42	3.10	-0.43	51.47	21467
Nonmig. minus mig. edu. in years						0	-0.93	-0.12	2.02	-11.01	13.40	21202
Nonmig.-Mig. income in \$1000s						0	-0.45	0.24	2.64	-43.68	7.60	21202
Migrants who crossed census regions	0.00	0.00	0.00	0.00	0.00	730	0.73	0.61	0.44	0.00	1.00	21467
Northeastern residence	0.24	0.39	0.43	0.00	1.00	730	0.24	0.21	0.43	0.00	1.00	21467
Midwestern residence	0.25	0.28	0.44	0.00	1.00	730	0.25	0.24	0.44	0.00	1.00	21467
Southern residence	0.33	0.22	0.47	0.00	1.00	730	0.29	0.18	0.45	0.00	1.00	21467
Western residence	0.17	0.11	0.38	0.00	1.00	730	0.21	0.37	0.41	0.00	1.00	21467

Table S6: Descriptive statistics for 1979-91 at the state-of-birth, state-of-residence, and five-year age-group level. For non-migrants, each row of the data is their state-of-residence age group. For migrants, each row of data is migrants from a particular state of birth in their current state of residence from one of the five-year age groups. With the 5% Census sample, we lack data on smaller migrant groups. W. Mean stands for weighted mean. White respondents born in the US ages 15-59.

	Lives in Birth State						Migrated from Birth State					
	Mean	W. Mean	SD	Min	Max	N	Mean	W. Mean	SD	Min	Max	N
Homicide count	144.52	361.21	243.19	0.00	2043.00	441	1.55	11.02	4.76	0.00	128.00	21842
Homicides per 100,000	6.15	6.62	4.45	0.00	34.13	441	4.95	6.64	21.56	0.00	1666.67	21842
Pop. in 100K	21.82	48.61	24.20	0.10	130.12	441	0.23	1.56	0.56	0.00	9.82	21842
Age	36.96	33.86	12.93	16.90	57.43	441	36.89	36.15	12.84	15.00	59.00	21842
Female	0.50	0.50	0.01	0.45	0.54	441	0.47	0.50	0.25	-1.00	0.99	21842
Married	0.70	0.64	0.29	0.00	0.95	441	0.73	0.72	0.32	0.00	1.00	21842
Education in years	13.18	13.20	1.01	10.93	16.61	441	14.20	14.10	1.48	6.00	22.00	21842
Income in \$1000s	24.96	25.76	4.89	15.47	60.38	441	27.87	27.74	11.22	0.00	664.38	21842
Nonmig. minus mig. edu. in years						0	-1.09	-0.93	0.69	-5.13	1.10	20964
Nonmig. minus mig. income in \$1000s						0	-2.05	-2.09	3.82	-33.86	22.49	20964
Migrants who crossed regions	0.00	0.00	0.00	0.00	0.00	441	0.76	0.58	0.43	0.00	1.00	21842
Northeastern residence	0.22	0.27	0.42	0.00	1.00	441	0.21	0.17	0.41	0.00	1.00	21842
Midwestern residence	0.22	0.29	0.42	0.00	1.00	441	0.21	0.18	0.41	0.00	1.00	21842
Southern residence	0.31	0.29	0.46	0.00	1.00	441	0.30	0.35	0.46	0.00	1.00	21842
Western residence	0.24	0.15	0.43	0.00	1.00	441	0.28	0.30	0.45	0.00	1.00	21842

Table S7: Descriptive statistics for 1979-91 at the state-of-birth, county-of-residence level. For non-migrants, each row of the data is a county. For migrants, each row of data is migrants from a particular state of birth in a particular county. Given the low likelihood of a migrant from each state appearing in the 5% census sample in every county outside her birth state, we only observe a small subset of all potential county-birth state combinations. The higher number of maximum homicides in the county data occurs because we are aggregating all homicides across age groups in the county. W. Mean stands for weighted mean. White respondents born in the US ages 15-59.

	Lives in Birth State						Migrated from Birth State					
	Mean	W. Mean	SD	Min	Max	N	Mean	W. Mean	SD	Min	Max	N
Homicide count	98.25	352.17	276.84	0.00	3568.00	420	1.08	15.08	4.90	0.00	264.00	19966
Homicides per 100,000	7.38	8.10	7.75	0.00	116.27	420	5.50	7.30	30.48	0.00	2500.00	19966
Pop. in 100K	12.13	35.66	16.91	0.05	171.98	420	0.15	1.88	0.51	0.00	20.86	19966
Age	33.27	33.38	1.69	25.68	36.76	420	35.31	36.58	4.95	15.00	59.00	19966
Female	0.60	0.54	0.17	0.46	0.93	420	0.51	0.51	0.17	0.00	1.00	19966
Education in years	12.80	12.99	0.68	10.88	14.89	420	13.26	13.41	1.39	0.00	22.00	19966
Income in \$1000s	51.46	37.72	46.90	17.56	139.00	420	29.59	32.49	14.85	-5.84	139.00	19966
Nonmig. minus mig. edu. in years						0	-0.45	-0.43	1.12	-9.29	13.55	19820
Nonmig.-mig. income in \$1000s						0	21.45	-0.53	46.11	-117.99	144.84	19820
Migrants who crossed regions	0.00	0.00	0.00	0.00	0.00	420	0.76	0.64	0.43	0.00	1.00	19966
Northeastern residence	0.23	0.31	0.42	0.00	1.00	420	0.23	0.16	0.42	0.00	1.00	19966
Midwestern residence	0.25	0.29	0.43	0.00	1.00	420	0.24	0.17	0.43	0.00	1.00	19966
Southern residence	0.32	0.20	0.47	0.00	1.00	420	0.32	0.30	0.47	0.00	1.00	19966
Western residence	0.20	0.20	0.40	0.00	1.00	420	0.21	0.38	0.41	0.00	1.00	19966

Table S8: Descriptive statistics for 2000-17 at the state-of-birth, state-of-residence, and five-year age group level. For non-migrants, each row of the data is a state-of-residence age group, e.g., 50-54-year-old Kentuckians. For migrants, each row of data is migrants from a particular state of birth in their current state of residence, e.g., 50-54-year-old Kentuckians living in Illinois. With the 5% Census sample, we lack data on smaller migrant groups, e.g., Montanans ages 20-24 living in Vermont. W. Mean stands for weighted mean. White respondents born in the US ages 15-59.

	Lives in Birth State						Migrated from Birth State					
	Mean	W. Mean	SD	Min	Max	N	Mean	W. Mean	SD	Min	Max	N
Homicides	101.60	182.46	107.65	0.00	590.00	441	1.22	6.88	3.15	0.00	76.00	22035
Homicides per 100,000	3.68	3.42	2.40	0.00	18.47	441	3.53	3.62	9.76	0.00	357.14	22035
Pop. in 100K	29.67	57.12	28.57	0.22	134.83	441	0.34	2.02	0.75	0.00	22.36	22035
Age	36.98	37.61	12.94	16.65	57.02	441	37.04	40.61	12.87	15.00	59.00	22035
Female	0.50	0.50	0.01	0.40	0.54	441	0.51	0.51	0.09	0.00	1.00	22035
Married	0.61	0.61	0.31	0.00	0.91	441	0.63	0.69	0.32	0.00	1.00	22035
Education in years	13.28	13.23	1.08	10.33	16.58	441	14.05	14.18	1.39	5.50	22.00	22035
Income in \$1000s	27.25	27.26	13.72	0.02	84.81	441	31.76	35.01	19.48	0.00	472.53	22022
Nonmig. minus mig. edu. in year						0	-1.02	-1.00	0.56	-3.27	0.63	21154
Nonmig. minus mig. income in \$1000						0	-7.51	-8.49	6.90	-49.40	8.39	21154
Migrants who crossed census regions	0.00	0.00	0.00	0.00	0.00	441	0.75	0.56	0.43	0.00	1.00	22035
Northeastern residence	0.18	0.23	0.39	0.00	1.00	441	0.18	0.14	0.38	0.00	1.00	22035
Midwestern residence	0.24	0.33	0.43	0.00	1.00	441	0.23	0.19	0.42	0.00	1.00	22035
Southern residence	0.35	0.30	0.48	0.00	1.00	441	0.33	0.42	0.47	0.00	1.00	22035
Western residence	0.22	0.15	0.42	0.00	1.00	441	0.26	0.25	0.44	0.00	1.00	22035

Table S9: Descriptive statistics for 2000-17 at the state-of-birth, county-of-residence level. For non-migrants, each row of the data is a county. For migrants, each row of data is migrants from a particular state of birth in a particular county. Given the low likelihood of a migrant from each state appearing in the 5% Census sample in every county outside her birth state, we observe a small subset of all potential county-birth state combinations. The higher number of maximum homicides in the county occurs because we are aggregating all homicides across age groups in the county. W. Mean stands for weighted mean. White respondents born in the US ages 15-59.

	Lives in Birth State						Migrated from Birth State					
	Mean	W. Mean	SD	Min	Max	N	Mean	W. Mean	SD	Min	Max	N
Homicides	73.99	163.41	118.03	1.00	1387.00	454	1.00	10.53	4.09	0.00	241.00	20591
Homicides per 100,000	3.61	2.75	3.55	0.32	28.32	454	3.86	2.92	16.36	0.00	1000.00	20591
Pop. in 100K	26.94	65.95	32.45	0.93	280.92	454	0.34	4.00	1.12	0.00	36.72	20591
Age	36.58	36.88	4.48	18.91	46.51	454	45.04	47.86	7.59	15.34	59.00	20591
Female	0.51	0.51	0.01	0.46	0.54	454	0.51	0.52	0.11	0.00	1.00	20591
Education in years	11.03	11.23	0.75	8.08	13.83	454	13.38	13.65	1.40	0.00	22.00	20591
Income in \$1000s	17.98	19.92	5.74	4.27	55.77	454	29.27	31.97	15.44	-49.69	442.31	20591
Nonmig. minus mig. edu. in year						0	-2.34	-2.89	1.42	-11.24	10.93	20447
Nonmig. minus mig. income in \$1000						0	-11.14	-14.10	14.36	-430.00	65.01	20447
Migrants who crossed census regions	0.00	0.00	0.00	0.00	0.00	454	0.74	0.59	0.44	0.00	1.00	20591
Northeastern residence	0.18	0.28	0.39	0.00	1.00	454	0.19	0.14	0.39	0.00	1.00	20591
Midwestern residence	0.24	0.26	0.43	0.00	1.00	454	0.24	0.14	0.43	0.00	1.00	20591
Southern residence	0.41	0.25	0.49	0.00	1.00	454	0.41	0.41	0.49	0.00	1.00	20591
Western residence	0.17	0.22	0.37	0.00	1.00	454	0.16	0.31	0.36	0.00	1.00	20591



Table S10: Alternative Historical Variables and Homicide Persistence: State Income, Employment, and Agricultural Employment.

	Dependent Variable: White Migrant Homicide Rate (per 100,000)								
	Income Control			Employed Percent Control			Agricultural Share Control		
	1960s	1980s	2000s	1960s	1980s	2000s	1960s	1980s	2000s
	1	2	3	4	5	6	7	8	9
Hist. homicide rate	0.457*** 0.054	0.375*** 0.045	0.356*** 0.049	0.592*** 0.067	0.397*** 0.042	0.356*** 0.045	0.475*** 0.056	0.369*** 0.045	0.362*** 0.050
Hist. income per capita	-0.547*** 0.085	-0.105 0.065	-0.060 0.071						
Employed share 1930				-0.334 0.238	-0.121 0.149	-0.263+ 0.155			
Agric. share 1930							1.152*** 0.200	0.283+ 0.156	0.072 0.178
Intercept	3.933*** 0.560	1.988*** 0.433	1.141* 0.471	0.607** 0.201	1.387*** 0.128	0.944*** 0.135	0.206* 0.083	1.270*** 0.063	0.738*** 0.069
N	49	49	49	49	49	49	49	49	49
R-squared	0.806	0.682	0.594	0.647	0.669	0.612	0.786	0.687	0.589

*Notes:* The dependent variable measures white internal US migrants' homicide rates in their new states in the three periods listed in the column headings. All explanatory variables are for migrants' states of birth. The historical homicide rate is the 1933-1942 white homicide rate used throughout this article from death certificate data. Hist. income per capita is the average per capita income, 1933-1942 (Bureau of Economic Analysis, Table SAINC1). Employed share 1930 is the share of white non-Hispanic individuals aged 16 to 70 who are employed in the 1930 full census file (Ruggles, 2025). Agric. share 1930 is the share of those employed working in agriculture calculated also from the 1930 full census file. This regression table explores how much white migrants' future homicide rates can be explained by their earlier homicide, income, employment and agricultural sector rates. Each column shows a separate least squares regression model. Standard errors below coefficients. Models weighted by state of birth migrant population. Homicide rates and income are logged. 1960s is 1959-1961, 1980s is 1979-1991, and 2000s is 2000-2017.

Table S11: Alternative Historical Variables and Homicide Persistence: Non-White Migrant Share

	<b>Dependent Variable: Homicide Rate (per 100,000)</b>		
	<b>Non-white Migrant Share Control</b>		
	<b>1960s</b>	<b>1980s</b>	<b>2000s</b>
	1960s	1980s	2000s
Hist. homicide rate	0.461*** 0.071	0.328*** 0.046	0.302*** 0.053
Non-white migrant share	1.042*** 0.280	0.511** 0.175	0.424* 0.189
Intercept	0.459*** 0.094	1.349*** 0.061	0.794*** 0.068
N	49	49	49
R-squared	0.717	0.717	0.628

*Notes:* The dependent variable measures white internal US migrants' homicide rates in their new states in the three periods listed in the column headings. The historical homicide rate is the state-of-birth 1933-1942 white homicide rate used throughout this article from death certificate data. The non-white migrant share is calculated for each state of birth using the 1930 full census file (Ruggles, 2025). For example, South Carolina has the largest value on this variable, 0.63, meaning that 63

Table S12: Full Regression Models for Table 1 1959-61. M indicates migrants. NM indicates non-migrants. Each column corresponds to a regression in a row in Table 1. The dependent variable is the log of homicide rates per 100,000 in 1959-61.

	1M	1NM	2M	2NM	3M	3NM	4M	4NM	5M	5NM	6M	6NM	7M	7NM	8M	8NM	9M	9NM	10M	10NM	11M	11NM	12M	12NM	13M	13NM	14M	14NM	15M	15NM	16M	16NM	17M	17NM
(Intercept)	0.50 (0.11)	-0.24 (0.15)																												-7.72 (17.64)		-0.43 (26.96)		-59.10 (17.99)
Birth-state hom. rate 1933-42 (log)	0.60 (0.06)	0.96 (0.09)	0.47 (0.04)	0.94 (0.09)	0.29 (0.05)	0.42 (0.08)	0.53 (0.05)	1.23 (0.11)	0.30 (0.04)	0.41 (0.09)	0.50 (0.05)	1.32 (0.10)	0.10 (0.06)	0.34 (0.09)	0.36 (0.08)	1.09 (0.15)	0.01 (0.03)	0.08 (0.05)	0.49 (0.05)	0.86 (0.10)	0.57 (0.05)	1.08 (0.10)	0.35 (0.06)	0.91 (0.09)	0.27 (0.06)	0.68 (0.07)	0.04 (0.06)	0.62 (0.15)	0.39 (0.05)	0.80 (0.17)	0.43 (0.06)	0.91 (0.21)	0.19 (0.05)	0.56 (0.14)
Female																													-0.19 (0.09)	7.49 (3.24)	-0.04 (0.20)	6.98 (6.50)	-0.17 (0.04)	8.23 (3.40)
Population (log)																													0.23 (0.02)	-0.02 (0.07)	0.24 (0.02)	-0.07 (0.10)	0.18 (0.02)	-0.13 (0.13)
Age																													0.05 (0.04)	-0.12 (0.86)	0.14 (0.08)	-0.50 (1.10)	0.02 (0.02)	2.93 (0.97)
Age squared																													0.00 (0.00)	0.00 (0.01)	0.00 (0.00)	0.01 (0.02)	0.00 (0.00)	-0.04 (0.01)
Num.Obs.	49	49	20240	441	18691	441	19012	441	17714	441	17329	441	12196	441	12839	441	6861	147	9239	196	9087	196	8390	196	7303	196	3135	98	15936	383	7215	155	8721	228
R2	0.645	0.722	0.234	0.590	0.185	0.237	0.230	0.596	0.156	0.161	0.181	0.597	0.185	0.177	0.209	0.502	0.088	0.548	0.275	0.582	0.218	0.628	0.183	0.569	0.158	0.335	0.110	0.211	0.379	0.280	0.377	0.316	0.230	0.254

Table S13: Full Regression Models for Table 1 2000-17. M indicates migrants. NM indicates non-migrants. Each column corresponds to a regression in a row in Table 1. The dependent variable is the log of homicide rates per 100,000 in 2000-17.

	1M	1NM	2M	2NM	3M	3NM	4M	4NM	5M	5NM	6M	6NM	7M	7NM	8M	8NM	9M	9NM	10M	10NM	11M	11NM	12M	12NM	13M	13NM	14M	14NM	15M	15NM	16M	16NM	17M	17NM	
(Intercept)	0.92 (0.08)	0.30 (0.11)																													-10.67 (7.14)		-23.43 (10.60)		-2.52 (3.04)
Birth-state hom. rate 1933-42 (log)	0.37 (0.04)	0.69 (0.06)	0.21 (0.04)	0.67 (0.06)	0.14 (0.04)	0.46 (0.05)	0.25 (0.05)	0.80 (0.07)	0.08 (0.03)	0.38 (0.04)	0.21 (0.04)	0.68 (0.08)	0.19 (0.06)	0.51 (0.08)	0.26 (0.07)	0.83 (0.07)	0.12 (0.03)	0.25 (0.04)	0.21 (0.05)	0.62 (0.06)	0.27 (0.05)	0.73 (0.07)	0.17 (0.04)	0.66 (0.06)	0.15 (0.03)	0.58 (0.05)	0.12 (0.03)	0.48 (0.06)	0.18 (0.03)	0.61 (0.09)	0.17 (0.03)	0.55 (0.12)	0.20 (0.04)	0.51 (0.14)	
Female																														0.43 (0.13)	8.20 (5.26)	0.63 (0.22)	15.37 (7.52)	0.09 (0.14)	6.11 (2.53)
Population (log)																														0.14 (0.01)	-0.08 (0.05)	0.11 (0.01)	0.02 (0.05)	0.23 (0.01)	-0.51 (0.06)
Age																														0.03 (0.01)	-0.03 (0.06)	0.01 (0.02)	0.02 (0.06)	0.07 (0.02)	-0.01 (0.10)
Age squared																														0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Num.Obs.	49	49	22035	441	21975	441	21967	441	20638	440	20093	440	20996	441	21094	441	7240	147	7342	147	7345	147	7348	147	7326	147	4856	98	20885	454	10551	227	10334	227	
R2	0.588	0.720	0.293	0.770	0.172	0.708	0.267	0.740	0.121	0.601	0.178	0.554	0.194	0.824	0.295	0.846	0.175	0.683	0.265	0.795	0.283	0.658	0.297	0.723	0.174	0.685	0.143	0.574	0.435	0.223	0.466	0.210	0.389	0.417	

Table S14: Full Regression Models for Table 2, Rows 1-25, 1959-61. Each column corresponds to a regression in a row in Table 2. The dependent variable is the log of homicide rates per 100,000 in 1959-61.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
(Intercept)	0.50 (0.11)																								
Birth-state hom. rate 1933-42 (log)	0.60 (0.06)	0.43 (0.05)	0.35 (0.17)	0.14 (0.07)	0.22 (0.06)	0.09 (0.04)	0.24 (0.10)	0.39 (0.07)	0.38 (0.07)	0.15 (0.06)	0.07 (0.05)	0.22 (0.06)	0.20 (0.06)	0.42 (0.07)	0.07 (0.08)	0.06 (0.06)	0.37 (0.05)	0.27 (0.06)	0.46 (0.05)	0.03 (0.02)	0.37 (0.07)	0.22 (0.07)	0.57 (0.08)	0.39 (0.10)	0.33 (0.09)
Female		-0.06 (0.15)	1.45 (0.68)	0.29 (0.30)	0.22 (0.19)	-0.14 (0.15)	0.08 (0.24)	-0.38 (0.22)	0.30 (0.28)	0.08 (0.18)	-0.09 (0.10)	-0.21 (0.14)	0.02 (0.20)	0.17 (0.32)	-0.26 (0.23)	0.22 (0.19)	-0.16 (0.29)	0.47 (0.27)	-0.17 (0.26)	0.01 (0.03)	-0.02 (0.16)	-0.06 (0.21)	0.26 (0.30)	-0.09 (0.23)	-0.01 (0.23)
Population (log)		0.26 (0.02)	0.29 (0.06)	0.28 (0.02)	0.23 (0.02)	0.15 (0.02)	0.25 (0.03)	0.32 (0.02)	0.23 (0.02)	0.20 (0.01)	0.12 (0.01)	0.24 (0.02)	0.19 (0.03)	0.29 (0.03)	0.24 (0.03)	0.24 (0.01)	0.28 (0.02)	0.28 (0.03)	0.29 (0.02)	0.05 (0.01)	0.25 (0.02)	0.18 (0.02)	0.20 (0.02)	0.37 (0.03)	0.30 (0.03)
Num.Obs.	49	20240	1460	3951	5122	5065	2581	5233	6228	6198	5022	4872	4817	4722	4940	4787	4786	4920	9601	10639	15216	3879	4370	5610	6381
R2	0.645	0.311	0.503	0.388	0.321	0.323	0.417	0.436	0.364	0.329	0.204	0.392	0.391	0.356	0.356	0.387	0.448	0.479	0.303	0.100	0.340	0.248	0.300	0.298	0.314

Table S15: Full Regression Models for Table 2, Rows 26-44, 1959-61. Each column corresponds to a regression in a row in Table 2. The dependent variable is the log of homicide rates per 100,000 in 1959-61.

