



10th ANNIVERSARY

PURPOSE
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COMMUNITIES



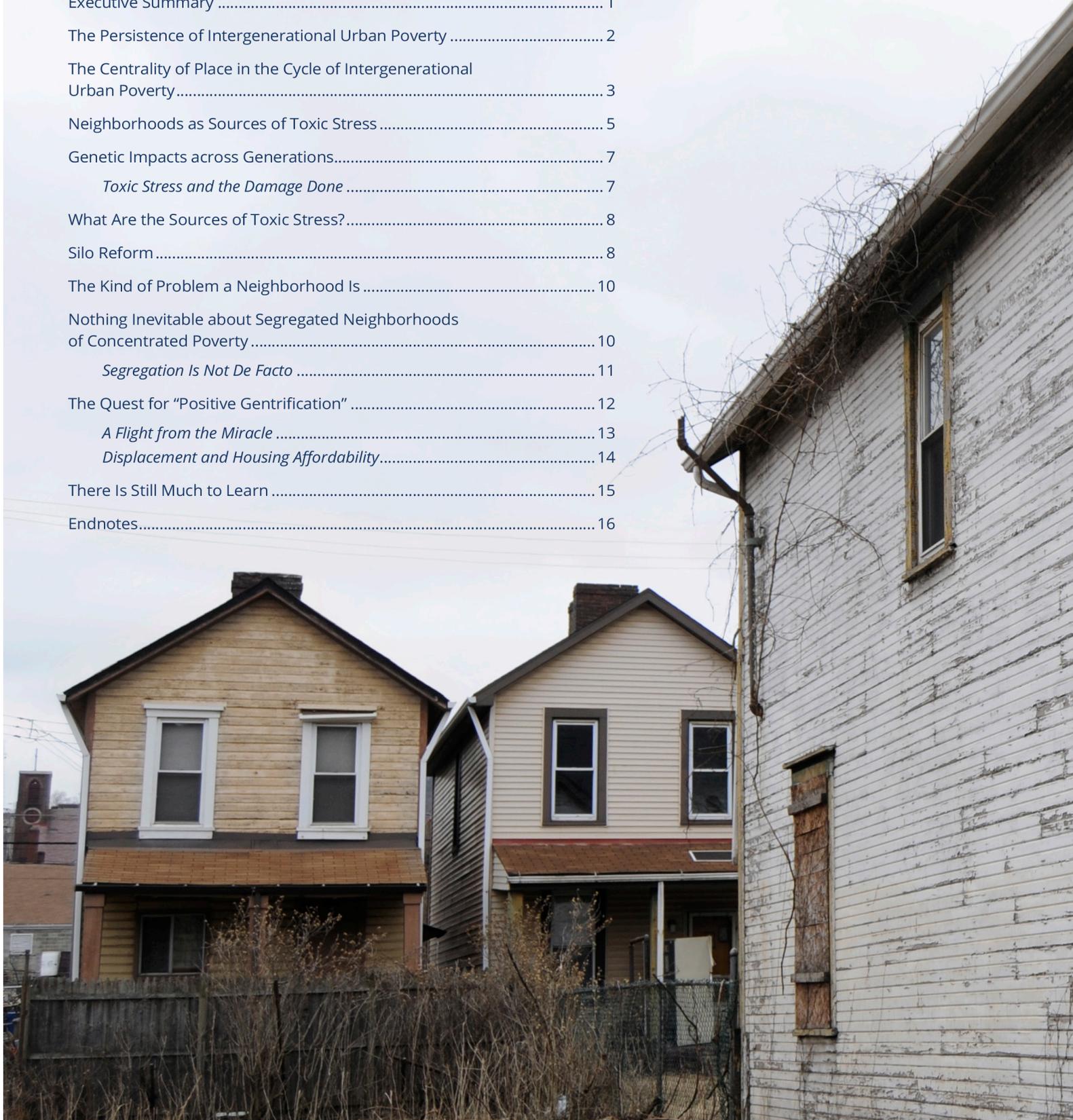
POVERTY AND PLACE

A REVIEW OF THE SCIENCE
AND RESEARCH THAT HAVE
IMPACTED OUR WORK 2019

October 2019

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EXECUTIVE SUMMARY

Purpose Built Communities was founded in 2009 with the mission of replicating the success of a place-based community transformation effort that began in the mid-1990s in the East Lake neighborhood of Atlanta. Tom Cousins, Julian Robertson and Warren Buffett founded the organization, because they believed that this model of neighborhood revitalization could be replicated elsewhere and, by doing so, potentially influence the way the country addressed the issue of intergenerational urban poverty.