	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	46
Birth-state hom. rate 1933-42 (log)	0.39 (0.05)	0.41 (0.11)	0.19 (0.06)	0.17 (0.08)	0.09 (0.07)	0.16 (0.06)	0.04 (0.06)	0.15 (0.06)	0.48 (0.08)	0.12 (0.11)	0.31 (0.07)	0.34 (0.08)	0.19 (0.07)	0.09 (0.10)	0.21 (0.08)	0.23 (0.06)	0.12 (0.12)	0.40 (0.05)	0.05 (0.01)
Female	-0.19 (0.09)	-0.39 (0.10)	-0.08 (0.17)	-0.20 (0.14)	-0.11 (0.05)	-0.14 (0.07)	0.01 (0.13)	-0.17 (0.17)	-0.48 (0.12)	-0.08 (0.07)	-0.13 (0.15)	-0.41 (0.18)	-0.09 (0.09)	-0.12 (0.07)	-0.19 (0.15)	-0.51 (0.15)	-0.17 (0.11)	0.13 (0.29)	0.00 (0.02)
Population (log)	0.23 (0.02)	0.26 (0.02)	0.20 (0.02)	0.21 (0.03)	0.14 (0.03)	0.15 (0.03)	0.16 (0.02)	0.22 (0.02)	0.26 (0.02)	0.22 (0.04)	0.26 (0.02)	0.24 (0.03)	0.17 (0.02)	0.19 (0.02)	0.21 (0.02)	0.27 (0.02)	0.34 (0.04)	0.25 (0.02)	0.03 (0.02)
Age	0.05 (0.04)	0.05 (0.06)	0.09 (0.08)	0.00 (0.06)	-0.05 (0.03)	0.03 (0.03)	0.00 (0.06)	0.01 (0.06)	0.07 (0.06)	0.00 (0.03)	0.03 (0.06)	0.17 (0.11)	-0.04 (0.04)	-0.05 (0.03)	0.06 (0.07)	0.01 (0.05)	-0.04 (0.04)	0.23 (0.08)	0.01 (0.01)
Age squared	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Num.Obs.	15936	3992	3994	3967	3983	4444	3985	3799	3534	3984	3984	3984	3984	4389	3860	3802	3711	7863	8073
R2	0.379	0.503	0.442	0.447	0.302	0.334	0.345	0.478	0.462	0.455	0.468	0.431	0.466	0.333	0.409	0.463	0.521	0.378	0.092



Table S16: Full Regression Models for Table 2, Rows 1-25, 2000-17. Each column corresponds to a regression in a row in Table 2. The dependent variable is the log of homicide rates per 100,000 in 2000-17.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
(Intercept)	0.92 -0.08																								
Birth-state hom. rate 1933-42 (log)	0.37 (0.04)	0.23 (0.03)	0.2 (0.05)	0.21 (0.04)	0.23 (0.04)	0.04 (0.04)	0.23 (0.04)	0.24 (0.05)	0.24 (0.03)	0.11 (0.04)	0.16 (0.05)	0.16 (0.03)	0.16 (0.04)	0.28 (0.04)	0.16 (0.05)	0.09 (0.04)	0.18 (0.04)	0.24 (0.04)	0.24 (0.03)	0.09 (0.04)	0.21 (0.04)	-0.03 (0.05)	0.32 (0.03)	0.27 (0.05)	0.23 (0.05)
Female		-0.22 (0.03)	-0.35 (0.05)	-0.15 (0.04)	-0.12 (0.04)	0.37 (0.04)	-0.08 (0.04)	0.05 (0.05)	-0.12 (0.03)	-0.07 (0.04)	0.1 (0.05)	-0.16 (0.03)	-0.09 (0.04)	0.22 (0.04)	-0.02 (0.05)	-0.09 (0.04)	-0.55 (0.04)	0.25 (0.04)	-0.36 (0.03)	-0.01 (0.04)	-0.13 (0.04)	0.29 (0.05)	-0.07 (0.03)	-0.21 (0.05)	-0.67 (0.05)
Population (log)		-0.16 (0.03)	-0.32 (0.05)	-0.35 (0.04)	-0.39 (0.04)	-0.26 (0.04)	-0.24 (0.04)	-0.24 (0.05)	-0.31 (0.03)	-0.28 (0.04)	-0.3 (0.05)	-0.29 (0.03)	-0.26 (0.04)	-0.29 (0.04)	-0.35 (0.05)	-0.29 (0.04)	-0.24 (0.04)	-0.28 (0.04)	-0.28 (0.03)	-0.12 (0.04)	-0.16 (0.04)	-0.2 (0.05)	-0.33 (0.03)	-0.25 (0.05)	-0.33 (0.05)
		0.19 (0.03)	0.19 (0.05)	0.16 (0.04)	0.2 (0.04)	0.13 (0.04)	0.24 (0.04)	0.25 (0.05)	0.15 (0.03)	0.13 (0.04)	0.14 (0.05)	0.18 (0.03)	0.22 (0.04)	0.22 (0.04)	0.14 (0.05)	0.2 (0.04)	0.22 (0.04)	0.21 (0.04)	0.16 (0.03)	0.21 (0.04)	0.18 (0.04)	0.17 (0.05)	0.18 (0.03)	0.18 (0.05)	0.2 (0.05)
		-0.02 (0.03)	-0.02 (0.05)	-0.02 (0.04)	-0.02 (0.04)	-0.01 (0.04)	-0.01 (0.04)	-0.01 (0.05)	-0.02 (0.03)	-0.02 (0.04)	-0.01 (0.05)	-0.01 (0.03)	-0.01 (0.04)	-0.02 (0.04)	-0.02 (0.05)	-0.01 (0.04)	-0.02 (0.04)	-0.02 (0.04)	-0.02 (0.03)	-0.02 (0.04)	-0.02 (0.04)	-0.02 (0.05)	-0.01 (0.03)	-0.02 (0.05)	-0.02 (0.05)
Num.Obs.	49	22035	4286	4286	4285	4285	5506	5505	5506	5505	5312	5280	5280	5282	5312	5278	5282	5282	11016	11019	16563	3884	5177	7341	5633
R2	0.588	0.367	0.426	0.405	0.346	0.336	0.369	0.386	0.392	0.348	0.454	0.411	0.429	0.436	0.467	0.36	0.444	0.432	0.375	0.13	0.327	0.392	0.279	0.309	0.289

Table S17: Full Regression Models for Table 2, Rows 26-44, 2000-17. Each column corresponds to a regression in a row in Table 2. The dependent variable is the log of homicide rates per 100,000 in 2000-17.

	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Birth-state hom. rate 1933-42 (log)	0.18 (0.03)	0.2 (0.07)	0.18 (0.04)	0.13 (0.03)	0.08 (0.04)	0.15 (0.04)	0.11 (0.04)	0.14 (0.03)	0.23 (0.06)	0.19 (0.06)	0.24 (0.04)	0.1 (0.04)	0.1 (0.03)	0.12 (0.04)	0.13 (0.04)	0.19 (0.03)	0.18 (0.05)	0.17 (0.03)	0.06 (0.03)
Female	0.43 (0.13)	0.12 (0.23)	0.39 (0.27)	0.4 (0.33)	0.35 (0.28)	-0.28 (0.35)	0.48 (0.26)	0.4 (0.27)	-0.04 (0.19)	-0.08 (0.2)	0.53 (0.25)	0.16 (0.26)	0.6 (0.32)	-0.22 (0.28)	0.52 (0.3)	0.44 (0.23)	0.03 (0.19)	0.68 (0.22)	-0.03 (0.09)
Population (log)	0.14 (0.01)	0.18 (0.01)	0.15 (0.01)	0.11 (0.01)	0.13 (0.01)	0.1 (0.01)	0.13 (0.01)	0.19 (0.01)	0.19 (0.01)	0.22 (0.01)	0.17 (0.01)	0.11 (0.01)	0.1 (0.01)	0.09 (0.01)	0.13 (0.01)	0.21 (0.01)	0.22 (0.01)	0.12 (0.01)	0.24 (0.02)
Age	0.03 (0.01)	-0.01 (0.02)	0.03 (0.03)	0.07 (0.05)	0.04 (0.05)	0.01 (0.05)	0.11 (0.04)	0.01 (0.03)	0.01 (0.02)	0.02 (0.02)	0.04 (0.03)	0.07 (0.04)	0.04 (0.05)	0.11 (0.05)	0.03 (0.03)	0.01 (0.02)	-0.01 (0.02)	0.02 (0.02)	0 (0.02)
Age squared	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Num.Obs.	20885	5168	5168	5168	5167	5185	5185	5185	5185	5222	5230	5212	5221	5184	5186	5185	5185	10434	10451
R2	0.435	0.466	0.464	0.508	0.501	0.484	0.479	0.529	0.482	0.418	0.451	0.479	0.512	0.514	0.473	0.504	0.487	0.468	0.166

Table S18: Full Regression Models for Table 3. Each column corresponds to a regression in a row in Table 3.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Female	-0.12 (0.01)	-0.01 (0.01)	0.02 (0.01)	-0.01 (0.01)	0.03 (0.01)	0.02 (0.01)	-0.06 (0.01)	0.01 (0.01)	0.05 (0.01)	0.01 (0.01)	-0.04 (0.01)	-0.02 (0.01)	-0.06 (0.01)	-0.04 (0.01)	-0.15 (0.01)	-0.12 (0.01)	-0.09 (0.01)	-0.14 (0.01)	-0.08 (0.01)	-0.13 (0.01)	-0.05 (0.01)	-0.02 (0.01)	-0.07 (0.00)	-0.03 (0.01)	-0.02 (0.01)
Birth-state hom. rate 1933-42 (log)	0.05 (0.02)	0.07 (0.02)	0.07 (0.01)	0.03 (0.02)	0.03 (0.02)	0.06 (0.02)	0.07 (0.02)	0.06 (0.02)	0.03 (0.03)	0.27 (0.04)	0.04 (0.04)	-0.08 (0.02)	0.09 (0.02)	0.05 (0.01)	0.10 (0.03)	0.11 (0.02)	0.09 (0.02)	0.11 (0.03)	0.09 (0.03)	0.08 (0.03)	0.05 (0.02)	0.05 (0.02)	-0.03 (0.02)	0.00 (0.02)	-0.08 (0.03)
Years of edu.	-0.01 (0.00)	-0.01 (0.00)	-0.02 (0.00)	-0.02 (0.00)	-0.02 (0.00)	-0.01 (0.00)	-0.02 (0.00)	-0.02 (0.00)	-0.02 (0.00)	-0.01 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.01 (0.00)	0.00 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	0.00 (0.00)	0.02 (0.00)	0.03 (0.00)
Birth-state hom. times Migrant	-0.01 (0.03)	0.03 (0.03)	0.03 (0.02)	0.01 (0.03)	-0.04 (0.03)	-0.04 (0.03)	0.00 (0.03)	0.04 (0.03)	0.00 (0.03)	-0.16 (0.03)	-0.04 (0.03)	0.09 (0.02)	0.02 (0.02)	-0.03 (0.02)	-0.05 (0.04)	-0.02 (0.03)	0.02 (0.03)	-0.04 (0.04)	-0.01 (0.04)	0.02 (0.04)	-0.02 (0.03)	-0.01 (0.03)	0.06 (0.02)	-0.02 (0.03)	-0.04 (0.05)
Num.Obs.	6185	4898	4898	7426	7426	7428	7425	7306	4800	7424	7424	7427	7428	6785	6785	6785	6785	6785	6155	6155	5533	5527	7427	7428	7428
R2	0.162	0.034	0.058	0.116	0.066	0.065	0.095	0.092	0.075	0.059	0.018	0.024	0.074	0.125	0.133	0.111	0.105	0.146	0.075	0.110	0.034	0.040	0.132	0.070	0.070

Table S19: Rural Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants and Non-Migrants. Analysis at the individual level with gender and five-year age group fixed effects.

Model	Effect of Historical Homicide Rate				
	Non-Mig.		Migrants		Persistence
	Coef.	SE	Coef.	SE	%
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>					
Witness violence growing up (three-item scale)	0.110*	0.029	0.108*	0.052	98
<i>Do they see the world as more dangerous?</i>					
Assault risk (three-item scale)	0.062	0.038	0.147*	0.047	237
Belief in a Dangerous World (two-item scale)	0.116*	0.042	0.209*	0.063	180
<i>Do they disregard the law?</i>					
Legal Cynicism (three-item scale)	-0.04	0.033	0.017	0.041	-43
<i>Do they report lower living standards?</i>					
Living standard (two-item scale)	-0.052	0.035	-0.101*	0.049	194
<i>Do high hist. hom. birth state respondents distrust institutions?</i>					
Distrust local government where they grew up (one-item scale)	0.054	0.041	0.091	0.057	169
Distrust local government where they live now (one-item scale)	0.069	0.044	0.108*	0.039	157
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.064*	0.028	0.025	0.041	39
(precision weighted average)	0.063*	0.021	0.072*	0.025	114
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>					
Trust family over the police (two-item scale)	0.063	0.036	0.095	0.050	151
Distrust other people where they grew up (one-item scale)	0.109*	0.039	0.201*	0.051	184
Distrust other people where they live now (one-item scale)	0.113*	0.045	0.130*	0.056	115
(precision weighted average)	0.111*	0.030	0.169*	0.038	152
Own gun mainly for protection	0.282*	0.078	0.134	0.077	48
Own gun partly for protection	0.022	0.055	0.038	0.071	
Own gun not for protection	-0.155*	0.030	-0.022	0.045	14
Aggressive self-response in the three threatening scenarios (three-item scale)	0.226*	0.038	0.204*	0.030	90
Aggressive response by friends where they grew up (three-item scale)	0.213*	0.044	0.228*	0.034	107
Aggressive response by typical male/female where they grew up (three-item scale)	0.184*	0.042	0.251*	0.038	136
(precision weighted average)	0.209*	0.024	0.224*	0.019	107
Aggressive response average in Kevin scenario (three-item scale)	0.200*	0.040	0.193*	0.032	96
Aggressive response average in Emma scenario (three-item scale)	0.191*	0.044	0.262*	0.039	137
Aggressive response average in Doug scenario (three-item scale)	0.199*	0.037	0.211*	0.036	106
If Kevin and Doug walked away, they would look weak (two-item scale)	0.194*	0.060	0.041	0.060	21
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.161*	0.056	0.057	0.077	35
(precision weighted average)	0.176*	0.041	0.047	0.047	27
Honor ideology in manhood (three-item scale)	0.166*	0.035	0.156*	0.052	94
Hotheadedness (three-item scale)	0.064*	0.024	0.046	0.034	72
Raised by both parents	-0.199*	0.044	-0.163*	0.055	82

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.

Table S20: Post Updated Registration Rural Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants and Non-Migrants. Analysis at the individual level with gender and five-year age group fixed effects.

Model	Effect of Historical Homicide Rate				
	Non-Mig.		Migrants		Persistence
	Coef.	SE	Coef.	SE	%
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>					
Witness violence growing up (three-item scale)	0.152*	0.061	0.02	0.108	13
<i>Do they see the world as more dangerous?</i>					
Assault risk (three-item scale)	0.033	0.059	0.127	0.082	386
Belief in a Dangerous World (two-item scale)	0.148*	0.060	0.091	0.105	61
<i>Do they disregard the law?</i>					
Legal Cynicism (three-item scale)	-0.075	0.085	0.04	0.115	-53
<i>Do they report lower living standards?</i>					
Living standard (two-item scale)	-0.076	0.058	-0.188*	0.093	247
<i>Do high hist. hom. birth state respondents distrust institutions?</i>					
Distrust local government where they grew up (one-item scale)	0.146	0.082	0.026	0.115	18
Distrust local government where they live now (one-item scale)	0.167*	0.080	0.102	0.098	61
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.126	0.067	0.065	0.121	51
(precision weighted average)	0.144*	0.043	0.068	0.063	47
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>					
Trust family over the police (two-item scale)	-0.021	0.095	-0.016	0.080	
Distrust other people where they grew up (one-item scale)	0.141	0.072	0.076	0.093	54
Distrust other people where they live now (one-item scale)	0.14	0.078	0.092	0.110	66
(precision weighted average)	0.141*	0.053	0.083	0.071	59
Own gun mainly for protection	0.223	0.139	0	0.144	0
Own gun partly for protection	-0.044	0.161	0.176	0.135	-400
Own gun not for protection	-0.136	0.081	-0.102	0.089	75
Aggressive self-response in the three threatening scenarios (three-item scale)	0.194*	0.072	0.17	0.109	88
Aggressive response by friends where they grew up (three-item scale)	0.240*	0.075	0.197	0.104	82
Aggressive response by typical male/female where they grew up (three-item scale)	0.221*	0.067	0.174	0.105	79
(precision weighted average)	0.218*	0.041	0.181*	0.061	83
Aggressive response average in Kevin scenario (three-item scale)	0.183*	0.081	0.165	0.098	91
Aggressive response average in Emma scenario (three-item scale)	0.246*	0.080	0.206	0.110	84
Aggressive response average in Doug scenario (three-item scale)	0.222*	0.067	0.171	0.104	77
If Kevin and Doug walked away, they would look weak (two-item scale)	0.222*	0.095	0.045	0.112	20
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.218*	0.095	0.009	0.117	4
(precision weighted average)	0.220*	0.067	0.028	0.081	13
Honor ideology in manhood (three-item scale)	0.260*	0.061	0.215	0.115	83
Hotheadedness (three-item scale)	0.025	0.080	0.029	0.091	
Raised by both parents	-0.280*	0.101	-0.084	0.152	30

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.

Table S21: Fixed Effect Poisson Models of the Persistence of Homicide Victimization Rates among White Internal US Migrants Compared to Non-Migrants

Model	1959-61					2000-17				
	Non-Mig.		Migrants		Persistence	Non-Mig.		Migrants		Persistence
	Coef.	SE	Coef.	SE		Coef.	SE	Coef.	SE	
<i>Analysis at the birth-state level (n=49 states of birth)</i>										
Bivariate regression estimates	1.31*	0.04	0.78*	0.04	60	0.69*	0.06	0.37*	0.04	54
<i>Analysis at the birth-state * residence-state * age-group level with controls for state-residence * age-group FE for migrants and age-group FE for non-migrants</i>										
Baseline regression estimates at this level of disaggregation	1.32*	0.13	0.69*	0.07	53	0.67*	0.06	0.21*	0.04	31
Females	0.70*	0.12	0.57*	0.09	82	0.46*	0.05	0.14*	0.04	30
Males	1.57*	0.14	0.75*	0.09	48	0.80*	0.07	0.25*	0.05	31
Married females	0.69*	0.15	0.64*	0.09	93	0.38*	0.04	0.08*	0.03	21
Married males	1.70*	0.15	0.76*	0.09	45	0.68*	0.08	0.21*	0.04	31
Unmarried females	0.70*	0.13	0.48*	0.17	68	0.51*	0.08	0.19*	0.06	37
Unmarried males	1.45*	0.17	0.79*	0.12	55	0.83*	0.07	0.26*	0.07	31
Age less than 15	0.21	0.13	-0.12	0.21	-57	0.25*	0.04	0.12*	0.03	48
Age 15-29	1.29*	0.15	0.76*	0.10	59	0.62*	0.06	0.21*	0.05	34
Age 30-44	1.38*	0.11	0.78*	0.09	56	0.73*	0.07	0.27*	0.05	37
Age 45-59	1.24*	0.11	0.52*	0.09	42	0.66*	0.06	0.17*	0.04	26
Age 60-74	0.99*	0.09	0.37*	0.11	37	0.58*	0.05	0.15*	0.03	26
Age 75 and up	1.04*	0.23	0.06	0.22	6	0.48*	0.06	0.12*	0.03	25
<i>Analysis at the county by state-of-birth level with controls for age, age squared, male %, log of group size, and county FE for migrants</i>										
Baseline regression estimates at the county level	1.30*	0.24	0.66*	0.06	51	0.61*	0.09	0.18*	0.03	30
Above the median county population	1.43*	0.29	0.64*	0.07	45	0.55*	0.12	0.17*	0.03	31
Below the median county population	0.97*	0.21	0.72*	0.17	74	0.51*	0.14	0.20*	0.04	39

Note: This table shows estimates of the effect of the log of 1933-42 state-of-birth white homicide rate on homicide counts in 1959-61 and 2000-17. Each set of coefficients and standard errors are from separate models of homicide counts. Except for the first row, SEs are clustered by state of birth. Homicide rates are logged. In row 1, the Ns are 49. In row 2, the Ns for migrants are 49 states of birth (including DC, but excluding AK and HI) within each of 51 states of residence (including DC) separately for nine five-year age groups (ages 15-59), so (49 times (51-1) times 9=) 22,050 groups, though we have missing population data for small migrant groups especially in small states—1,810 groups in 1959-61 and 15 in 2000-17. It is 51-1 in this calculation since each of the 49 states of birth can pair with 51-1 possible migrant groups, not 51, because those born in their state of residence can't be migrants in their own state. For counties in 1959-61, we use all data points for which the 5% census files in 1980 and 1990 contains respondents. In 1959-61, this yields an N of 383 non-migrant counties and 15,936 migrant groups in US counties. In 2000-17, these Ns are 454 and 21,866. The models do not include state of residents fixed effects or county fixed effects for non-migrants because these are colinear with the historical homicide rate. \* p<0.05.

Table S22: Fixed Effect Negative Binomial Models of the Persistence of Homicide Victimization among White Internal US Migrants Compared to Non-Migrants

Model	1959-61						2000-17					
	Non-Mig.		Migrants		Persistence		Non-Mig.		Migrants		Persistence	
	Coef.	SE	Coef.	SE	%		Coef.	SE	Coef.	SE	%	
<i>Analysis at the birth-state level (n=49 states of birth)</i>												
Bivariate regression estimates	1.28*	0.09	0.76*	0.08	59		0.69*	0.06	0.37*	0.04	54	
<i>Analysis at the birth-state * residence-state * age-group level with controls for the log of group size state-residence * age-group FE for migrants and age-group FE for non-migrants</i>												
Baseline regression estimates at this level of disaggregation	1.28*	0.08	0.69*	0.07	54		0.67*	0.06	0.21*	0.04	31	
Females	0.68*	0.11	0.57*	0.09	84		0.46*	0.05	0.14*	0.04	30	
Males	1.54*	0.09	0.75*	0.09	49		0.80*	0.07	0.25*	0.05	31	
Married females	0.68*	0.14	0.64*	0.09	95		0.38*	0.04	0.08*	0.03	21	
Married males	1.70*	0.10	0.76*	0.09	45		0.68*	0.08	0.21*	0.04	31	
Unmarried females	0.70*	0.13	0.48*	0.17	68		0.51*	0.08	0.19*	0.06	37	
Unmarried males	1.45*	0.12	0.79*	0.12	55		0.83*	0.07	0.26*	0.07	31	
Age less than 15	0.19	0.14	-0.14	0.21	-75		0.25*	0.04	0.12*	0.03	48	
Age 15-29	1.22*	0.10	0.76*	0.10	63		0.62*	0.06	0.21*	0.05	34	
Age 30-44	1.37*	0.09	0.78*	0.09	57		0.73*	0.07	0.27*	0.05	37	
Age 45-59	1.23*	0.09	0.52*	0.09	42		0.66*	0.06	0.17*	0.04	26	
Age 60-74	1.00*	0.09	0.37*	0.11	37		0.58*	0.05	0.15*	0.03	26	
Age 75 and up	1.04*	0.23	0.06	0.23	6		0.48*	0.06	0.12*	0.03	25	
<i>Analysis at the county by state-of-birth level with controls for age, age squared, male %, log of group size, and county FE for migrants</i>												
Baseline regression estimates at the county level	1.20*	0.17	0.66		55		0.61*	0.09	0.18*	0.03	30	
Above the median county population	1.36*	0.22	0.64		47		0.55*	0.12	0.17*	0.03	31	
Below the median county population	0.96*	0.21	0.72		75		0.51*	0.14	0.20*	0.04	39	

Note: This table shows estimates of the effect of the log of 1933-42 state-of-birth white homicide rate on homicide counts in 1959-61 and 2000-17. Except for the first row, SEs are clustered by state of birth. In 1959-61, the county models fail to converge for migrants. In row 1, the Ns are 49. In row 2, the Ns for migrants are 49 states of birth (including DC, but excluding AK and HI) within each of 51 states of residence (including DC) separately for nine five-year age groups (ages 15-59), so (49 times (51-1) times 9=) 22,050 groups, though we have missing population data for small migrant groups especially in small states—1,810 groups in 1959-61 and 15 in 2000-17. It is 51-1 in this calculation since each of the 49 states of birth can pair with 51-1 possible migrant groups, not 51, because those born in their state of residence can't be migrants in their own state. For counties in 1959-61, we use all data points for which the 5% census files in 1980 and 1990 contains respondents. In 1959-61, this yields an N of 383 non-migrant counties and 15,936 migrant groups in US counties. In 2000-17, these Ns are 454 and 21,866. The models do not include state of residents fixed effects or county fixed effects for non-migrants because these are colinear with the historical homicide rate. \* p<0.05.

Table S23: Any Homicide Models—Persistence of Homicide Victimization Rates among White Internal US Migrants Compared to Non-Migrants 1959-61

Model	Non-Mig.		Migrants	
	Coef.	SE	Coef.	SE
<i>State Level</i>				
Baseline regression estimates at this level of disaggregation	0.044*	0.006	0.095*	0.045
Females	0.020*	0.003	0.168*	0.046
Males	0.043*	0.006	0.188*	0.040
Married females	0.017*	0.003	0.164*	0.043
Married males	0.036*	0.005	0.259*	0.038
Unmarried females	0.010*	0.003	0.209*	0.047
Unmarried males	0.029*	0.005	0.329*	0.041
Age less than 15	-0.002	0.003	-0.01	0.060
Age 15-29	0.038*	0.007	0.094*	0.046
Age 30-44	0.056*	0.008	0.113	0.062
Age 45-59	0.040*	0.007	0.097	0.057
Age 60-74	0.018*	0.004	0.259*	0.051
Age 75 and up	0.006	0.004	0.280*	0.072
<i>County level</i>				
Baseline regression estimates at the county level	0.032*	0.004	0.107*	0.044
Above the median county population	0.049*	0.008	0.047	0.038
Below the median county population	0.019*	0.004	0.134*	0.062

Note: Least squares regression of an indicator for greater than zero homicides in 1959-61 (DV) on the 1933-42 state-of-birth white homicide rate (log), with each set of coefficients and standard errors from a separate regression. State level analysis is at the birth-state \* residence-state \* age-group level with controls for state-residence \* age-group FE for migrants and age-group FEs for non-migrants. County level analysis at the state-of-birth \* county level controlling for age, age squared, male %, and log of group size age-group for county FEs for migrants. Standard errors are clustered by state of birth. Data weighted by population. See the note to Table 1 for additional details.

Table S24: Any Homicide Models—Persistence of Homicide Victimization Rates among White Internal US Migrants Compared to Non-Migrants 1979-91

Model	Non-Mig.		Migrants	
	Coef.	SE	Coef.	SE
<i>State level</i>				
Baseline regression estimates at this level of disaggregation	0	0.000	0.038	0.028
Females	0	0.002	0.063	0.037
Males	0.001	0.001	0.06	0.031
Married females	0.011	0.008	0.089*	0.039
Married males	0.007	0.005	0.131*	0.033
Unmarried females	0.004	0.004	0.053	0.042
Unmarried males	0	0.001	0.042	0.035
Age less than 15	0	0.000	0.021	0.024
Age 15-29	0	0.000	0.023	0.013
Age 30-44	0	0.000	0.033*	0.014
Age 45-59	-0.003	0.004	0.059*	0.013
Age 60-74	0.015	0.012	0.051*	0.015
Age 75 and up	-0.002	0.003	0.056*	0.028
<i>County level</i>				
Baseline regression estimates at the county level	0.036	0.034	0.049*	0.012
Above the median county population	0.046	0.045	0.046*	0.013
Below the median county population	0.025*	0.010	0.055*	0.017

Note: Least squares regression of an indicator for greater than zero homicides in 1979-91 (DV) on the 1933-42 state-of-birth white homicide rate (log), with each set of coefficients and standard errors from a separate regression. State level analysis is at the birth-state \* residence-state \* age-group level with controls for state-residence \* age-group FE for migrants and age-group FEs for non-migrants. County level analysis at the state-of-birth \* county level controlling for age, age squared, male %, and log of group size age-group for county FEs for migrants. Standard errors are clustered by state of birth. Weighted by population. See the note to the main 1979-91 SI Table for additional details.



Table S25: Log of Homicide Models Excluding Zeros—Persistence of Homicide Victimization Rates among White Internal US Migrants Compared to Non-Migrants 1959-61

Model	Non-Mig.		Migrants	
	Coef.	SE	Coef.	SE
<i>State Level</i>				
Baseline regression estimates at this level of disaggregation	1.163*	0.083	0.212*	0.028
Females	0.423*	0.085	0.084*	0.039
Males	1.276*	0.087	0.203*	0.035
Married females	0.378*	0.099	0.058	0.046
Married males	1.280*	0.096	0.167*	0.035
Unmarried females	0.181	0.094	0.016	0.046
Unmarried males	0.934*	0.109	0.094*	0.042
Age less than 15	0.207	0.142	-0.001	0.044
Age 15-29	1.088*	0.108	0.304*	0.048
Age 30-44	1.290*	0.100	0.269*	0.037
Age 45-59	1.135*	0.074	0.118*	0.045
Age 60-74	0.772*	0.115	-0.007	0.046
Age 75 and up	0.34	0.212	0.004	0.116
<i>County level</i>				
Baseline regression estimates at the county level	-22.28	11.982	0.185*	0.045
Above the median county population	-49.752*	16.759	0.201*	0.046
Below the median county population	-6.018	15.686	0.049	0.062

Note: Least squares regression of log(homicides) excluding zeros in 1959-61 (DV) on the 1933-42 state-of-birth white homicide rate (log), with each set of coefficients and standard errors from a separate regression. State level analysis is at the birth-state \* residence-state \* age-group level with controls for state-residence \* age-group FE for migrants and age-group FEs for non-migrants. County level analysis at the state-of-birth \* county level controlling for age, age squared, male %, and log of group size age-group for county FEs for migrants. Standard errors are clustered by state of birth. Data weighted by population. See the note to Table 1 for additional details.

Table S26: Log of Homicide Models Excluding Zeros—Persistence of Homicide Victimization Rates among White Internal US Migrants Compared to Non-Migrants 1979-91

Model	Non-Mig.		Migrants	
	Coef.	SE	Coef.	SE
<i>State level</i>				
Baseline regression estimates at this level of disaggregation	1.163*	0.083	0.212*	0.028
Females	0.423*	0.085	0.084*	0.039
Males	1.276*	0.087	0.203*	0.035
Married females	0.378*	0.099	0.058	0.046
Married males	1.280*	0.096	0.167*	0.035
Unmarried females	0.181	0.094	0.016	0.046
Unmarried males	0.934*	0.109	0.094*	0.042
Age less than 15	0.207	0.142	-0.001	0.044
Age 15-29	1.088*	0.108	0.304*	0.048
Age 30-44	1.290*	0.100	0.269*	0.037
Age 45-59	1.135*	0.074	0.118*	0.045
Age 60-74	0.772*	0.115	-0.007	0.046
Age 75 and up	0.34	0.212	0.004	0.116
<i>County level</i>				
Baseline regression estimates at the county level	-22.28	11.982	0.185*	0.045
Above the median county population	-49.752*	16.759	0.201*	0.046
Below the median county population	-6.018	15.686	0.049	0.062

Note: Least squares regression of log(homicides) excluding zeros in 1979-91 (DV) on the 1933-42 state-of-birth white homicide rate (log), with each set of coefficients and standard errors from a separate regression. State level analysis is at the birth-state \* residence-state \* age-group level with controls for state-residence \* age-group FE for migrants and age-group FEs for non-migrants. County level analysis at the state-of-birth \* county level controlling for age, age squared, male %, and log of group size age-group for county FEs for migrants. Standard errors are clustered by state of birth. Weighted by population. See the note to the main 1979-91 SI Table for additional details.

Table S27: Survey Demographics Benchmarked to Census' 2021 American Community Survey (five-year average)

Sample	Migrants		Non-Migrants	
	Lucid	ACS 2021	Lucid	ACS 2021
N	3,312	3,205,692	4,182	4,903,830
Gender				
Female	58	51	56	51
Age				
18-24	5	7	9	12
25-34	11	14	16	17
35-49	27	22	29	23
50-64	34	28	29	26
65+	23	29	18	23
Education				
No HS Degree	3	4	3	6
HS Graduate	22	30	26	40
Some College / 2-year Degree	34	24	33	25
Bachelor's Degree	25	25	23	19
Graduate Degree	15	17	14	10
Income				
<\$20k	19	7	22	8
\$20k-\$39k	28	11	26	12
\$40k-\$59k	21	12	20	13
\$60k-\$79k	12	12	11	13
\$80k+	20	57	22	54

Note: Except for the N row, cell entries provide the percentage of each sample present in each demographic category. We include respondents from the ACS 2021 who are 18 and over and who identified as white non-Hispanic. The Lucid survey defines migrants as people who say they grew up in a state other than the one they currently live in. In the ACS, we use whether they were born in a state other than the one they currently live in (our only option). We exclude in both samples respondents born outside the United States. The ACS sample is weighted.

Table S28: Survey Descriptive Statistics.

	Lives in Birth State					Migrated from Birth State				
	Mean	SD	Min	Max	N	Mean	SD	Min	Max	N
Witness violence growing up (3-item scale)	0.374	0.275	0.000	1.000	3311	0.343	0.279	0.000	1.000	2929
Assault risk (3-item scale)	0.305	0.258	0.000	1.000	2430	0.308	0.262	0.000	1.000	2515
Belief in a dangerous World (2-item scale)	0.616	0.244	0.000	1.000	2430	0.612	0.252	0.000	1.000	2515
Legal cynicism (3-item scale)	0.340	0.245	0.000	1.000	4181	0.300	0.230	0.000	1.000	3312
Living standard (2-item scale)	0.558	0.258	0.000	1.000	4182	0.548	0.267	0.000	1.000	3312
Distrust local government where they grew up (1 item)	0.443	0.286	0.000	1.000	4181	0.439	0.293	0.000	1.000	3311
Distrust local government where they live now (1 item)	0.509	0.282	0.000	1.000	4181	0.520	0.280	0.000	1.000	3311
Distrust police effectiveness and responsiveness where they live now (3-item scale)	0.420	0.250	0.000	1.000	4182	0.445	0.252	0.000	1.000	3312
Trust family over the police (2-item scale)	0.413	0.331	0.000	1.000	4180	0.418	0.313	0.000	1.000	3311
Distrust other people where they grew up (1 item)	0.433	0.299	0.000	1.000	4118	0.437	0.298	0.000	1.000	3254
Distrust other people where they live now (1 item)	0.496	0.297	0.000	1.000	2387	0.521	0.296	0.000	1.000	2460
Own gun mainly for protection	0.281	0.450	0.000	1.000	4180	0.290	0.454	0.000	1.000	3310
Own gun partly for protection	0.152	0.359	0.000	1.000	4180	0.142	0.349	0.000	1.000	3310
Own gun not for protection	0.056	0.229	0.000	1.000	4180	0.051	0.221	0.000	1.000	3310
Aggressive self-response in the three threatening scenarios (3-item scale)	0.417	0.315	0.000	1.000	3738	0.354	0.298	0.000	1.000	3108
Aggressive response by friends where they grew up (3-item scale)	0.527	0.306	0.000	1.000	3738	0.492	0.301	0.000	1.000	3108
Aggressive response by typical male/female where they grew up (3-item scale)	0.569	0.307	0.000	1.000	3738	0.532	0.310	0.000	1.000	3108
Aggressive response average in Kevin scenario (3-item scale)	0.470	0.311	0.000	1.000	3738	0.426	0.303	0.000	1.000	3108
Aggressive response average in Emma scenario (3-item scale)	0.581	0.322	0.000	1.000	3297	0.537	0.322	0.000	1.000	2915
Aggressive response average in Doug scenario (3-item scale)	0.479	0.309	0.000	1.000	3297	0.430	0.294	0.000	1.000	2915
If Kevin and Doug walked away, they would look weak (2-item scale)	0.499	0.312	0.000	1.000	2870	0.480	0.314	0.000	1.000	2715
If Kevin and Doug walked away, they would not feel like real men (2-item scale)	0.503	0.306	0.000	1.000	2867	0.475	0.312	0.000	1.000	2712
Honor ideology in manhood (3-item scale)	0.478	0.283	0.000	1.000	4182	0.463	0.283	0.000	1.000	3311
Hot headedness (3-item scale)	0.288	0.254	0.000	1.000	4182	0.261	0.248	0.000	1.000	3312
Raised by both parents (one item)	0.723	0.448	0.000	1.000	4182	0.714	0.452	0.000	1.000	3312

Table S29: Correlations between Survey Measures

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Witness violence growing up (3-item scale)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Assault risk (3-item scale)	.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Belief in a dangerous World (2-item scale)	.28	.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Legal cynicism (3-item scale)	.30	.22	.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5. Living standard (2-item scale)	-.10	-.13	-.16	-.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Distrust local government where they grew up (1 item)	.27	.21	.32	.19	-.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Distrust local government where they live now (1 item)	.13	.13	.24	.12	-.35	.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8. Distrust police effectiveness and responsiveness where they live now (3-item scale)	.16	.17	.18	.15	-.33	.39	.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9. Trust family over the police (2-item scale)	.30	.19	.19	.26	-.15	.34	.25	.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10. Distrust other people where they grew up (1 item)	.25	.29	.47	.12	-.22	.46	.30	.31	.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11. Distrust other people where they live now (1 item)	.12	.18	.32	.07	-.35	.30	.49	.41	.17	.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12. Own gun mainly for protection	.15	.10	.14	.06	-.01	.11	.07	.06	.12	.10	.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13. Own gun partly for protection	.03	-.02	.01	.00	-.01	.01	.02	.03	.03	-.01	-.02	-.26	—	—	—	—	—	—	—	—	—	—	—	—	—
14. Own gun not for protection	-.06	-.08	-.09	-.06	.04	-.04	-.04	-.02	-.04	-.06	-.07	-.15	-.10	—	—	—	—	—	—	—	—	—	—	—	—
15. Aggressive self-response in the three threatening scenarios (3-item scale)	.43	.27	.24	.34	-.04	.19	.09	.13	.31	.18	.12	.15	.04	-.07	—	—	—	—	—	—	—	—	—	—	—
16. Aggressive response by friends where they grew up (3-item scale)	.48	.33	.30	.29	-.08	.23	.12	.18	.33	.25	.14	.15	.05	-.04	.74	—	—	—	—	—	—	—	—	—	—
17. Aggressive response by typical male/female where they grew up (3-item scale)	.48	.35	.34	.26	-.10	.26	.14	.19	.31	.28	.16	.14	.04	-.05	.66	.86	—	—	—	—	—	—	—	—	—
18. Aggressive response average in Kevin scenario (3-item scale)	.49	.33	.29	.33	-.08	.25	.13	.17	.34	.23	.14	.15	.05	-.05	.80	.86	.83	—	—	—	—	—	—	—	—
19. Aggressive response average in Emma scenario (3-item scale)	.41	.27	.29	.24	-.08	.22	.12	.16	.27	.24	.15	.15	.04	-.07	.77	.83	.82	.67	—	—	—	—	—	—	—
20. Aggressive response average in Doug scenario (3-item scale)	.45	.32	.28	.30	-.06	.20	.09	.14	.29	.21	.12	.13	.04	-.05	.79	.86	.82	.73	.67	—	—	—	—	—	—
21. If Kevin and Doug walked away, they would look weak (2-item scale)	.29	.21	.18	.21	-.04	.15	.08	.11	.21	.13	.06	.10	.02	-.06	.41	.43	.44	.46	.37	.42	—	—	—	—	—
22. If Kevin and Doug walked away, they would not feel like real men (2-item scale)	.28	.20	.19	.23	-.05	.16	.10	.11	.20	.13	.06	.09	.02	-.06	.38	.39	.41	.42	.34	.39	.74	—	—	—	—
23. Honor ideology in manhood (3-item scale)	.43	.29	.31	.28	-.04	.19	.10	.14	.32	.24	.13	.15	.02	-.06	.50	.55	.56	.55	.49	.52	.44	.43	—	—	—
24. Hot headedness (3-item scale)	.35	.25	.18	.35	-.13	.20	.13	.17	.27	.20	.13	.09	.02	-.05	.41	.33	.31	.37	.29	.34	.24	.26	.33	—	—
25. Raised by both parents (one item)	-.20	-.11	-.13	-.08	.12	-.20	-.14	-.14	-.15	-.18	-.14	-.06	.03	.03	-.11	-.14	-.15	-.14	-.13	-.12	-.08	-.07	-.13	-.13	—

Table S30: Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants and Non-Migrants. This table shows the pre-registered version of Table 3. Originally, we presented the table below as Table 3, but based on a reviewer request, we changed the specification of Table 3. We also changed the layout of Table 3 for clarity. This table maintains the layout and specification of our pre-registered table, as do the tables below. Please see SI Sections S6 and S7 for details.

Model	Effect of Historical Homicide Rate				Persistence %
	Non-Mig.		Migrants		
	Coef.	SE	Coef.	SE	
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>					
1. Witness violence growing up (three-item scale)	0.054*	0.019	0.036	0.021	67
<i>Do they see the world as more dangerous?</i>					
2. Assault risk (three-item scale)	0.065*	0.022	0.086*	0.025	132
3. Belief in a dangerous world (two-item scale)	0.071*	0.014	0.117*	0.020	165
<i>Do they disregard the law?</i>					
4. Legal cynicism (three-item scale)	-0.028	0.019	0.012	0.021	
<i>Do they report lower living standards?</i>					
5. Living standard (two-item scale)	-0.009	0.021	-0.027	0.026	
<i>Do high hist. hom. birth state respondents distrust institutions?</i>					
6. Distrust local government where they grew up (one-item scale)	0.037	0.025	0.051*	0.022	139
7. Distrust local government where they live now (one-item scale)	0.038	0.024	0.012	0.023	33
8. Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.065*	0.019	0.037*	0.017	58
(precision weighted average)	0.050*	0.013	0.035*	0.012	70
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>					
9. Trust family over the police (two-item scale)	0.078*	0.020	0.083*	0.027	106
10. Distrust other people where they grew up (one-item scale)	0.064*	0.020	0.105*	0.028	163
11. Distrust other people where they live now (one-item scale)	0.034	0.030	0.041	0.024	120
(precision weighted average)	0.054*	0.017	0.068*	0.018	125
12. Own gun mainly for protection	0.281*	0.040	0.162*	0.034	58
13. Own gun partly for protection	0.045	0.038	0.032	0.037	70
14. Own gun not for protection	-0.083*	0.017	-0.007	0.022	9
15. Aggressive self-response in the three threatening scenarios (three-item scale)	0.105*	0.030	0.058*	0.028	56
16. Aggressive response by friends where they grew up (three-item scale)	0.115*	0.023	0.091*	0.029	79
17. Aggressive response by typical male/female where they grew up (three-item scale)	0.092*	0.023	0.108*	0.032	117
(precision weighted average)	0.104*	0.014	0.084*	0.017	81
18. Aggressive response average in Kevin scenario (three-item scale)	0.113*	0.024	0.079*	0.027	71
19. Aggressive response average in Emma scenario (three-item scale)	0.095*	0.027	0.084*	0.033	89
20. Aggressive response average in Doug scenario (three-item scale)	0.078*	0.032	0.093*	0.031	118
21. If Kevin and Doug walked away, they would look weak (two-item scale)	0.052*	0.024	0.023	0.028	44
22. If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.053*	0.022	0.041	0.026	77
(precision weighted average)	0.053*	0.016	0.033	0.019	62
23. Honor ideology in manhood (three-item scale)	0.097*	0.022	0.108*	0.027	111
24. Hotheadedness (three-item scale)	0.049*	0.014	0.025	0.019	51
25. Raised by both parents	-0.094*	0.030	-0.138*	0.036	147

Note: Each row shows a separate regression where the survey measure (DV) is regressed on the log of the historical homicide rate in the state where respondents grew up, an indicator for whether the respondent is an internal US migrant, and the interaction of these two variables, with gender and five-year age group fixed effects. We calculate the migrant coefficient with the main effect and the interaction. Analysis is conducted at the individual level. All variables are rescaled to vary from 0 to 1. Standard errors are clustered by the state where the respondent grew up. \* p<0.05.

Table S31: Region Fixed Effects Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants within States of Residence. Analysis at the individual level with gender, five-year age group, and state-of-residence FEs. Robust standard errors clustered by state of birth. This is a pre-registered table and maintains the layout of our pre-registration rather than the layout of Table 3.