Over the past ten years, we have helped local leaders launch 27 neighborhood revitalization projects across the country. We have an additional 50 projects in development. Given the nature of our work, we consider it critical to stay as informed as possible regarding the science and research in fields that can inform our practice.

The purpose of this document is to share the science and research from recent years that have influenced our efforts. It is not intended to be a comprehensive review of the scientific literature, but rather an overview of selected research that has influenced how we approach our work.* This paper is not intended to be an explanation or defense of our specific approach. Instead, our goal is simply to share the work that has informed our thinking and to point out that which we think still needs to be understood for this fight against intergenerational urban poverty to be ultimately successful.

Overall, the science and research in sociology, economics and related fields have taught us four things:

1. Intergenerational urban poverty continues to persist and has not been materially reduced by public and private interventions over the past half century. Although those interventions have helped to alleviate the effects of poverty, they have done too little to address its root causes.
2. Intergenerational urban poverty is intrinsically linked to place, and more precisely, to neighborhoods. Distressed urban neighborhoods were engineered into existence by mal-intended public policy and private actions that were explicitly designed to segregate our cities and concentrate poverty into targeted neighborhoods.

3. These urban neighborhoods are highly distressed in the sense that they contain sources of toxic stress. It is exposure of children to these sources of toxic stress that impedes their healthy neurological and physiological development and serves as the engine of intergenerational poverty.
4. This root cause of intergenerational urban poverty—the exposure of children to sources of toxic stress—can be eliminated by transforming distressed neighborhoods into healthy ones. Healthy neighborhoods are self-sustaining, durable and produce young adults with the capacity to independently succeed and thrive in the world.



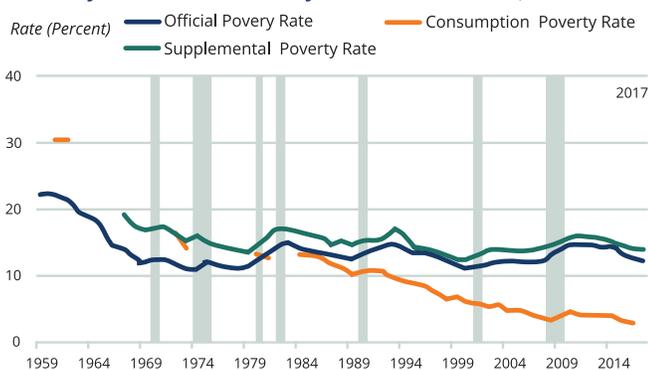
* Important to note that we are practitioners and not academics, and therefore any mischaracterization of the research cited in this document is both unintended and completely our fault.

THE PERSISTENCE OF INTERGENERATIONAL URBAN POVERTY

When President Johnson declared war on poverty in 1964, just over 19 percent of Americans were classified as living in poverty. In 2019, that number is 12.3 percent. At the same time, the actual number of Americans living in poverty has increased from 34 million to 39 million due to overall population growth.

The President was correct in at least one regard: the struggle has been neither short nor easy. Since the mid-1960s, the overall poverty rate has remained relatively consistent. Using consumption (rather than income) based measures, the picture is more encouraging in the sense that although people are still not earning enough income to provide a decent standard of living, income transfers through government programs are ensuring that they are not living in abject poverty.

Poverty Rate over Time by Select Measures, 1959-2017



Sources: Recessions: NBER. Official poverty rate: U.S. Census Bureau. Consumption poverty rate: Meyer, B.D. & Sullivan, J.X. 2017. "Annual report on U.S. consumption poverty." American Enterprise Institute. Supplemental poverty rate (2009-2017): U.S. Census Bureau. Supplemental poverty rate (1967-2008): Fox, L.E., Wilmer, C., Garfinkel, I., Kaushal, N., & Waldfogel, J. 2015. "Waging war on poverty: Poverty trends using a historical supplemental poverty measure." *Journal of Policy Analysis and Management* 34(3):567-592. Estimates updated by authors (1/12/16).
Note: Gray shading indicates recession. Consumption poverty anchored to official poverty rate in 1980.

Figure 1

The Great Society programs and those that followed have provided access to food relief, decent housing and medical care. When Bobby Kennedy did his tour of rural poverty in Mississippi in 1967, he found desperate housing conditions and malnourished children, conditions that have largely (though not entirely) been eliminated.