Model	Effect of Historical Homicide Rate		
	Coef.	SE	N
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>			
Witness violence growing up (three-item scale)	0.042*	0.021	2,913
<i>Do they see the world as more dangerous?</i>			
Assault risk (three-item scale)	0.092*	0.027	2,502
Belief in a dangerous world (two-item scale)	0.108*	0.021	2,502
<i>Do they disregard the law?</i>			
Legal cynicism (three-item scale)	0.028	0.021	3,293
<i>Do they report lower living standards?</i>			
Living standard (two-item scale)	-0.025	0.024	3,293
<i>Do high hist. hom. birth state respondents distrust institutions?</i>			
Distrust local government where they grew up (one-item scale)	0.03	0.023	3,292
Distrust local government where they live now (one-item scale)	-0.012	0.024	3,292
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.017	0.017	3,293
(precision weighted average)	0.013	0.012	
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>			
Trust family over the police (two-item scale)	0.067*	0.029	3,292
Distrust other people where they grew up (one-item scale)	0.101*	0.028	3,235
Distrust other people where they live now (one-item scale)	0.031	0.029	2,447
(precision weighted average)	0.066*	0.020	
Own gun mainly for protection	0.117*	0.036	3,291
Own gun partly for protection	0.004	0.035	3,291
Own gun not for protection	0.003	0.020	3,291
Aggressive self-response in the three threatening scenarios (three-item scale)	0.058	0.030	3,091
Aggressive response by friends where they grew up (three-item scale)	0.096*	0.029	3,091
Aggressive response by typical male/female where they grew up (three-item scale)	0.107*	0.034	3,091
(precision weighted average)	0.086*	0.018	
Aggressive response average in Kevin scenario (three-item scale)	0.077*	0.028	3,091
Aggressive response average in Emma scenario (three-item scale)	0.089*	0.033	2,898
Aggressive response average in Doug scenario (three-item scale)	0.099*	0.032	2,898
If Kevin and Doug walked away, they would look weak (two-item scale)	0.034	0.032	2,700
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.052	0.030	2,697
(precision weighted average)	0.044*	0.022	
Honor ideology in manhood (three-item scale)	0.113*	0.025	3,292
Raised by both parents	-0.127*	0.035	3,293

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.

Table S32: Pilot Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants and Non-Migrants. We collected these pilot samples before registration. Analysis at the individual level with gender and five-year age group fixed effects. This is a pre-registered table and maintains the layout of our pre-registration rather than the layout of Table 3.

Model	Effect of Historical Homicide Rate				
	Non-Mig.		Migrants		Persistence %
	Coef.	SE	Coef.	SE	
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>					
Witness violence growing up (three-item scale)	0.076*	0.025	0.090*	0.043	119
<i>Do they see the world as more dangerous?</i>					
Assault risk (three-item scale)	0.086	0.050	0.121*	0.057	141
Belief in a Dangerous World (two-item scale)	0.011	0.044	0.187*	0.054	
<i>Do they disregard the law?</i>					
Legal Cynicism (three-item scale)	-0.033	0.022	0.007	0.029	-20
<i>Do they report lower living standards?</i>					
Living standard (two-item scale)	0.006	0.031	-0.026	0.038	
<i>Do high hist. hom. birth state respondents distrust institutions?</i>					
Distrust local government where they grew up (one-item scale)	0.059	0.035	0.027	0.036	45
Distrust local government where they live now (one-item scale)	0.036	0.037	0.008	0.034	22
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.048	0.028	0.013	0.031	27
(precision weighted average)	0.048*	0.019	0.015	0.019	32
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>					
Trust family over the police (two-item scale)	0.083*	0.029	0.075	0.048	90
Distrust other people where they grew up (one-item scale)	0.05	0.029	0.088*	0.039	174
Distrust other people where they live now (one-item scale)	-0.062	0.052	-0.022	0.063	36
(precision weighted average)	0.024	0.025	0.057	0.033	
Own gun mainly for protection	0.272*	0.044	0.148*	0.055	55
Own gun partly for protection	0.046	0.046	0.046	0.054	98
Own gun not for protection	-0.093*	0.020	-0.011	0.028	12
Aggressive self-response in the three threatening scenarios (three-item scale)	0.131*	0.034	0.088*	0.037	67
Aggressive response by friends where they grew up (three-item scale)	0.131*	0.034	0.142*	0.051	109
Aggressive response by typical male/female where they grew up (three-item scale)	0.099*	0.032	0.155*	0.050	158
(precision weighted average)	0.119*	0.019	0.120*	0.026	100
Aggressive response average in Kevin scenario (three-item scale)	0.120*	0.030	0.140*	0.045	117
Aggressive response average in Emma scenario (three-item scale)	0.104*	0.038	0.120*	0.057	115
Aggressive response average in Doug scenario (three-item scale)	0.095*	0.048	0.154*	0.047	163
If Kevin and Doug walked away, they would look weak (two-item scale)	0.117*	0.037	0.059	0.054	50
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.054	0.039	0.075	0.056	138
(precision weighted average)	0.087*	0.027	0.067	0.039	76
Honor ideology in manhood (three-item scale)	0.095*	0.023	0.108*	0.049	113
Hotheadedness (three-item scale)	0.065*	0.022	0.033	0.032	51
Raised by both parents	-0.128*	0.040	-0.177*	0.054	139

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.



Table S33: Region Fixed Effects Pilot Sample Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants within States of Residence. We collected these pilot samples before registration. Analysis at the individual level with gender, five-year age group, and state-of-residence FEs. Robust standard errors clustered by state of birth. This is a pre-registered table and maintains the layout of our pre-registration rather than the layout of Table 3.

Model	Effect of Historical Homicide Rate		
	Coef.	SE	N
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>			
Witness violence growing up (three-item scale)	0.099*	0.043	780
<i>Do they see the world as more dangerous?</i>			
Assault risk (three-item scale)	0.114*	0.054	369
Belief in a dangerous world (two-item scale)	0.193*	0.054	369
<i>Do they disregard the law?</i>			
Legal cynicism (three-item scale)	0.017	0.030	1,160
<i>Do they report lower living standards?</i>			
Living standard (two-item scale)	-0.03	0.039	1,160
<i>Do high hist. hom. birth state respondents distrust institutions?</i>			
Distrust local government where they grew up (one-item scale)	0.027	0.034	1,160
Distrust local government where they live now (one-item scale)	-0.003	0.037	1,160
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.002	0.033	1,160
(precision weighted average)	0.009	0.020	
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>			
Trust family over the police (two-item scale)	0.051	0.057	1,160
Distrust other people where they grew up (one-item scale)	0.102*	0.045	1,140
Distrust other people where they live now (one-item scale)	-0.045	0.076	365
(precision weighted average)	0.064	0.039	
Own gun mainly for protection	0.083	0.071	1,159
Own gun partly for protection	0.013	0.054	1,159
Own gun not for protection	-0.015	0.028	1,159
Aggressive self-response in the three threatening scenarios (three-item scale)	0.083*	0.039	958
Aggressive response by friends where they grew up (three-item scale)	0.159*	0.052	958
Aggressive response by typical male/female where they grew up (three-item scale)	0.163*	0.053	958
(precision weighted average)	0.124*	0.027	
Aggressive response average in Kevin scenario (three-item scale)	0.140*	0.051	958
Aggressive response average in Emma scenario (three-item scale)	0.139*	0.055	765
Aggressive response average in Doug scenario (three-item scale)	0.169*	0.053	765
If Kevin and Doug walked away, they would look weak (two-item scale)	0.071	0.062	571
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.130*	0.060	569
(precision weighted average)	0.101*	0.043	
Honor ideology in manhood (three-item scale)	0.123*	0.042	1,159
Hot headedness (three-item scale)	0.035	0.033	1,160

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.

Table S34: Final Sample Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants and Non-Migrants. Pilot respondents excluded. Analysis at the individual level with for gender and five-year age group fixed effects. This is a pre-registered table and maintains the layout of our pre-registration rather than the layout of Table 3.

Model	Effect of Historical Homicide Rate				Persistence %
	Non-Mig.		Migrants		
	Coef.	SE	Coef.	SE	
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>					
Witness violence growing up (three-item scale)	0.043	0.023	0.019	0.020	43
<i>Do they see the world as more dangerous?</i>					
Assault risk (three-item scale)	0.058*	0.023	0.081*	0.026	140
Belief in a Dangerous World (two-item scale)	0.088*	0.016	0.102*	0.022	116
<i>Do they disregard the law?</i>					
Legal Cynicism (three-item scale)	-0.018	0.023	0.019	0.025	
<i>Do they report lower living standards?</i>					
Living standard (two-item scale)	-0.026	0.022	-0.019	0.025	
<i>Do high hist. hom. birth state respondents distrust institutions?</i>					
Distrust local government where they grew up (one-item scale)	0.006	0.030	0.057*	0.025	
Distrust local government where they live now (one-item scale)	0.042	0.033	0.008	0.023	20
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.081*	0.026	0.046*	0.020	56
(precision weighted average)	0.047*	0.017	0.037*	0.013	79
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>					
Trust family over the police (two-item scale)	0.059*	0.028	0.079*	0.024	134
Distrust other people where they grew up (one-item scale)	0.074*	0.030	0.104*	0.033	140
Distrust other people where they live now (one-item scale)	0.059	0.033	0.048	0.027	82
(precision weighted average)	0.067*	0.022	0.071*	0.021	105
Own gun mainly for protection	0.292*	0.052	0.164*	0.051	56
Own gun partly for protection	0.042	0.046	0.018	0.039	45
Own gun not for protection	-0.070*	0.025	-0.002	0.028	3
Aggressive self-response in the three threatening scenarios (three-item scale)	0.082*	0.033	0.048	0.030	59
Aggressive response by friends where they grew up (three-item scale)	0.101*	0.026	0.066*	0.032	65
Aggressive response by typical male/female where they grew up (three-item scale)	0.089*	0.027	0.084*	0.033	95
(precision weighted average)	0.092*	0.016	0.065*	0.018	71
Aggressive response average in Kevin scenario (three-item scale)	0.106*	0.030	0.05	0.027	47
Aggressive response average in Emma scenario (three-item scale)	0.094*	0.032	0.074*	0.036	79
Aggressive response average in Doug scenario (three-item scale)	0.072*	0.029	0.074*	0.030	103
If Kevin and Doug walked away, they would look weak (two-item scale)	0.021	0.032	0.012	0.029	
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.054*	0.025	0.033	0.025	61
(precision weighted average)	0.041*	0.020	0.024	0.019	58
Honor ideology in manhood (three-item scale)	0.099*	0.035	0.105*	0.024	107
Hotheadedness (three-item scale)	0.03	0.022	0.02	0.020	66
Raised by both parents	-0.058	0.039	-0.112*	0.048	193

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.

Table S35: Final Sample Region Fixed Effects Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants within States of Residence. We collected these pilot samples before registration. Analysis at the individual level with gender, five-year age group, and state-of-residence FEs. Robust standard errors clustered by state of birth. This is a pre-registered table and maintains the layout of our pre-registration rather than the layout of Table 3.

Model	Effect of Historical Homicide Rate		
	Coef.	SE	N
<i>Do high hist. hom. birth state respondents see more violence growing up?</i>			
Witness violence growing up (three-item scale)	0.021	0.020	2,133
<i>Do they see the world as more dangerous?</i>			
Assault risk (three-item scale)	0.081*	0.026	2,133
Belief in a dangerous world (two-item scale)	0.102*	0.022	2,133
<i>Do they disregard the law?</i>			
Legal cynicism (three-item scale)	0.033	0.023	2,133
<i>Do they report lower living standards?</i>			
Living standard (two-item scale)	-0.016	0.024	2,133
<i>Do high hist. hom. birth state respondents distrust institutions?</i>			
Distrust local government where they grew up (one-item scale)	0.038	0.028	2,132
Distrust local government where they live now (one-item scale)	-0.01	0.023	2,132
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.033	0.021	2,133
(precision weighted average)	0.019	0.014	
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i>			
Trust family over the police (two-item scale)	0.075*	0.026	2,132
Distrust other people where they grew up (one-item scale)	0.104*	0.034	2,095
Distrust other people where they live now (one-item scale)	0.042	0.031	2,082
(precision weighted average)	0.070*	0.023	
Own gun mainly for protection	0.133*	0.049	2,132
Own gun partly for protection	-0.014	0.040	2,132
Own gun not for protection	0.012	0.026	2,132
Aggressive self-response in the three threatening scenarios (three-item scale)	0.043	0.031	2,133
Aggressive response by friends where they grew up (three-item scale)	0.071*	0.034	2,133
Aggressive response by typical male/female where they grew up (three-item scale)	0.083*	0.036	2,133
(precision weighted average)	0.064*	0.020	
Aggressive response average in Kevin scenario (three-item scale)	0.046	0.030	2,133
Aggressive response average in Emma scenario (three-item scale)	0.075*	0.037	2,133
Aggressive response average in Doug scenario (three-item scale)	0.076*	0.033	2,133
If Kevin and Doug walked away, they would look weak (two-item scale)	0.024	0.035	2,129
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.037	0.032	2,128
(precision weighted average)	0.031	0.024	
Honor ideology in manhood (three-item scale)	0.110*	0.024	2,133
Hot headedness (three-item scale)	0.016	0.020	2,133

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.

Table S36: Post Updated Registration Survey Findings on the Persistence of Violent Victimization among White, Non-Hispanic Internal US Migrants and Non-Migrants. Analysis at the individual level with gender and five-year age group fixed effects. This is a pre-registered table and maintains the layout of our pre-registration rather than the layout of Table 3.

Model	Effect of Historical Homicide Rate				Persistence %
	Non-Mig.		Migrants		
	Coef.	SE	Coef.	SE	
<i>Do high hist. hom. birth state respondents see more violence growing up?</i> Witness violence growing up (three-item scale)	0.059	0.040	0.03	0.035	50
<i>Do they see the world as more dangerous?</i> Assault risk (three-item scale)	0.081*	0.035	0.072*	0.034	89
Belief in a Dangerous World (two-item scale)	0.108*	0.024	0.093*	0.035	86
<i>Do they disregard the law?</i> Legal Cynicism (three-item scale)	-0.061*	0.031	-0.023	0.034	38
<i>Do they report lower living standards?</i> Living standard (two-item scale)	-0.055	0.036	-0.075*	0.035	137
<i>Do high hist. hom. birth state respondents distrust institutions?</i> Distrust local government where they grew up (one-item scale)	-0.026	0.037	0.034	0.040	
Distrust local government where they live now (one-item scale)	0.037	0.036	0.048	0.034	132
Distrust police effectiveness and responsiveness where they live now (three-item scale)	0.098*	0.029	0.051	0.040	51
(precision weighted average)	0.047*	0.019	0.045*	0.022	96
<i>Do high hist. hom. birth state respondents show adaptation to weak institutions?</i> Trust family over the police (two-item scale)	0.034	0.036	0.061	0.038	179
Distrust other people where they grew up (one-item scale)	0.037	0.043	0.083*	0.041	223
Distrust other people where they live now (one-item scale)	0.058	0.036	0.110*	0.037	191
(precision weighted average)	0.049	0.028	0.098*	0.028	198
Own gun mainly for protection	0.252*	0.052	0.170*	0.081	67
Own gun partly for protection	0.064	0.075	0.08	0.047	125
Own gun not for protection	-0.073*	0.030	-0.032	0.036	43
Aggressive self-response in the three threatening scenarios (three-item scale)	0.089*	0.043	0.042	0.046	47
Aggressive response by friends where they grew up (three-item scale)	0.131*	0.041	0.067	0.043	51
Aggressive response by typical male/female where they grew up (three-item scale)	0.105*	0.038	0.065	0.037	62
(precision weighted average)	0.108*	0.024	0.059*	0.024	55
Aggressive response average in Kevin scenario (three-item scale)	0.118*	0.050	0.032	0.047	27
Aggressive response average in Emma scenario (three-item scale)	0.107*	0.041	0.087	0.045	81
Aggressive response average in Doug scenario (three-item scale)	0.098*	0.040	0.055	0.039	56
If Kevin and Doug walked away, they would look weak (two-item scale)	0.077	0.046	0.033	0.040	43
If Kevin and Doug walked away, they would not feel like men (two-item scale)	0.059	0.042	0.05	0.044	85
(precision weighted average)	0.067*	0.031	0.041	0.029	61
Honor ideology in manhood (three-item scale)	0.112*	0.040	0.144*	0.038	129
Hotheadedness (three-item scale)	0.025	0.027	-0.003	0.033	
Raised by both parents	-0.114	0.065	-0.128*	0.063	112

Note: Each set of coefficients and standard errors is from a separate regression. Standard errors are clustered by state of birth. \* p<0.05.

## **S2 Supporting Information Figures**

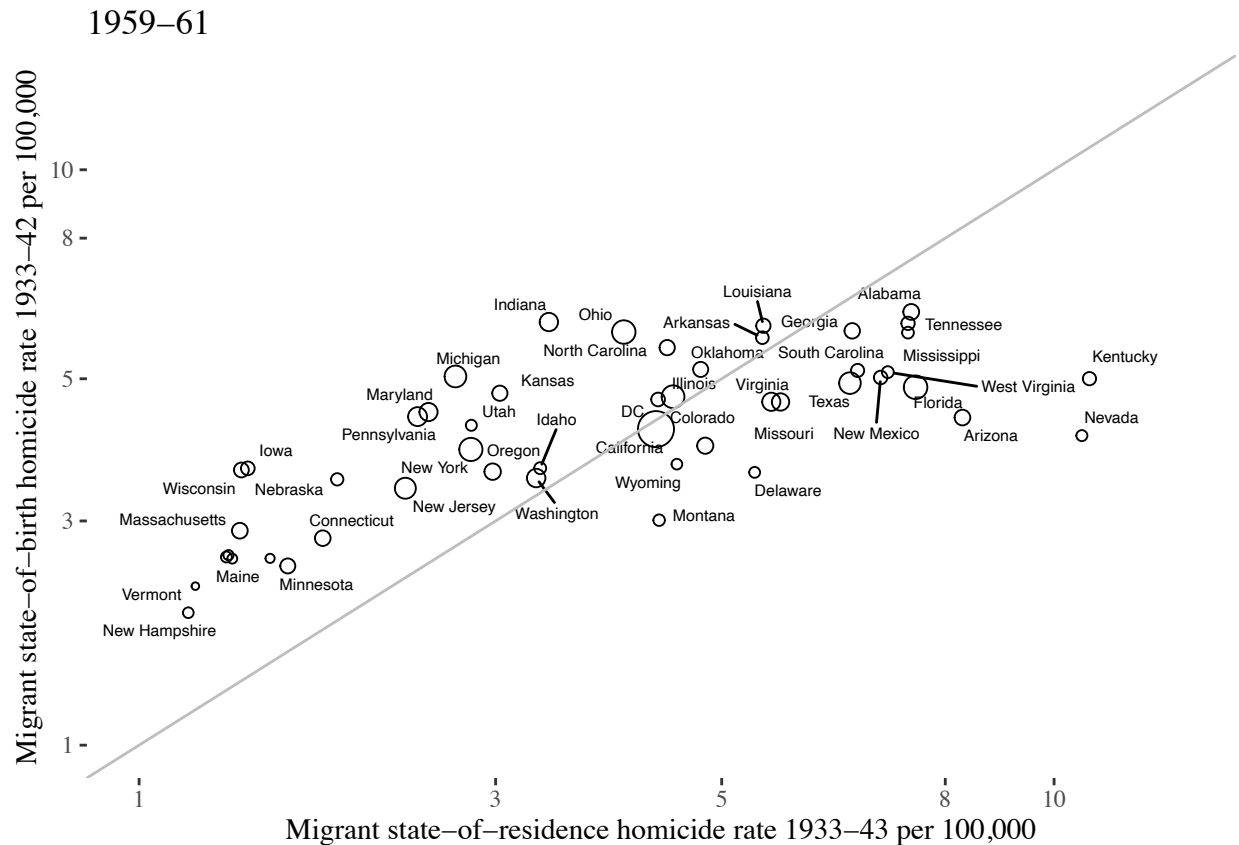


Figure S1: This figure examines the degree to which historically violent states for whites attracted white migrants from historically violent states. Each circle shows the average historical homicide rate for migrants (weighted by population). Each circle is sized by the white migrant population. The figure shows less selection than one might expect, with more violent states disproportionately receiving migrants from less violent states, and less violent states disproportionately receiving migrants from more violent states. The gray line shows the 45 degree line.

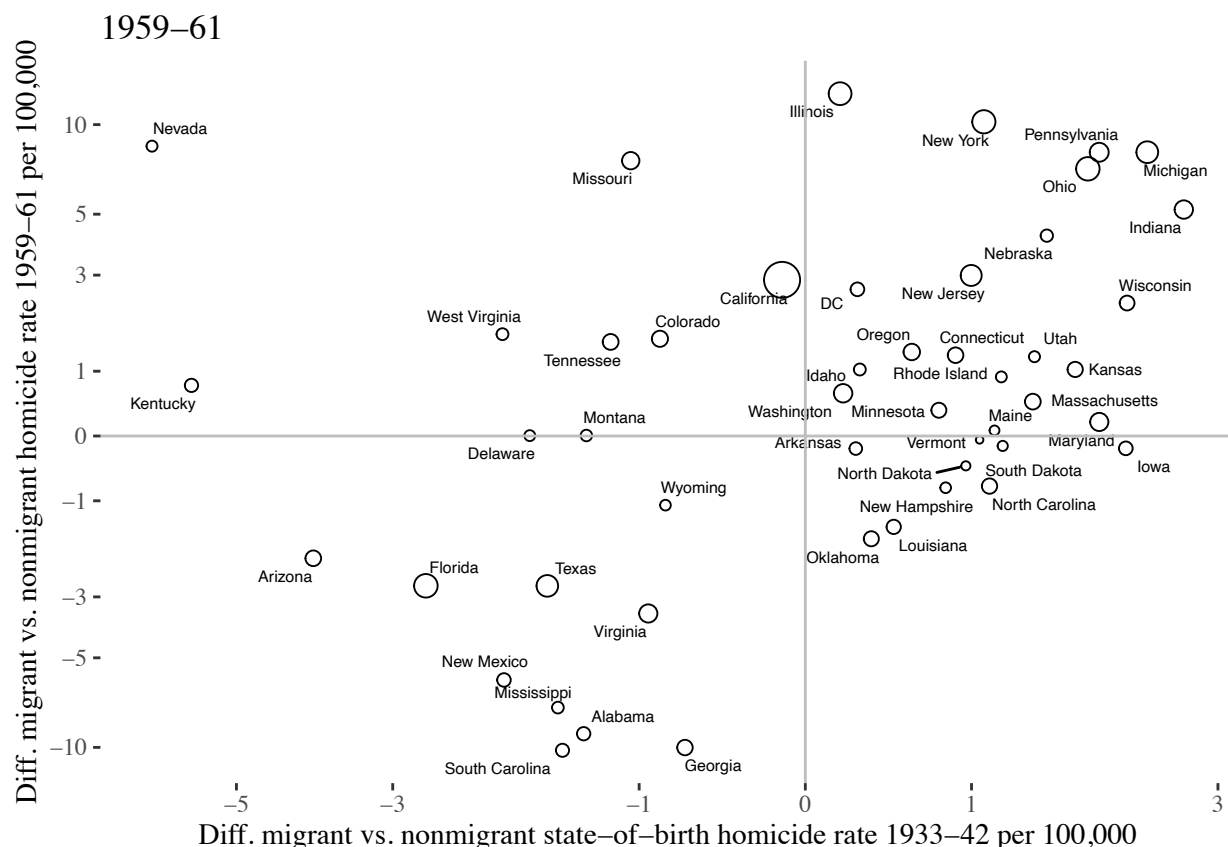


Figure S2: This figure shows which states received white migrants from relatively more historically violent states than non-migrants' historical violence rates (x-axis) and whether these migrants were relatively more at risk from violence in their new state than non-migrants (y-axis). It does so by taking the difference between the historical homicide rates of migrants and nonmigrants in each state of residence as the x axis, and this same difference for 1959-61 homicide rates as the y axis. States in the upper right quadrant received migrants from historically more violent states and those migrants were more at risk of violence in the states than locals. Indiana, for instance, had migrants with an average historical homicide rate three points higher than Indiana's historical homicide rate, the largest of any state. It also had migrants more at risk than nonmigrants. Nevada is an outlier because it had a trivial nonmigrant population in this period. Another outlier, Kentucky, received migrants from historically less violent states (relatively speaking), but those migrants died at higher than expected rates. Circles sized by the white migrant population.



Figure S3: 1959-61 homicide rates by gender for white migrants and non-migrants. Each circle shows a state of birth. For migrants, each shows the homicide rate averaged across wherever migrants from a state ended up. Circles sized by the white non-migrant or migrant population. Loess smoother. The smaller number of person years and homicides yields noisier estimates when disaggregating by sex. Note the unlogged y-axis.



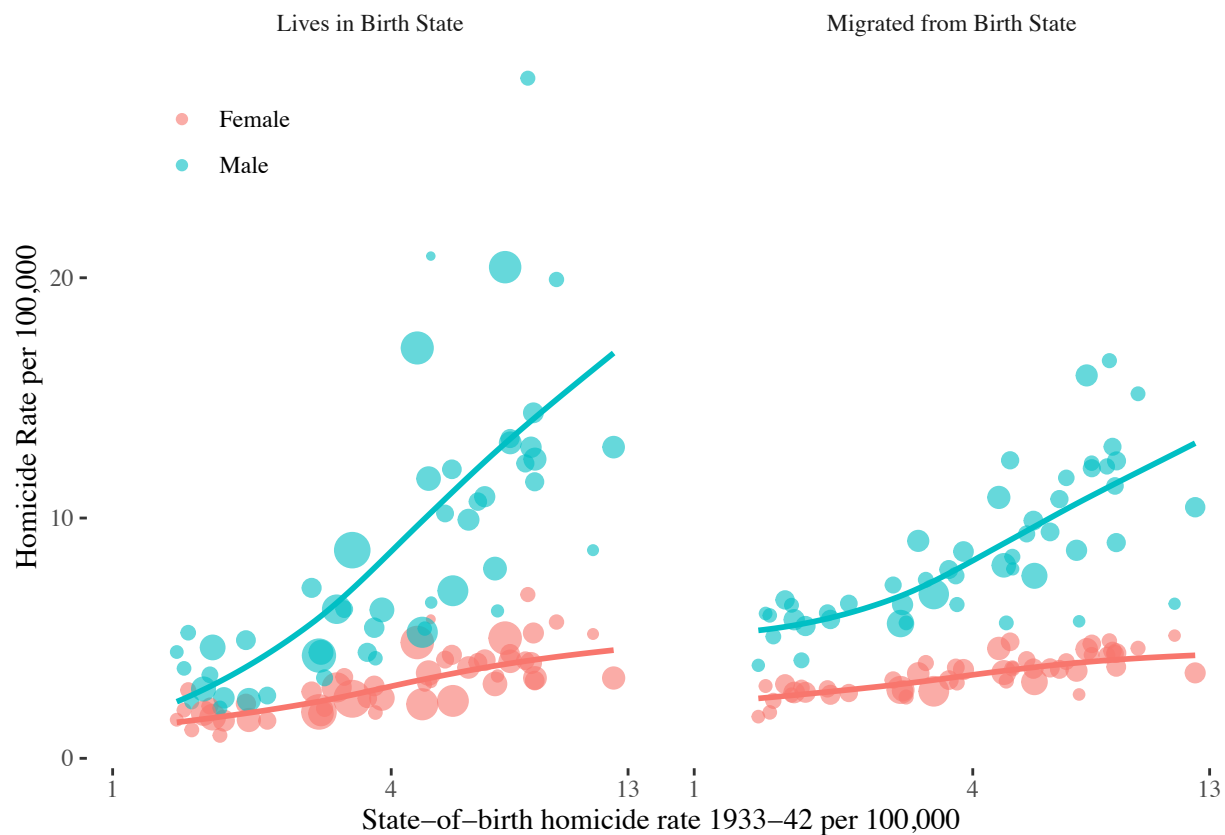


Figure S4: 1979-91 homicide rates by gender for migrants and non-migrants. Each circle shows a state of birth. For migrants, each shows the homicide rate averaged across wherever migrants from a state ended up. Circles sized by the white non-migrant or migrant population. Loess smoother. Note the unlogged y-axis.

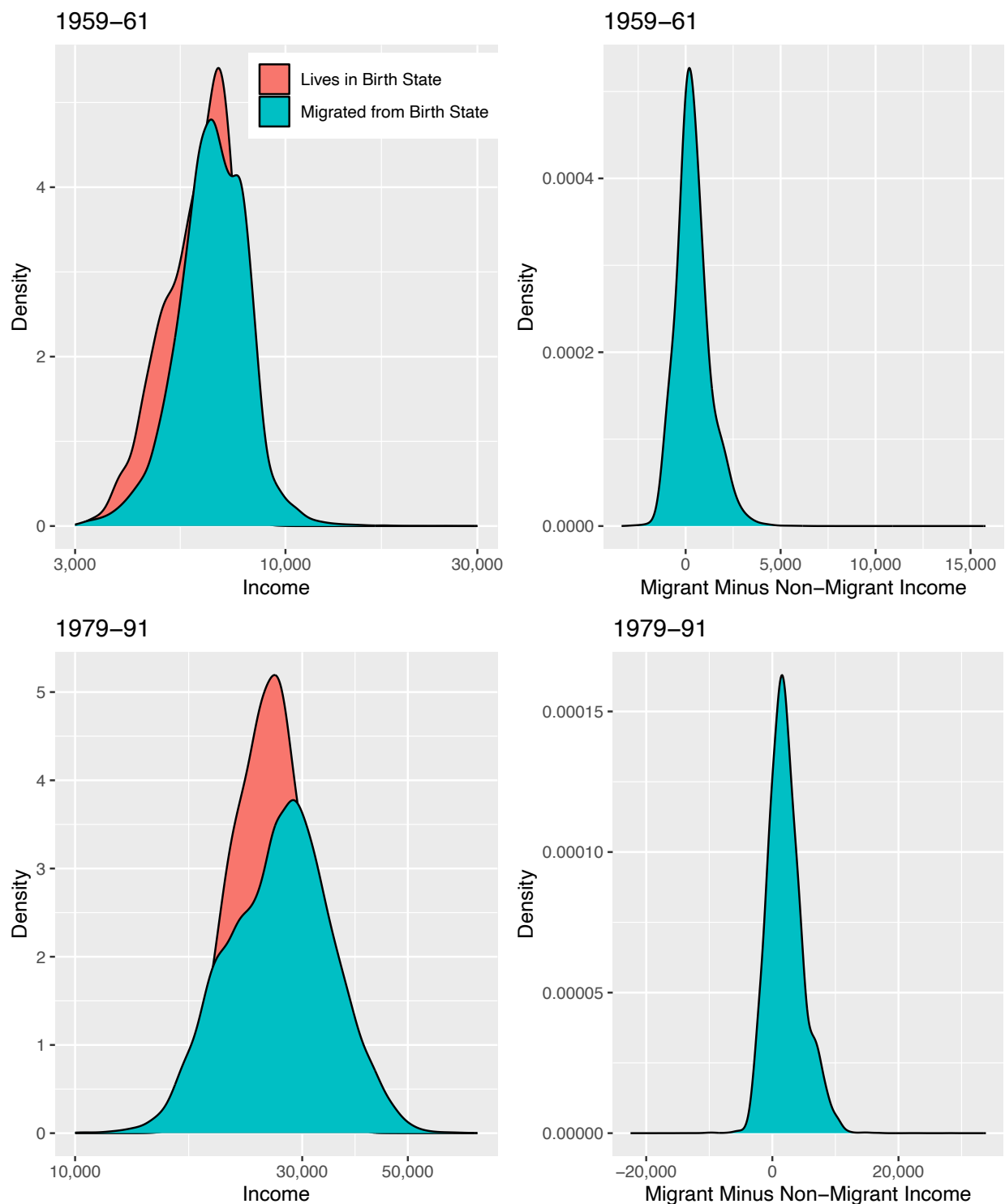


Figure S5: This figure plots the distribution of migrant and non-migrant incomes and the difference between those incomes. It shows that migrants were often better off than their new neighbors. For non-migrants, each row of the data is a state-of-residence age group, e.g., 50-54 year-old Kentuckians. For migrants, each row of data is migrants from a particular state of birth in their current state of residence for an age group, e.g., 50-54 Kentuckians living in Illinois. The distributions are weighted by the population size of each respective group.

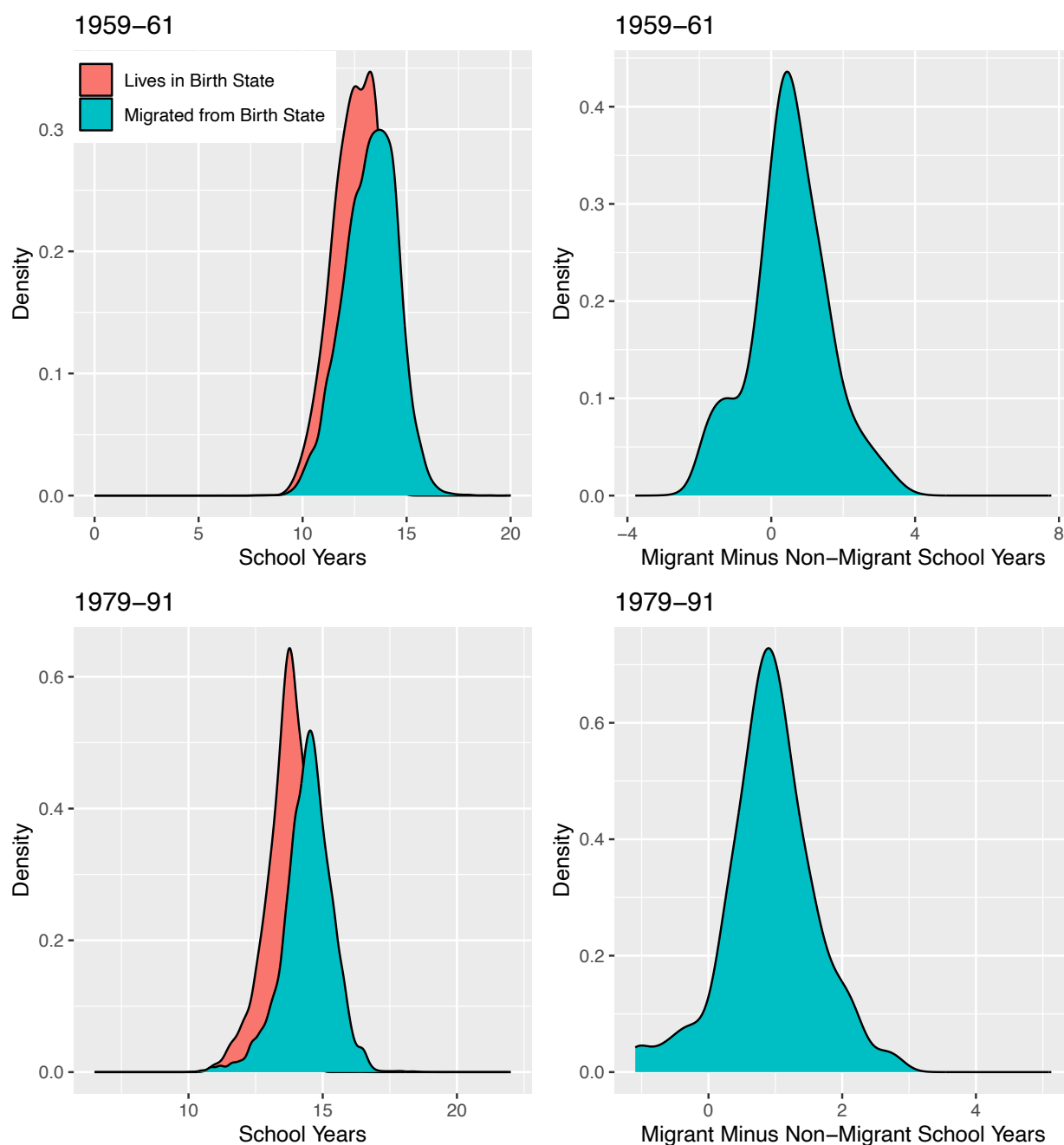


Figure S6: This figure plots the distribution of migrant and non-migrant years in school and the difference between them in years in school for migrant groups 25 and over. It shows that migrants were often better educated than their new neighbors. For non-migrants, each row of the data is a state-of-residence age group, e.g., 50-54 year-old Kentuckians. For migrants, each row of data is migrants from a particular state of birth in their current state of residence for an age group, e.g., 50-54 Kentuckians living in Illinois. The distributions are weighted by the population size of each respective group.

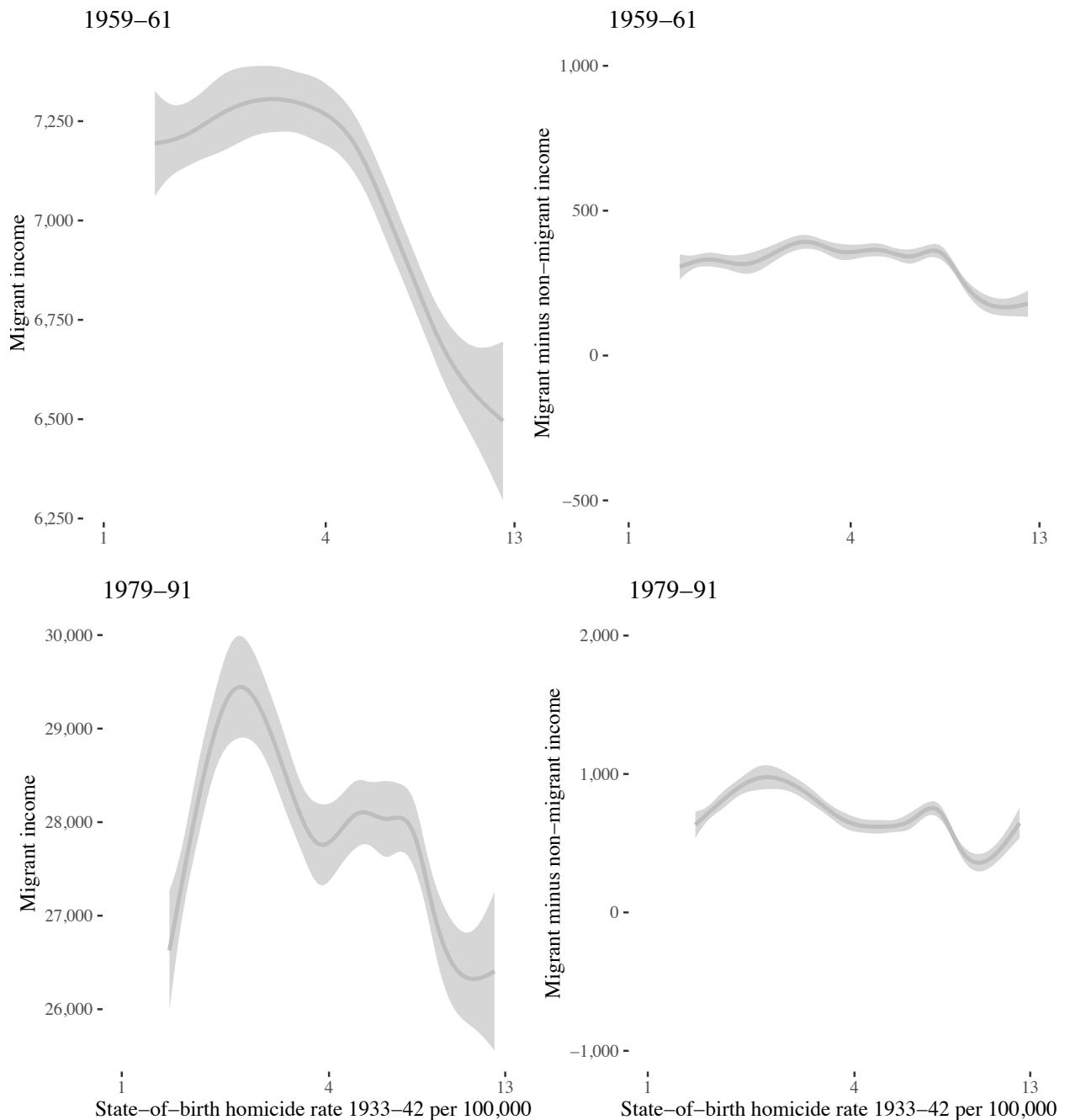


Figure S7: This figure plots the relationship between historical homicide rates and migrant incomes (left) and the difference between their incomes and those of their new neighbors (right). Although migrants are generally better off than non-migrants, the left panels in this figure show that migrants from the most historically violent states are somewhat worse off financially. However, compared to the residents where they migrate to, the right panels show that these migrants are not worse off. So we would not expect lower incomes relative to incomes where they've migrated to, to contribute to persistence of violence. Each row of data is migrants from a particular state of birth in their current state of residence for an age group, e.g., 50-54 Kentuckians living in Illinois. Loess smoother. The data are weighted by the population size of each respective group.

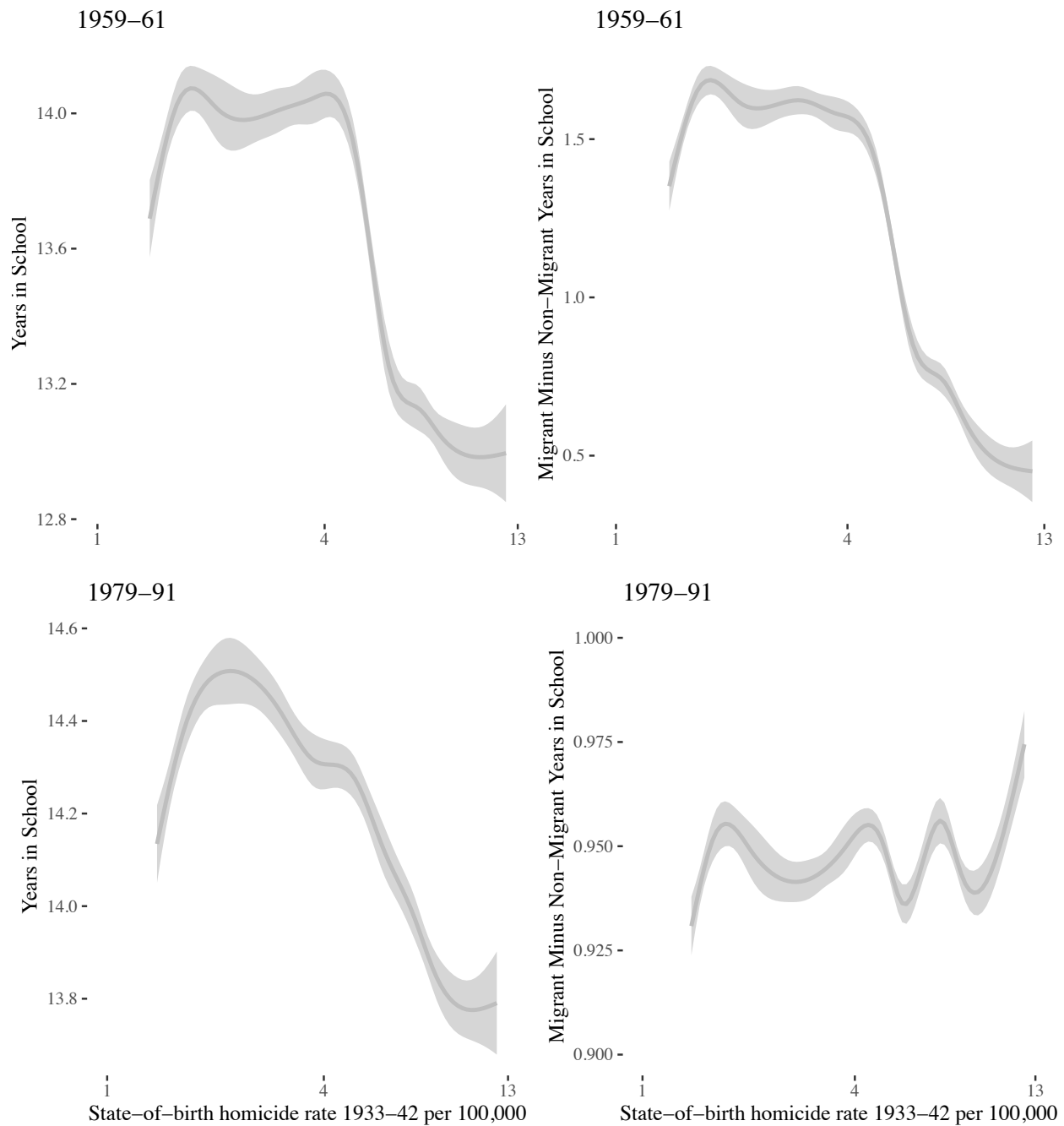


Figure S8: This figure plots the relationship between historical homicide rates and migrant years in school (left) and the difference between their years in school and those of their new neighbors (right). Although migrants are generally better educated than non-migrants, the left panels in this figure show that migrants from the most historically violent states are somewhat less educated. However, compared to the residents where they migrate to, the right panels show that these migrants are only trivially less educated. So we would not expect lower education relative to those living where they have migrated to to contribute to persistence of violence. Each row of data is migrants from a particular state of birth in their current state of residence for an age group, e.g., 50-54 Kentuckians living in Illinois. Loess smoother. The data are weighted by the population size of each respective group.