This administration today, here and now, declares unconditional war on poverty in America. It will not be a short or easy struggle, no single weapon or strategy will suffice, but we shall not rest until that war is won. The richest nation on earth can afford to win it. We cannot afford to lose it.

President Lyndon B. Johnson, January 8, 1964

Of course, supplementing incomes to avoid malnutrition and homelessness was not the intent of the war on poverty. As Johnson himself said, "our aim is not only to relieve the symptoms of poverty, *but to cure it and, above all, to prevent it.*" If the goal was to prevent poverty, then it is hard to argue that the war on poverty has been successful at all.

One reason for this failure to make progress lies in the underlying conceit that helped to shape the thinking of those charged with fighting this war. There was a fundamental belief that poverty was a result of people not having access to the basic necessities of life, and that the struggle to attain those necessities meant that people could not invest in themselves in a way that would lead them to higher incomes and ultimately self-sufficiency. In other words, if we could just get people out of abject poverty by providing a basic safety net, they could put themselves on a path to prosperity.

The programs and initiatives that emerged based on this idea—and those that still predominate today—are reflective of that thinking. Food stamps, housing vouchers, Medicaid, direct aid to families, and other companion programs were primarily designed to close the gap between what people actually earned in the private economy and what they needed to achieve a decent standard of living. What these programs did—and still do—is relieve the misery associated with being poor, but there is little evidence that they actually put people on a path to self-sufficiency, at least not in any systematic way.

So while there has been success at relieving some of the more dire consequences of poverty, little progress has been made in eradicating poverty itself. If, by that, we mean what President Johnson meant: creating the conditions needed to ensure that all people earn enough income in the

private economy to sustain a decent standard of living for themselves and their children. That failure today amounts to nearly 40 million Americans unable to consistently earn incomes that provide for a basic standard of living.

The Fading American Dream

Percent of Children Earning More than Their Parents, by Year of Birth

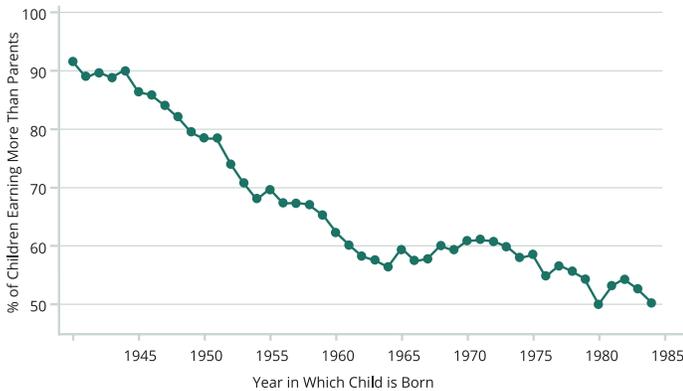
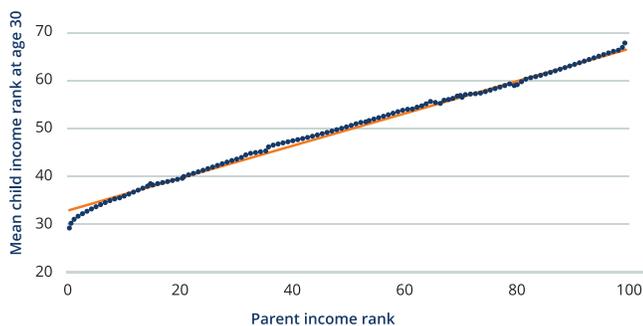


Figure 2

This failure comes at a significant cost. Using a broad definition of spending on anti-poverty efforts, the country spends around \$1 trillion each year on poverty-related programs.

Even if the original goal was indeed to “cure” or “prevent” poverty, as President Johnson suggested it should be, perhaps we should be satisfied with spending that \$1 trillion every year and know that we are successfully (more or less) relieving the consequences of poverty. There are certainly some who would be happy to declare victory and remove the issue as a topic of conversation.¹

The Inheritance of Income Status



Source: Chetty et al., “Where is the land of opportunity? The geography of intergenerational mobility in the United States,” Figure IIa: Association between children’s and parents percentile rank.

BROOKINGS

Figure 3

Conversely, we could return to those original goals and try to re-energize our efforts by leveraging what we have learned over the past 50 years and applying those lessons to our current circumstances. Based on our own work, we would suggest that the goal of “preventing” poverty should be reframed as ending “intergenerational” poverty – that is, abolishing the connection between the circumstances of a child’s birth and his or her chance of living in poverty as an adult. In a sense it is an acknowledgment that while we may not be able to turn every existing adult into an adequate wage earner, we can certainly ensure that every child born today is placed on an immediate path to health and prosperity. The *American Dream realized* would be another way of stating it.