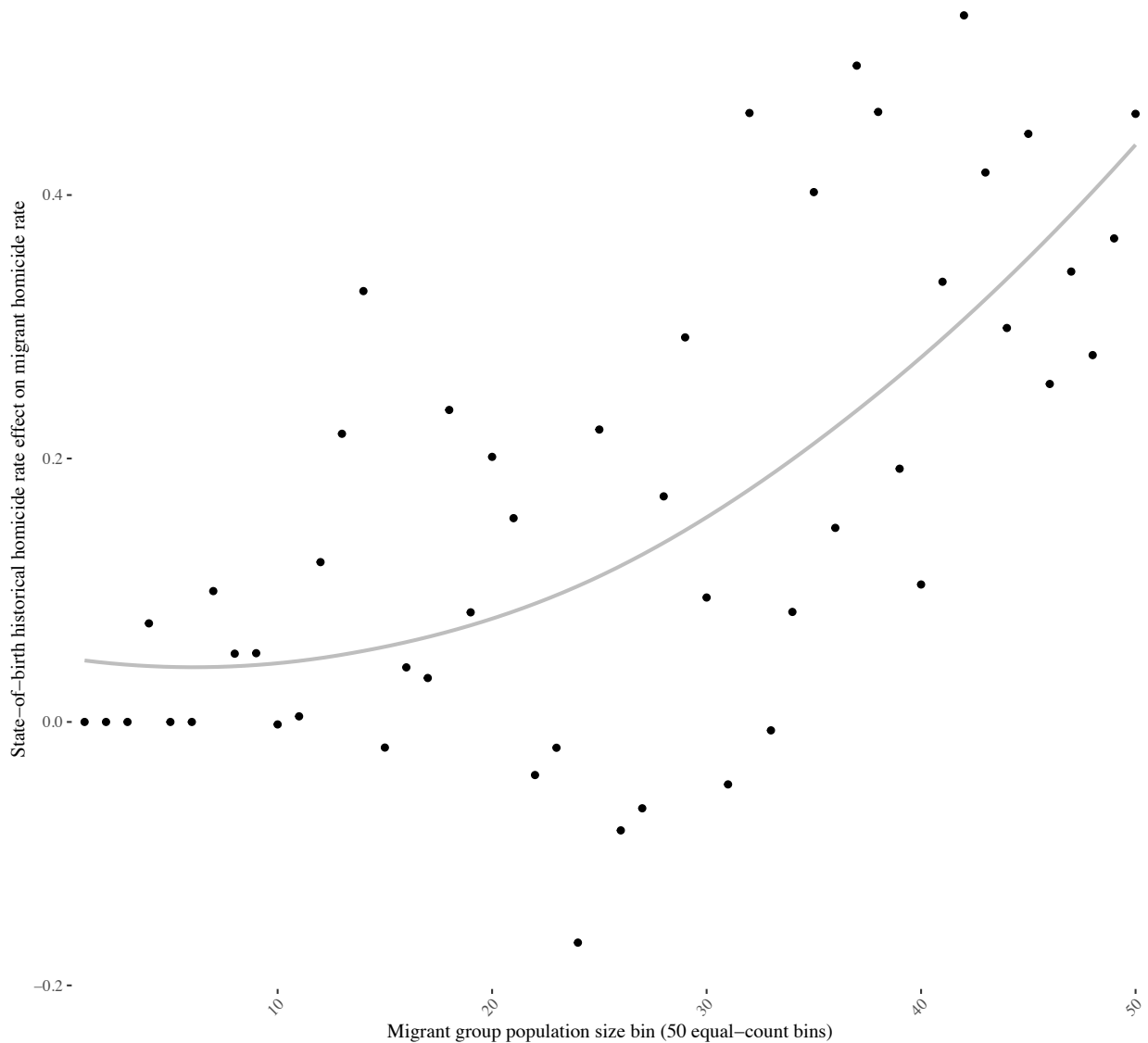
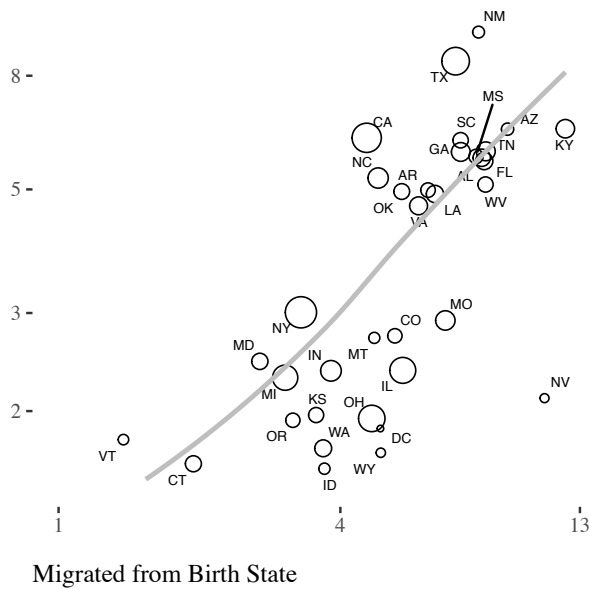


Figure S9: Persistence estimates for 50 migrant group population bins, 1979-91. Each point shows an estimate for migrant groups of a particular population size range (bin) from a regression at the state-of-birth-county level with county fixed effects weighted by migrant populations. Each point/bin contains about 200 migrant groups, e.g., Kentucky-born migrants living in San Francisco. We present the 1979-91 figure because we have lots of homicides (dangerous time) and a large population during this period. The increase shows no sign of plateauing, which seems more consistent with migrant population size facilitating persistence. If migrant population size mattered only because larger groups give us more precise estimates of homicide rates, we would expect the increase in effect size to level off as group size grows—since each additional observation contributes less to reducing measurement error. Unfortunately, we lack the power to tell for sure if it's non-plateauing. We find similar patterns when we omit county fixed effects and when we use other numbers of bins. We observe a more consistently positive effect above about the 30th bin, which corresponds to migrant populations of about 4,000. The first migrant population bin has migrant group sizes of around 20. The 49th and 50th are 75,010-127,010 and 127,010-2,085,850, respectively.

Gun Homicide Rate 1979–91  
Lives in Birth State



Non-Gun Homicide Rate 1979–91  
Lives in Birth State

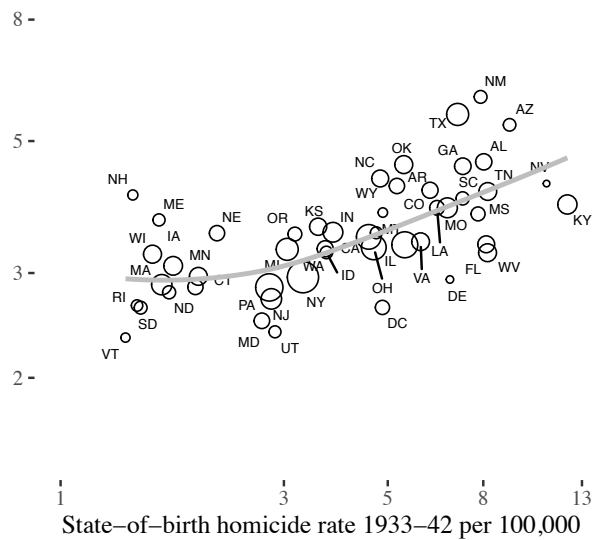
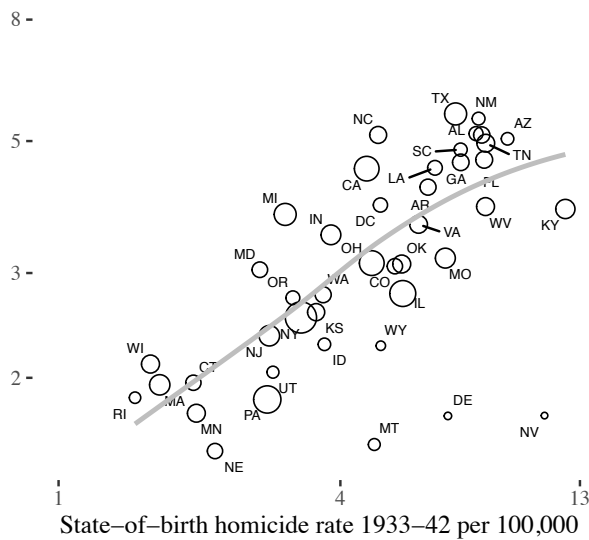
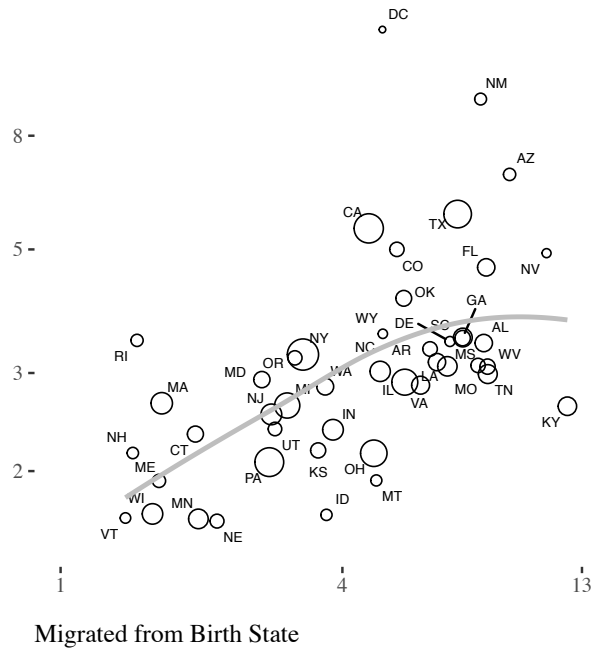


Figure S10: US Gun Homicide (left) and Non-Gun Homicide (right) Victimization Rate 1979-91 by Historical State of Birth Homicide Victimization Rate for Whites Ages 15-60 by Migration Status. For migrants, each point shows the homicide rate averaged across wherever those migrants ended up. Loess lines are weighted and circles are sized by white population. We calculated these for 1979-91 because it provides the largest number of homicides. In log-log regressions, the non-gun coefficients for the historical homicide rate are 0.44 for non-migrants and 0.24 for migrants, for a persistence coefficient just above 0.5, similar to the persistence coefficients presented in Table 1.

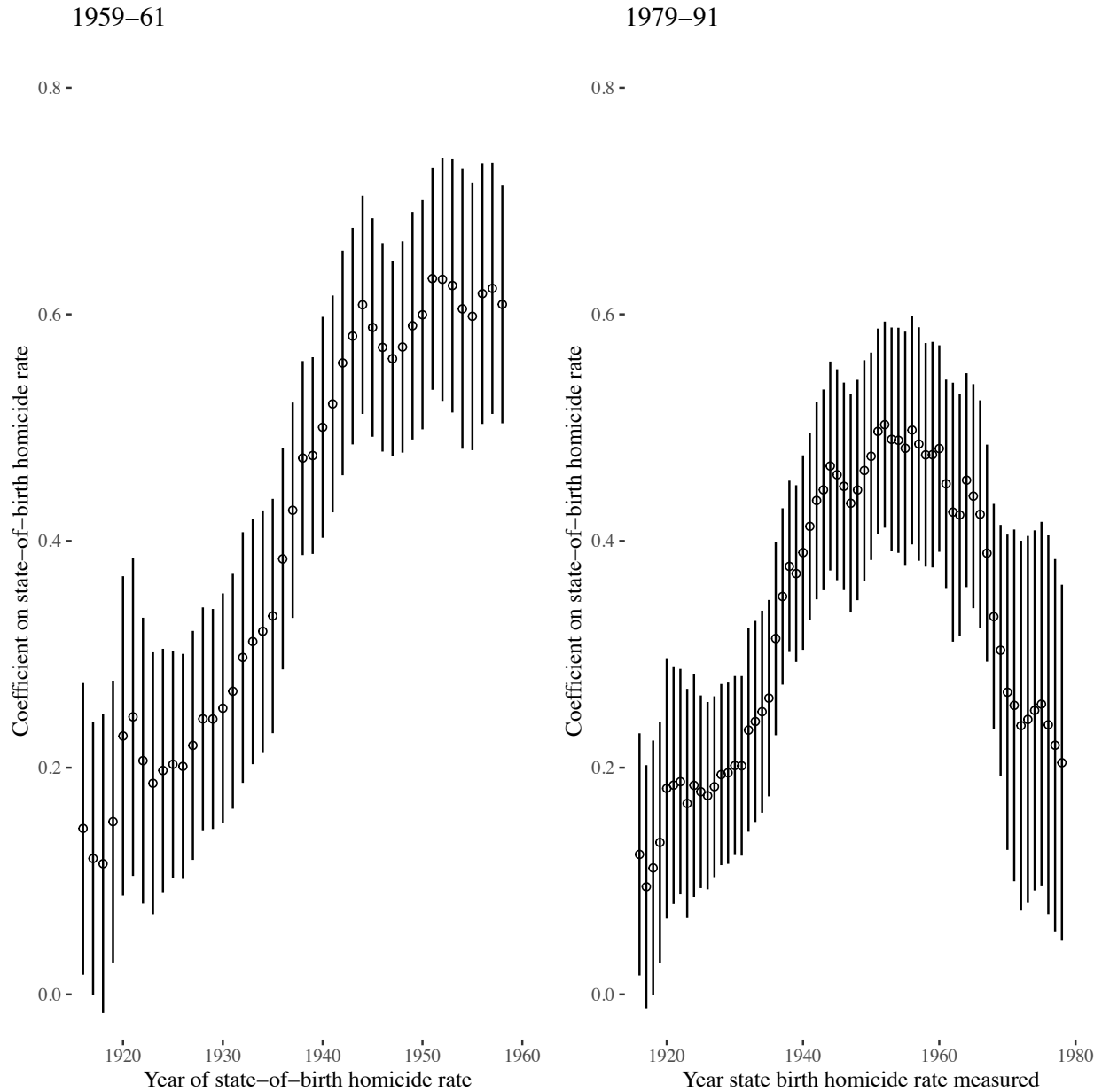


Figure S11: This figure shows how our estimates of persistence in homicide rates for migrants change with the years we use to measure the historical homicide rate in states of birth. In the main results in the paper, we measure the historical homicide rate with the 1933-42 average. In this figure, we replace that measure with the three-year moving average. Each point shows the estimate of persistence for homicides for each of these three year averages (before 1933, we only have homicide rates for a subset of states so the estimates aren't comparable pre-1933). For 1959-61, the left panel shows that measuring the homicide rate closer to 1959-61 improves predictions of migrants' homicide rates. For 1979-91, the right panel shows a rise and decline, which is partially driven by New York and especially New York City becoming more dangerous for whites in the 1970s, while white migrants from New York state remained quite safe. The figure on the next page shows the 1979-91 estimates without New York State. The estimates here use our main specification from Table 2 with state times age group fixed effects. 95% confidence intervals shown calculated from robust standard errors clustered by state of birth.



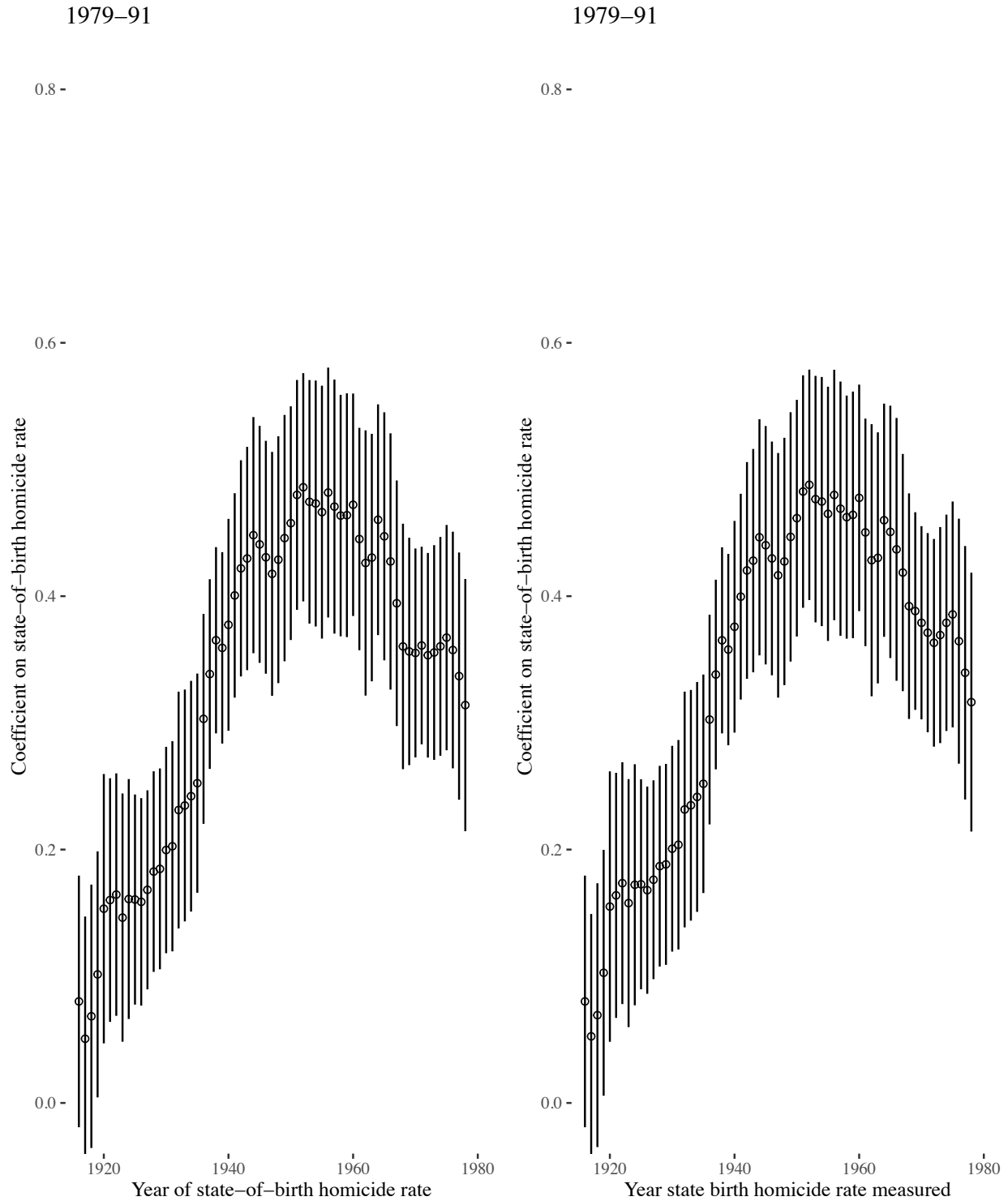


Figure S12: This figure builds on the previous figure by showing how the persistence estimates vary for 1979-91 excluding migrants born in New York state (left) and migrants born in New York or DC migrants (right). Please see the note to the previous figure for details. One explanation for why later state-of-birth homicides are more predictive is simply improvement in measurement. Although death certificate data is generally considered high quality, it may not have captured all homicides, especially in weakly-governed violent states, until the 1950s.

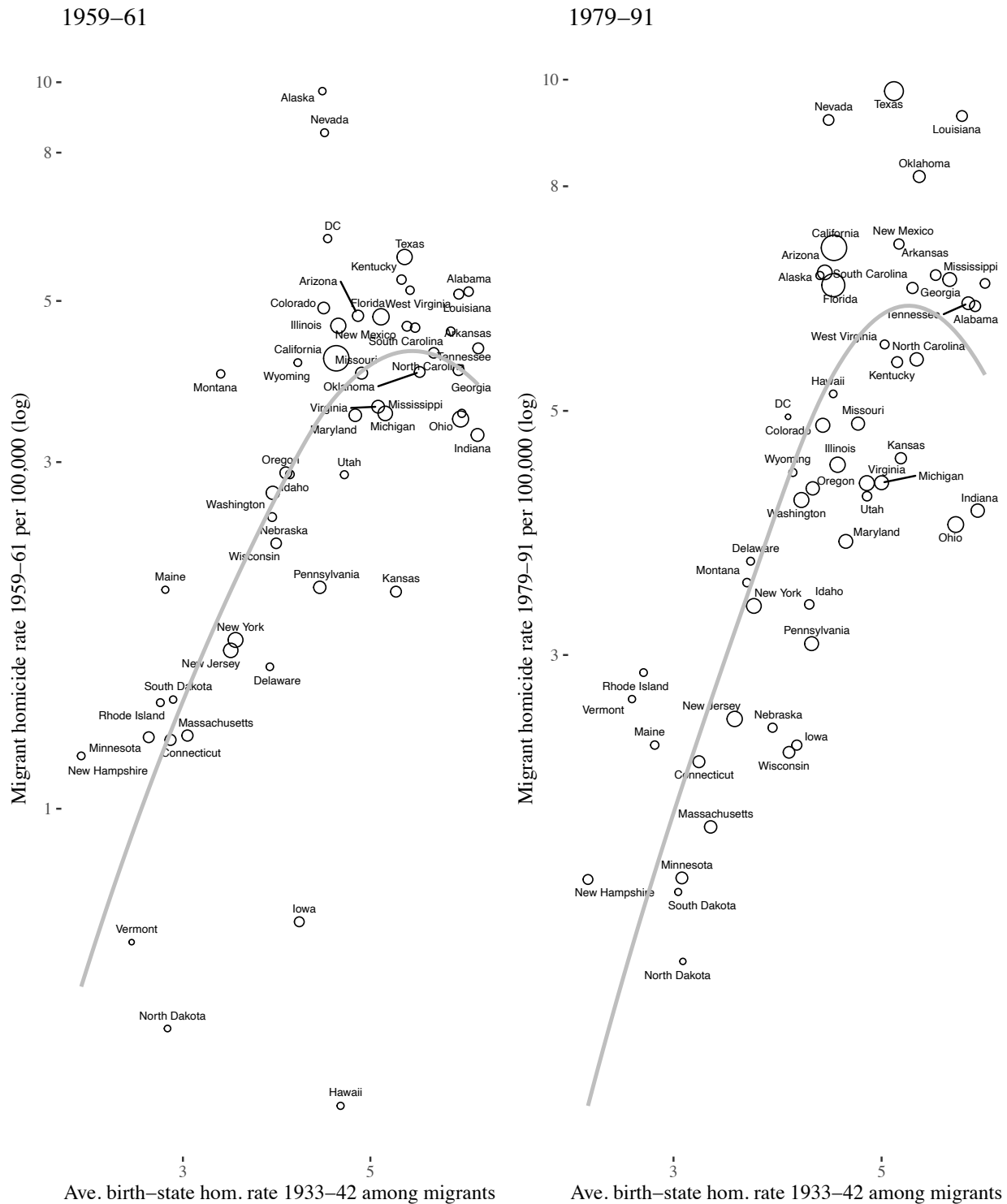


Figure S13: Average victimization rates in each state of residence in 1959-61 and 1979-91 by the average historical homicide rate of migrants each state received. The figure shows that Ohio and Indiana received migrants disproportionately from the most violent states and had some of the highest rates of homicide among those migrants. In the 1980s, however, those states appear to have lower rates of victimization for their migrants. Loess lines are weighted and circles are sized by white population.

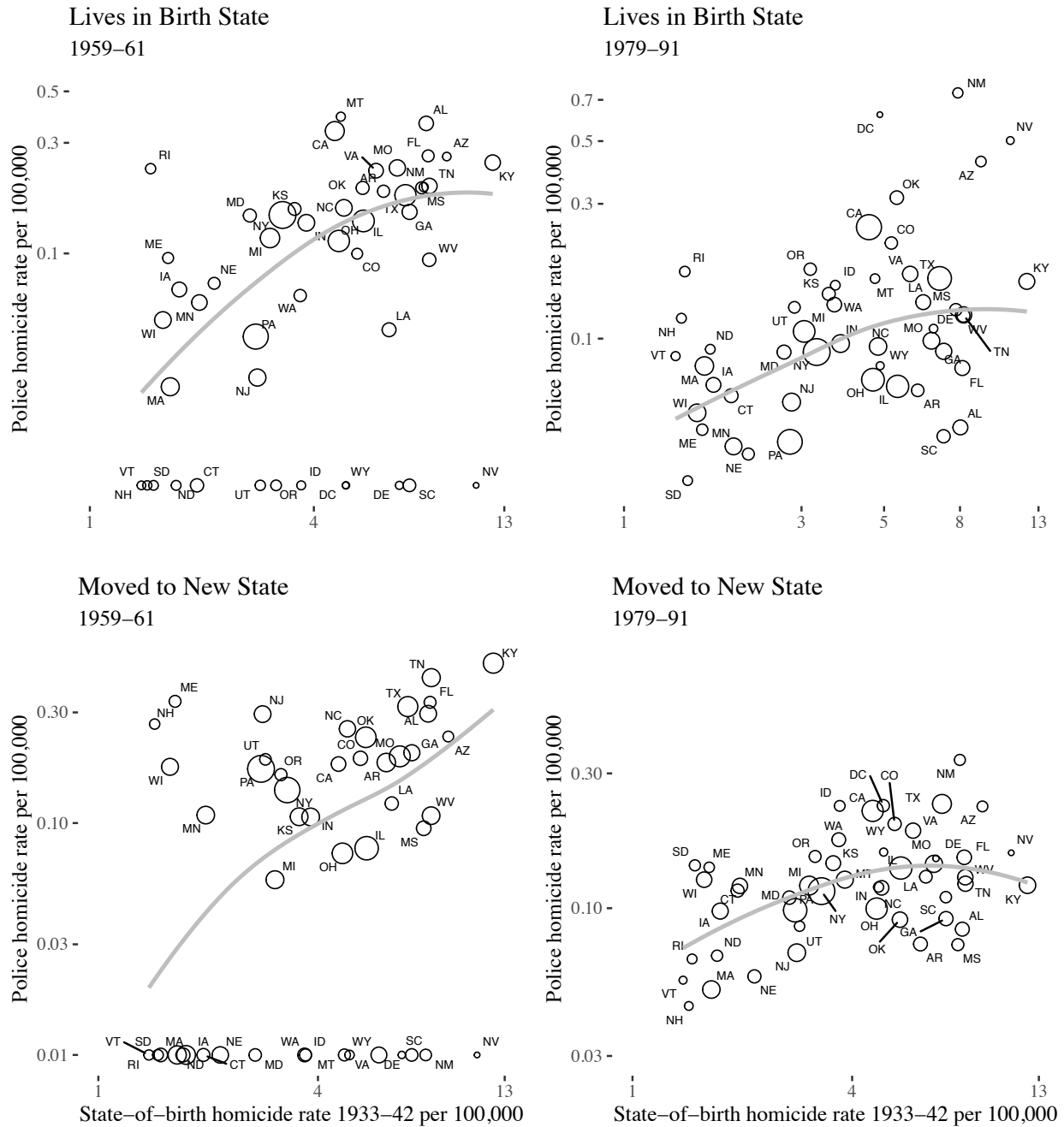


Figure S14: Police Homicide Victimization Rate 1959-61 and 1979-91 by Historical State-of-Birth Homicide Victimization Rate. Loess lines are weighted and circles are sized by white population. We add 0.01 to the police homicide rate in 1959-61 before logging because several states have no police homicides. The data capture 202 non-migrants and 117 migrant police homicides in 1959-61, and 1,085 non-migrant and 659 migrant police homicides in 1979-91. The bivariate OLS estimate for migrants in 1959-61 years is 1.78 (CI 95%: 0.33– 3.23), implying that a one-percent increase in the historical homicide rate corresponds with a 1.78-percent increase in the police homicide rate. Police violence against migrant groups from unsafe places may backfire, fostering distrust in local law enforcement institutions (Goldsmith 2005).



Figure S15: Selected Survey Measures by Historical State-of-Upbringing Homicide Victimization Rate for Whites by Migration Status. Linear best fit lines are weighted and circles are sized by the number of respondents. For the figure only, we exclude states with 20 respondents or fewer. Circles with fewer than twenty respondents are not shown. All respondents are non-Hispanic white. Note that Y-axis ranges vary for each figure. All dependent variables are scaled from 0 to 1.

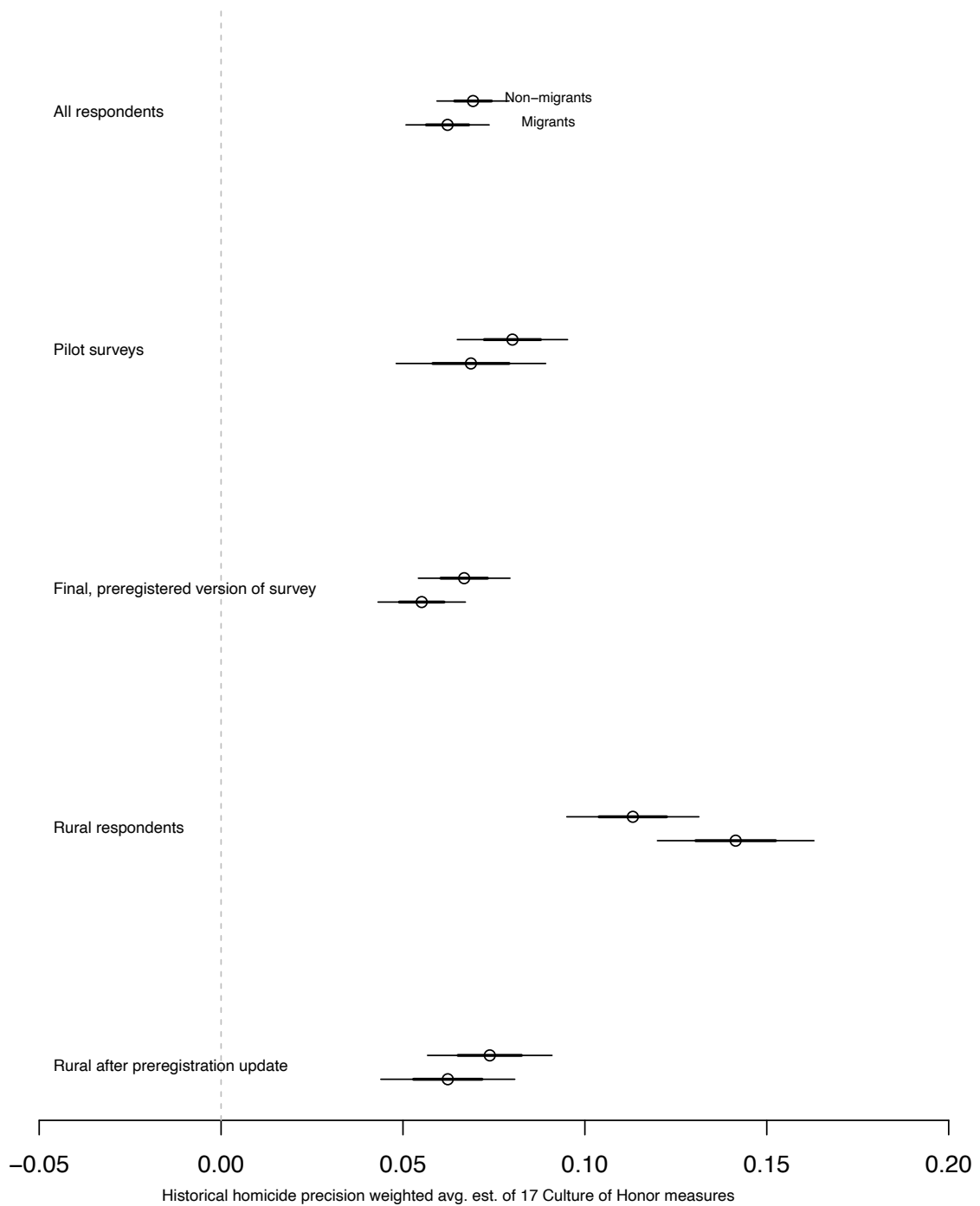


Figure S16: This figure shows the precision weighted average estimate for the effect of 17 Culture of Honor related measures for various samples. It starts by showing all respondents, then it shows only the estimates based on respondents in the pilot surveys, in the final preregistered version of the survey, in a sample of rural respondents, and in the sample of rural respondents after we updated our preregistration on September 11, 2023 (partway through the final version of the survey).

### **S3 Data Availability Statement**

Data and code to replicate all results will be posted to the project's OSF page on publication with the exception of the last period we examine with the death registry data, 2000-17. For these years, the CDC restricts access to death certificate data, requires a data user agreement, and prohibits most redistribution. We are allowed to make highly aggregated data available for replication, but full replication of the 2000-17 findings will require a CDC agreement and specialized data protective services from one's institution. It's important to note that the findings in this last period simply replicate the findings in the two earlier periods we examined with death certificate data, and these earlier data are publicly available.

### **S4 Death Registry and Census Data**

*1959-61* death registry data are from NBER.<sup>1</sup> They include this note about the 1959-1967 data:

The chief of the NCHS mortality branch has said that while the 1959-1967 files are generally good quality, they have not been rigorously verified. "Counts by selected causes and demographic groups seem to match up with VSUS, but because in some cases these files had to be reconstructed and pieced together from different sources-some were damaged or lost-we cannot at this time be certain as to their accuracy."

Any errors are unlikely to produce the main findings in the paper, especially since these findings also show up long after 1967. We use the 5% 1960 Census IPUMS file to provide the population counts and other census variables for these three years. The Census and mortality data have very low rates of missing data. State of residence, race, and sex are complete for all homicides, though this likely implies some amount of guessing on the part of coroners and funeral home directors. State of birth is missing in 1% of homicides, age in 0.25%, and marital status in 3%. The census data appear complete.

*1979-91* Death registry data are from the Center for Disease Control.<sup>2</sup> The data contain few missing values: none for state of residence, under 2% for state of birth, and sex is complete, while race is missing in 1% of homicides, age in 0.05%, and marital status in 0.86%. We use the 5% 1980 and 1990 Census IPUMS files to provide the population counts and other census variables. In 1980 and 1990, variables are complete except for total family income with 2% missing (though for education census coding is ambiguous between no schooling and n/a). We aggregate and linearly interpolated census data from 1979 to 1991, with 1990 income deflated to 1980 beforehand. The aggregation and interpolation is to the state-of-birth, age group, sex, and state-of-residence level and to the state-of-birth-county level. Before interpolation, we impute missing aggregated education, income, and marital status for 1980 and 1990 in about 10% of state-of-birth-age-group-sex-state-of-residence data points and about 40% of

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<sup>1</sup>Mortality Data - Vital Statistics NCHS Multiple Cause of Death Data <https://www.nber.org/research/data/mortality-data-vital-statistics-nchs-multiple-cause-death-data>

<sup>2</sup>[https://www.cdc.gov/nchs/data\\_access/cmf.htm](https://www.cdc.gov/nchs/data_access/cmf.htm)

state-of-birth-county-of-residence data points using other demographics, but these aggregates receive little weight in analyses because of very small populations. We never impute homicides or state of births.

*2000-17* Death registry data are from the Center for Disease Control (CDC). The CDC restricts access to death certificate data, requires a data user agreement for access, and prohibits most data redistribution. We are allowed to make highly aggregated data available for replication, but full replication will require an extensive process with the CDC and specialized data protective services from one's institution. Data on homicide victims' sex and race are complete, although 0.7% of observations are missing data on Hispanic ethnicity. Age is missing from 0.1%, state of residence from 0.5%, state of birth from 11%, and marital status from 1.5% of observations. We match these observations to demographic data from the 5% sample of the 2000 census, 1-year American Community Survey datasets 2001-2006, the 2008 3-year ACS, and the 2012 and 2017 5-year ACSs. Variables from these datasets are complete except for total family income with 3.3% missing and education with 3.5% missing (unlike the 1980 and 1990 census data files, these later years disambiguate no schooling and n/a). Due to changes in the ACS's coding scheme for education compared to the earlier two periods and subsequent adjustments to our coding of education, descriptive estimates for education are slightly lower for this period compared to 1959-61 and 1979-91.

## **S5 Correlate Benchmarks**

In the paper, we compare the correlates of historical state-of-birth homicide rates to the correlates of race and age on homicides in 1959–61. For the age association, we limit the model to white non-migrants and estimate how homicide rates decline with age, using the lower bound of each five-year age group as a linear predictor, with state-of-residence fixed effects. For the race effect, the model examines homicide rates among non-migrants and estimates the average difference between Black and white individuals, with age-group and state-of-residence fixed effects. For all models, we exclude Alaska and Hawaii, as we do throughout this paper because we lack historical homicide rates for these.

To compare migration to race and age, we calculate how much the homicide rate increases when moving from the least to the most violent state of birth among white migrants, using the baseline model in Table 1 (row 2). We then express that increase as a fraction of the estimated increase associated with being Black rather than white, and separately as a fraction of the decrease associated with aging from 20 to 80 among white non-migrants. These comparisons allow us to benchmark migration against two familiar sources of variation in homicide risk.

As we report in the paper, the increase in homicide rates for white migrants born in the most violent states

- Exceeded the entire decline in rates associated with aging from 20 to 80 by 141% and
- Amounted to 50% of the total gap between Black and white non-migrants.

The comparisons we report in the paper remain similar in other specifications.

- When we restrict the estimates from all three models to males, these are 140% and 53%, respectively.
- When we restrict the estimates from all three models to females, these are 99% and 39%, respectively.
- When we restrict the estimates for age and race to migrants, these are 158% and 43%, respectively.

## S6 Survey

Due to space constraints, our discussion of the survey in the paper is brief. Here we provide a detailed discussion, including reporting Cronbach's alphas for all scales, discussing the results for each survey item, and discussing our preregistration and several minor deviations from it.

We conducted pilot surveys on Lucid Theorem and additional pilots and the final survey on Lucid Marketplace. Thanks to the Lucid staff, we successfully prevented respondents from participating in the survey more than once across all versions. We utilized Lucid Marketplace to exclusively survey non-Hispanic white respondents matching the age profile of migrants. While the Lucid Theorem pilots included Hispanics and nonwhites, we excluded them from our analysis. Pilot 1 of the survey ran from April 6 to April 18, 2022; 2 from April 30 to May 2, 2022; 3 from March 2 to March 4, 2023; 4 from March 15 to March 16, 2023; 5 from September 4 to September 6, 2023; the final survey ran from September 7 to September 19, 2023. We also conducted another pilot study, where several innovations failed to pan out, and so preregistered excluding it from the analysis.

In the pilots and in the full version, we drop respondents who fail to complete the survey and who fail an attention test late in the survey (preregistered). (To enter the survey, they must pass two simple attention checks.) In the pilots and in the full version, we also drop respondents who did not report their state of residence or a US state where they grew up (we didn't pre-specify these, but they are necessary since the point of the survey is to study migrants and non-migrants). We also drop a handful of respondents that Qualtrics security software labeled as duplicates (not pre-specified).

For the Lucid Marketplace respondents, we established quotas for our survey using the following categories: age and gender groups (18-29, 30-44, 45-64, 65 and over, each for female and male), geographic regions (Northeast, Midwest, South, West), household income levels (under \$29k, \$30k-59k, \$60k and up), and education (less than college, college and above). We also applied a quota within the survey to keep the number of migrants and non-migrants similar. To ensure that this did not result in very different migrants and non-migrants, we combined it with age and gender quotas (e.g., 18 to 29-year-old female migrants, 18 to 29-year-old female non-migrants, etc.). Thus, we applied two sets of quotas, one to enter the survey and one within the survey to ensure that we were recruiting similar migrants and non-migrants. To set the quotas, we used the American Community Survey and selected quotas for non-migrants to match the demographics of migrants, who tend to be older.



Our survey is broadly representative of non-Hispanic white internal US migrants. As we discuss in the paper, we focus on this population for methodological reasons. We also do so because we aim to demonstrate that the patterns we document apply to non-minorities. Often, minority migrants from weak-institutional regions face criminalization for taking defense and justice into their own hands. We hope our findings will help people understand that these behaviors are not malicious. Convincing people is easier when whites exhibit these behaviors.

All survey instruments and replication data will be posted to the OSF replication page for this paper.

We define migrants in our survey data as those who indicate that they grew up in a different state than the one in which they currently reside. We use the state in which people say they grew up rather than the state in which they were born since, in cases where these locations differ, the state in which someone spends the majority of their childhood is more likely to impart beliefs and cultural norms.

Our analysis of the survey closely follows our analysis of homicide rates. We estimate individual-level models, regressing survey responses on the logged historical homicide rate in respondents' birth states, an indicator for migrant status, and the interaction between these variables. In the following, we present a more detailed discussion of the findings than we could include in the paper. In this discussion, we focus on the two pre-registered tables, which differ somewhat from Table 3 in the paper, though all produce similar substantive findings.

Table S30 presents the main findings. To ensure that migrants' self-selection into dangerous states does not drive the estimates, Table S31 shows the migrant estimates separately with state-of-residence fixed effects.<sup>3</sup> We preregistered these tables and the code to produce them, though see our note on several minor deviations from the preregistration below. In all models, we include gender and five-year age group fixed effects. We also cluster the standard errors at the level of the state where they grew up. To simplify the interpretation of the estimates, we rescale all variables to 0-1, including the logged historical homicide rate. When constructing multi-item scales, we take the simple average of the scale components using all available respondents (no listwise deletion).

It is worth emphasizing that we generally expect to find small coefficients. We hoped that these reverberations from long ago would be just strong enough to be still detected in noisy survey responses. Indeed, although we can still detect persistence in historical homicide rates in the 2000s, this persistence is much weaker than in the 1960s.

If the persistence of violence is a response to the belief that the world is a violent and dangerous place, we should see a relationship between these phenomena in survey responses. Tables S30 and S31 therefore begin by examining whether the historical homicide rate predicts witnessing violence growing up, e.g., "Did you ever see someone be hit, beat, kicked, roughed up, or deliberately hurt," using a three-item scale (Cronbach's  $\alpha = 0.74$ ). The estimates indicate that respondents from historically violent states witness more violence. Since all the measures are on a 0-1 scale, a shift from the least violent state for whites in the 1930s to the most violent state corresponds with

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<sup>3</sup>As in the homicide victimization analysis, we cannot estimate these relationships with state of resident fixed effects for non-migrants because by definition all non-migrants live in the state where they grew up, so there is no within-state variation in historical homicide rates.

a 0.05 increase on the witnessing violence 0-1 measure. Table S31 shows that this relationship remains small but statistically significant among migrants within their states of residence. As in the analysis of the persistence of violent victimization, Table S30 includes a persistence column where we divide the migrant coefficient by the non-migrant coefficient multiplied by 100. In the analysis of homicides, this calculation captures the percent of persistence over time. In the survey analysis, it captures not persistence over time but carryover to migrants. We only calculate this statistic in rows where the absolute value of the coefficient for non-migrants is larger than 0.03 (a preregistered threshold). In this case, 67% of the relationship carries over.

In a similar vein, we next examine whether people who grow up in historically violent states are more likely to see the world as a dangerous place. We first use a three-item battery that asks about assault risk: the risk of being mugged, violently attacked, and having their home invaded by an armed burglar (Cronbach's  $\alpha = 0.9$ ). We also asked a two-item battery about how dangerous they perceive the world to be with items that include whether "there are many dangerous people in our society who will attack someone out of pure meanness" (Cronbach's  $\alpha = 0.77$ ). Figures S15(a) and (b) revealed that they do appear to assess a higher assault risk and to see the world as a more dangerous place, and this perception carries over to migrants. Figure S15's panels presented simple scatterplots aggregated the birth-state level. Table S31 shows that these relationships remains highly statistically significant among migrants within their states of residence. We also find that they remain unchanged when controlling for partisan identification.

Contrary to our expectations, the persistence of high homicide rates could alternatively be about disregard for laws in general. To explore this possibility, we asked a three-item legal cynicism scale (Karstedt and Farrall 2006; Sampson and Bartusch 1998), with items such as "sometimes you need to ignore the law and do what you want to." The estimates however show that, if anything, respondents from historically violent states believe more in the importance of following laws. Society tends to criminalize those involved in violence, assuming they disregard laws with impunity. At least according to what they say on surveys, however, this common perception isn't reflected in the data.

Next, Tables S30 and S31 examine whether persistence is about the perception of a lower living standards using a two-item scale (Cronbach's  $\alpha = 0.64$ ) with items about satisfaction with their current standard of living and about how it compares to their parents at the same age. The tables reveal essentially no relationship, providing another data point inconsistent with an economic account.

We expect that persistence emanates from peoples' responses to weak institutions in their states of origin. We asked: "How much trust and confidence did you have in local governments where you grew up when it comes to handling local problems?" We also asked the same question about local governments where they live now. Finally, we asked a three-item battery about how much they trust the police where they live now to prevent violence, catch people who committed burglaries, and arrive quickly during an emergency (Cronbach's  $\alpha = 0.83$ ). For most people, government institutions are remote abstractions they don't think about often, so we don't expect to find much. Nonetheless, migrants and non-migrants from states with high historical homicide rates are slightly more likely to distrust institutions, especially those where they grew up (Figures S15(c) and (d)). Table S30 presented these estimates individually and with a precision-weighted average estimate, which has enough power to detect statistically significant effects. These associations, however,

weaken among migrants when we only examine them within states of residence in Table S31.

Next, we turn to potential attitudinal, behavioral, personality, and value-based responses to these weak institutions. When people face absent or hostile governments, they tend to rely more on families when facing danger. We asked a two-item question about whether people trusted family or trusted police more when someone in their family was being attacked or someone was stealing from them (Cronbach's  $\alpha = 0.8$ ). As expected, we find that people are more likely to rely on families than on the police when they grew up in historically violent states, a pattern that persists among migrants in their new states, including when we only examine this relationship within states of residence. Figure 2(a) presented a scatterplot of this relationship.

Research suggests weak institutions also lead to less trust in other people, so we asked whether “most people can be trusted” or “you need to be very careful in dealing with people.” We asked about trust separately for where respondents grew up and where they live now. The estimates again show that people who grew up with historically high homicide rates trust people less where they grew up, though less clearly so for where they now live.

Next, we examine a behavioral response to historically high homicide rates: whether people own guns for protection rather than for other reasons. In the survey, we asked whether they or somebody in their family owned a gun. If they answered ‘yes,’ we asked whether it was mainly for protection, at least somewhat for protection, or not for protection. We create indicator variables for each response, with the other responses set to zero. Figure 2(b) showed, as we would expect, that people from historically violent states report owning guns for protection at much higher levels. Tables S30 and S31 show that this pattern holds with our controls and among migrants within their states of residence. Compared to people from the least violent states, non-migrants from the most violent are about 28 percentage points more likely to say they own a gun for protection. Among migrants, this difference is about 16 percentage points. By contrast, respondents from the most violent states are not more likely to say that they own a gun partly for protection or not for protection. As these estimates imply, the own-for-protection relationship is larger than the simple own-a-gun relationship.

As we noted, research has found that individuals in weak-institutional settings respond aggressively to threats. If they back down instead, they will appear weak and therefore vulnerable to further victimization. To explore whether people from historically violent states feel the need to respond aggressively, we asked respondents about three scenarios. In each scenario, we described a person who faces aggression. In the Kevin scenario, a man pours beer on Kevin's head at a bar. In the Emma scenario, a girl scratches Emma repeatedly on their school bus. In the Doug scenario, a man cuts in line at the movies and threatens Doug when he objects. The individual then reacts aggressively, punching, slapping, or shoving, in the three scenarios respectively. We asked respondents whether they would respond aggressively, whether their friends where they grew up would do so, and whether the typical male or female (depending on the scenario) would do so, using a seven-point scale from “extremely unlikely” to “extremely likely.” We asked about friends and typical males and females to assess how much respondents expect aggressiveness from the people around them and also in case respondents are reluctant to agree to aggression themselves but would admit aggression by those around them. It is important to reemphasize that we see these reactions as fundamentally defensive, part of a deterrence strategy, as they would say in international relations. Without institutions to protect them, people feel like they must respond

forcefully to threats. Tables S30 and S31 show the estimates, grouping them in various ways. It first shows estimates for scales created by averaging respondents' answers to the three scenarios by how the respondent would respond themselves (Cronbach's alpha = 0.81), how their friends would respond (Cronbach's alpha = 0.85), and how typical males or females where they grew up would respond (Cronbach's alpha = 0.87). Figure 2(c) showed the scatterplot for this last measure. Then we show the answers to these three questions averaged separately for the Kevin, Emma, and Doug scenarios (Cronbach's alphas = 0.86, 0.91, and 0.87, respectively). The estimates show that respondents from historically violent states do indeed react more forcefully themselves and expect their friends and typical males or females to also do so. Moreover, these patterns persist among migrants, including when we only examine the relationship within states of residence. About 80% of the association among non-migrants remains among migrants when we look at the precision weighted average.

To further test our interpretation that these aggressive responses are fundamentally defensive, we asked in the Kevin and Doug scenarios how respondents thought Kevin and Doug would feel if they walked away instead of responding aggressively. We asked whether he would "look weak in front of his friends" and "feel like he wasn't a real man." We take the average of these for each of the two scenarios (Cronbach's alphas = 0.69 for "look weak" and 0.71 for "a real man"). As expected, respondents from historically violent states are slightly more likely to respond in the affirmative to all three questions, a pattern that again persists for migrants.

The question about feeling like "a real man" captures a value we might expect people to hold in weak institutional settings. When the government is either absent or hostile, people may see strength and aggressiveness as central to their identities, as they keep them safe by deterring victimization. To explore this possibility, we included three items adapted from the Honor Ideology in Manhood Scale (Barnes, Brown, and Osterman 2012). We asked how important were the following to being a "real man" where you grew up: "never backs down from a fight," "isn't afraid to act with physical aggression toward another man who steals from him," and "doesn't take any crap from anybody." Using a scale of these three items (Cronbach's alpha = 0.89), Figure 2(d) and Tables S30 and S31 show that respondents from historically violent states say these are more important to being a "real man." These findings may help us understand the origins and persistence of "toxic masculinity" as an adaptation to weak institutions.

Similarly, scholars have noted the importance of what might be described as "hotheadedness" to safety in weak institutional settings, as a reputation for having a temper may protect people from victimization. In *Albion's Seed*, for example, Fischer reports that parents encouraged violent emotional responses in male children in the antebellum South, as individuals with such reputations may face less victimization (Fischer 1989). We therefore asked how well the following statements describe respondents: "Some of my friends think I am a hothead," "I have trouble controlling my temper," and "I am an even-tempered person." We adapted these from the Buss-Perry Aggression questionnaire (Bryant and Smith 2001). It is important to emphasize that we see this personality trait as fundamentally defensive. We also emphasize that we don't expect people to think through the importance of deterrence strategies in weak institutional settings. Instead, we suspect that cultural learning may lead people to adopt a response to the dangerous circumstances they face. Using a scale of these three items with the last one reverse coded (Cronbach's alpha = 0.81), respondents from historically violent states report being slightly more hotheaded, a pattern that

may again persist among migrants, but in a diminished form.

Finally, we asked a question about whether both parents raised respondents to crudely capture social disorganization (not pre-registered). We do find a relationship between historical homicide rates and this measure: respondents from the most violent states are about 10 percentage points less likely to be raised by both parents (see Table S30 for all of these findings).

As we note in the article, we find larger associations for rural respondents. We don't find larger ones for less educated respondents.

In the text, we report that results remain similar when we control for party identification. In the Lucid Theorem surveys, we have the standard American National Elections Study, seven-point party identification question. We add this to the models as a fixed effect for each of those seven points. Rescaling all measures to 0-1, the precision-weighted average estimated effect of historical homicide rate across the available culture-of-honor measures, controlling for gender, five-year age-group fixed effects, and fixed effects for seven-point party identification, is 0.093 (95% CI 0.074, 0.117) for migrants and 0.058 (95% CI 0.034, 0.082) for nonmigrants. This is similar to what we find without controlling for party identification, as we describe in the next section and show in Figure S16.

## **S7 Survey Analysis Preregistration**

We preregistered the plan for analysis, in the form of two Tables, on September 7, after the pilots but before running the final version of the survey.<sup>4</sup>

- Tables S32 and S33 present these tables for only the pilot surveys.
- Tables S34 and S35 do so for the preregistered final survey.

We posted a revised version of our registration on September 11, midway through fielding the final survey, to specify two analyses not in the original plan.

- We accidentally omitted a dependent variable: belief in a dangerous world.
- We had intended to but forgot to specify that effect sizes should be larger among individuals who grew up in rural areas. We operationalized rural in the updated preregistration as scoring in the top two points of an index composed of our two questions related to ruralness: whether they grew up in a rural area and whether they currently reside in a rural area. The updated registration stated that we will present the results separately for respondents who score at the top of this index, i.e., the top two points. Table S19 shows the estimates for each item for rural respondents. Table S20 shows them for only those interviewed after the preregistration update. Figure S16 shows precision weighted averages for rural respondents before and after the preregistration update, which reveals a lack of precision for migrants postupdate but not non-migrants. Additionally, we said we would examine the interaction between a dummy

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<sup>4</sup>[https://osf.io/pr97f/?view\\_only=befe13d162f94af5a7533624977ae629](https://osf.io/pr97f/?view_only=befe13d162f94af5a7533624977ae629)

variable indicating whether respondents fall into the top two points and the logged historical homicide rate, using the same specifications we use throughout the analysis in the tables below.

To report these interactions, we estimate each one in a separate equation just for migrants and then pool them with a precision weighted average. Rescaling all measures to 0-1, the precision-weighted average estimated effect of historical homicide rate across all culture-of-honor measures, controlling for gender and five-year age group fixed effects, is 0.047 (95% CI 0.035, 0.059) for non-rural respondents and the interaction between the historical homicide rate and this rural indicator is 0.129 (95% CI 0.128, 0.13). These estimates are consistent with Table S19, which shows the estimates for each item for rural respondents for non-migrants and migrants (though the specifications differ slightly).

We deviate from the preregistration in Tables S30 and S31 in the following ways.

- We include a battery called assault risk which we added in our last pilot survey but forgot to preregister. The estimates are sufficiently precise in Tables S30 and S31 that would have had to be cherry picking from many items for this to be a false positive (and we disclose all survey items).
- We include a indicator variable for being raised by both parents. The relationship between historical homicide rate and not being raised by both parents was sufficiently strong that we felt it important to report. Of course it may or may not be an important channel through which persistence occurs.

The main analysis we present in the paper, Table 3, deviates from our main pre-registered table (Table S30). Based on a thoughtful request from a reviewer, it includes state of residence fixed effects for migrants and the number of years in school. The substantive results change little with these additions, and it's worth noting that our second pre-registered table, Table S31, did include fixed effects for residents.

## **S8 Lessons from Pilot Surveys**

We conducted several pilot surveys with various questions but eliminated them before the final version because they did not correlate with historical homicide rates for non-migrants or migrants. These include:

1. Two question sets about expectations of violence in the respondents' childhood environments, removed early from the pilot surveys. One battery inquired if people worried about being struck first during an argument, felt the need to act before being attacked, or feared appearing weak if they backed down. Another gauged surprise at the occurrence of violence in specific places or situations, like bars or during disputes. We excluded these because neither performed as well as the Assault Risk and Dangerous World batteries included in the final survey.

2. A set based on the culture of honor concept asking about teachings from friends and family, including beliefs about respect, intimidation, and the need to appear tough. This set was less effective than the Honor Ideology and Manhood battery in the final version.
3. A set about efforts to avoid escalating arguments, insulting individuals, theft, or home invasions. These items underperformed compared to the Assault Risk and Dangerous World batteries.
4. A version of the threatening scenarios asking respondents how they would react (strike or not). This approach seemed less effective than having the aggrieved individual striking back in the scenarios and asking respondents whether they would do the same.
5. The Revenge Planning Subscale from the Displaced Aggression Battery (Denson, Pedersen, & Miller 2006). While there were indications of a relationship with historical homicide rates, it was too weak for the final survey. Instead, our takeaway from these questions are that young people and especially younger men think a great deal about getting back at people who have harmed them. Those thoughts do not seem to vary with the historical homicide rate. These questions don't explicitly ask about violent revenge. So our hunch is that young men from historically safe states are much more likely to be thinking about non-violent revenge.
6. A set inspired by a Chicago schools study, focusing on qualities sought in friends, such as avoiding fights and dependability in a fight. These did not correlate with historical homicide rates.
7. A set about disagreeableness, with statements like being critical and quarrelsome, showing no relationship with historical homicide rates.
8. Items adapted from the street-code battery (Stewart & Simons, and Piquero 2012), such as the counterproductiveness of arguing or fighting, the respect garnered by toughness, and the importance of not being intimidated. These were less effective than our three scenarios or the Honor Ideology and Manhood battery.
9. A police-battery about the effectiveness of police where respondents grew up. Interestingly, historical homicide rates correlated more with perceptions of police effectiveness where they live now, suggesting respondents might struggle to accurately recall distant governmental institutions.
10. A pilot randomizing most survey questions resulted in lower correlations with historical homicide rates. We speculate that the order of questions in our survey better frames respondents' mindsets about their youth. This pilot was excluded in our pre-registration. For replicating our results, surveys should stick closely to the order we settled on (see the survey in the next section).

## S9 Survey Questions

The survey questions below are from the final version of the survey. In the pilot studies, the language may differ slightly. We will post the survey questions of all pilot version to our OSF project page.

### *Attention Checks*

Hello and welcome!

We need to make sure that everyone who is taking our survey is paying close attention.

Please read carefully and answer the following questions.

Please click BOTH “I understand” AND “I don’t understand.”

- I understand (1)
- I don’t understand (2)

In order to proceed, we request that you complete this attention check. Please select “I am a robot” below.

- I am a robot (1)
  - I am not a robot (2)
- 

### *Legal cynicism*

Given where you grew up, how much do you agree or disagree with the following ...

- Sometimes you need to ignore the law and do what you want to
- People who obey rules often disadvantage themselves

Given where you grew up, how much do you agree or disagree with the following ...

- To make money, there are no right and wrong ways, only easy ways and hard ways

Answers: Strongly disagree (1) Somewhat disagree (2) Neither agree nor disagree (3) Somewhat agree (4) Strongly agree (5)

---

### *Hotheadness*

Given where you grew up, how well do the following statements describe you?



- Some of my friends think I am a hothead
- I have trouble controlling my temper

Answers: Very unlike me (1) Somewhat unlike me (2) A bit unlike me (3) A bit like me (4) Somewhat like me (5) Very like me (6)

(New page)

Given where you grew up, how well does the following statement describe you?

- I am an even-tempered person

Answers: Very unlike me (1) Somewhat unlike me (2) A bit unlike me (3) A bit like me (4) Somewhat like me (5) Very like me (6)

---

### ***Witness violence***

Did you ever see someone be hit, beat, kicked, roughed up, or deliberately hurt . . .

- at your high school? (1)
- at your junior high? (2)

Answers: Never (1) Rarely (2) Sometimes (3) Frequently (4)

When you were growing up, did you ever see adult males fighting (striking, punching, hitting, stabbing, shooting, etc.)?

Answers: Never (1) Rarely (2) Sometimes (3) Frequently (4)

---

### ***Assault risk***

Given where you grew up, what do you estimate is the likelihood the following will happen in your lifetime (in your future)?

- Likelihood you will be mugged
- Likelihood you will be violently attacked
- Likelihood your home will be invaded by an armed burglar

Answers: Highly unlikely (1) Somewhat unlikely (2) Neither likely nor unlikely (3) Somewhat likely (4) Highly likely (5)

---

### ***Kevin Scenario***

We'd like to ask about the following scenario: Kevin is at a bar one evening. He is sitting at a table having a beer and cheering on his team as it wins the game. A fan of the other team walks by and pours beer on Kevin's head and doesn't apologize. Kevin gets up and punches him. How likely is punching (like Kevin did) in this scenario for . . .

- You?
- One of your friends where you grew up?
- A typical male in the neighborhood where you grew up?

Answers: Extremely unlikely (1) Moderately unlikely (2) Slightly unlikely (3) Neither likely nor unlikely (4) Slightly likely (5) Moderately likely (6) Extremely likely (7)

---

If Kevin walked away instead, would he . . .

- Feel like he wasn't a real man
- Look weak in front of his friends

Answers: 0-10 slider with and labeled Strongly disagree and Strongly agree

---

### ***Doug Scenario***

We'd like to ask about the following scenario:

Doug is standing in line for a movie with his friend. A guy cuts into the line right in front of Doug. When Doug politely says something, the guy starts insulting and threatening Doug.

After taking it for several minutes, Doug shoves him. How likely is shoving (like Doug did) in this scenario for . . .

- You?
- One of your friends where you grew up?
- A typical male in the neighborhood where you grew up?

Answers: Extremely unlikely (1) Moderately unlikely (2) Slightly unlikely (3) Neither likely nor unlikely (4) Slightly likely (5) Moderately likely (6) Extremely likely (7)

---

### ***Emma scenario***

One final scenario:

On the last two school bus trips home, a girl deliberately scratched Emma hard with her nails.

Emma decides she has to do something if it happens again.

Sure enough, on the next trip, the girl again attacks Emma for no reason.

Emma slaps her in the face.

- You?
- One of your friends where you grew up?
- A typical female in the neighborhood where you grew up?

How likely is slapping her (like Emma did) in this scenario for ...

Answers: Extremely unlikely (1) Moderately unlikely (2) Slightly unlikely (3) Neither likely nor unlikely (4) Slightly likely (5) Moderately likely (6) Extremely likely (7)

---

***Honor ideology for manhood*** How important are the following to being a “real man” where you grew up?

- Never backs down from a fight (2)
- Isn’t afraid to act with physical aggression toward another man who steals from him (3)
- Doesn’t take any crap from anybody (4)

**Answers:** Not at all important (1) | Slightly important (2) | Moderately important (3) | Very important (4) | Extremely important (5)

---

### ***Belief in a dangerous world***

Given where you grew up, how much do you agree or disagree with the following?

**Answers:** Strongly disagree (1) | Somewhat disagree (2) | Neither agree nor disagree (3) | Somewhat agree (4) | Strongly agree (5)

- Any day now chaos and anarchy could erupt around us. (1)

- There are many dangerous people in our society who will attack someone out of pure meanness. (2) (New page)

Given where you grew up, how much do you agree or disagree with the following?

**Answers:** Strongly disagree (1) | Somewhat disagree (2) | Neither agree nor disagree (3) | Somewhat agree (4) | Strongly agree (5)

- The social world we live in is safe. (1) (Reverse coded)

---

### ***Social trust***

Generally speaking, where you grew up, would you say that most people can be trusted or that you need to be very careful in dealing with people?

Answer on a 0-10 slider With the endpoints labeled “Need to be very careful” and “Most people can be trusted.”

How much trust and confidence did you have in the local government where you grew up when it comes to handling local problems?

Answer: None, Not very much, A fair amount, A great deal

---

### ***Trust family or police***

Imagine adults you knew growing up got into a dispute so heated that it could turn violent. How likely is it that they would call the police to help resolve it?

Answers: Extremely unlikely, Somewhat unlikely, Neither likely nor unlikely, Somewhat likely, Extremely likely

Would you mostly trust the police or would you mostly trust family and friends to help if ...

- Someone was attacking me
- Someone was stealing from me

**Answers:** Completely trust police to handle it (1) | Mostly trust police to handle it (2) | Trust police, family and friends equally (3) | Mostly trust family and friends to handle it (4) | Completely trust family and friends to handle it (5)

### ***Trust measures***

Generally speaking, where you live now, would you say that most people can be trusted or that you need to be very careful in dealing with people?

Need to be very careful - Most people can be trusted

0 1 2 3 4 5 6 7 8 9 10

Now, how much trust and confidence do you have in the local government where you live now when it comes to handling local problems?

- None (1)
  - Not very much (2)
  - A fair amount (3)
  - A great deal (4)
- 

### ***Trust in police response***

How successful do you think the police are where you live now at preventing violent crimes?

How successful do you think the police are where you live now at catching people who committed burglaries?

- Very successful (1)
- Somewhat successful (2)
- Moderately successful (3)
- A little successful (4)
- Not at all successful (5)

How quickly would the police arrive where you live now when called to an emergency?

- Very quickly (1)
- Fairly quickly (2)
- Moderately quickly (3)

- Fairly slowly (4)
  - Very slowly (5)
- 

### ***Standard of living***

How satisfied are you with your standard of living?

- Extremely dissatisfied (1)
- Somewhat dissatisfied (2)
- Neither satisfied nor dissatisfied (3)
- Somewhat satisfied (4)
- Extremely satisfied (5)

Compared to your parents at your age, do you think your own standard of living is . . .

- Much better (1)
- Somewhat better (2)
- About the same (3)
- Somewhat worse (4)
- Much worse (5)

### ***Parent birth***

In which state was your mother born?

Who was the last question about?

- You (1)
- Your mother (2)
- Your father (3)
- Your pet (4)

In which state was your father born?

***Urban v rural***

Would you say you live in ...

- A large city (1)
- Suburb near a large city (2)
- Small city or town (3)
- A rural area (4)

Would you say you grew up in ...

- A large city (1)
- Suburb near a large city (2)
- Small city or town (3)

***City*** What city/town and state did you go to high school in? E.g., Springfield, Illinois.

---

***Gun ownership***

Do you or anyone in your family own a gun?

- Yes (1)
- No (2)

---

[If yes] Is the gun ...

- Mainly for protection (1)
- At least somewhat for protection (2)
- Not for protection (3)

---

### *Parents*

Were you primarily raised by ...

- Both parents (1)
- Mother (2)
- Father (3)
- Grandparent or grandparents (4)
- Other guardian (5)



## S10 SI Citations

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