When the problem is framed this way, what jumps out is that the problem is not getting better, and by some measures, it is getting worse. A child born in 1940 had a 90 percent chance of earning more than their parents; a child born in 1985 has only a 50 percent chance.² A child born into poverty today has no better chance to escape poverty as an adult as they did half a century ago.³

Measured in this way, the war on poverty is clearly failing. We are not producing young adults who are upwardly mobile with a low risk of ending up back in poverty.

THE CENTRALITY OF PLACE IN THE CYCLE OF INTERGENERATIONAL URBAN POVERTY

At the time of our founding, the notion that poverty and place were intrinsically linked was not a new one. William Julius Wilson argued in *The Truly Disadvantaged* that the social isolation of largely African American communities into specific neighborhoods had undermined public efforts to fight poverty. Robert Sampson – based on his groundbreaking work in Chicago - made the connection between health outcomes and neighborhood conditions even more explicitly and pointed out that “attempts to change places and social environments rather than people”⁴ may deliver better results in the fight against poverty. Sampson went on later to suggest that:

If “neighborhood effects” of concentrated poverty on health exist, presumably they stem from social processes that involve collective aspects of neighborhood life, such as social cohesion, spatial diffusion, local support networks, informal social control, and subcultures of violence. **Yet we know little about these and other social mechanisms, especially how to measure them at the community level.**

Although Wilson and others had been pointing out the connection between poverty and place for many years, it was, in fact, a different piece of academic research that caught the eye of Tom Cousins before the work in East Lake began. In 1993, a criminologist from Rutgers University named Todd Clear pointed out, in an opinion piece in the New York Times, that 70 percent of the New York State prison population came from eight neighborhoods in New York City.⁵ That just a handful of places in New York City could be responsible for producing the bulk of the state’s convicted criminals was both a shock and a revelation. The thought occurred to Tom that perhaps it was the geographic dimension of this problem that needed to be addressed.

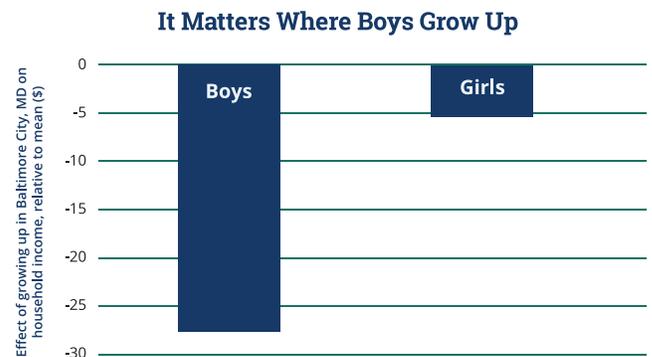
Scholars had been pointing out this connection between poor outcomes and place for many decades. Map any disconcerting outcome – life expectancy, crime rate, third grade test scores – and you will find that they are both highly correlated with each other as well as being highly correlated with place.⁶ The science seemed to be suggesting that living in poverty was a problem, but living in impoverished places was the bigger problem.

The research certainly supports this. The “Moving to Opportunity” findings revealed how important place is to the future of children. Outcomes for children who moved from distressed to stable neighborhoods improved almost across the board, including future earnings potential. These results in some sense understate the impact of place because they only look at the impact of families moving, which is a source of stress to be begin with. Low-income children that are simply born into healthy neighborhoods actually perform even better.

If, for example, one compares how low-income children in high-poverty schools perform relative to low-income children in low-poverty schools, you see material differences in outcomes. In other words, simply being from a low-income household is not determinative of school

performance. In a representative example shown, two elementary schools in Atlanta achieve highly divergent results in the literacy scores of low-income students. This differential is typical across the district. While we can’t draw a definitive conclusion regarding the drivers of these differences, it would indeed be surprising if neighborhood conditions did not play the central role.

In recent years there have been several major advances in our understanding of this connection between outcomes and place. One is the gradual recognition within the health care industry that health outcomes could not be improved exclusively through improved access to health care services. Instead, sustainable improvements in health outcomes could only be delivered by addressing what has become known as the “social determinants of health,” generally defined as



Source: Chetty and Hendren, “The impacts of neighborhoods on intergenerational mobility II: County-level estimates,” Online appendix table VIII

BROOKINGS

Figure 4

Percent of Free or Reduced Lunch Students Meeting or Exceeding Literacy Standards

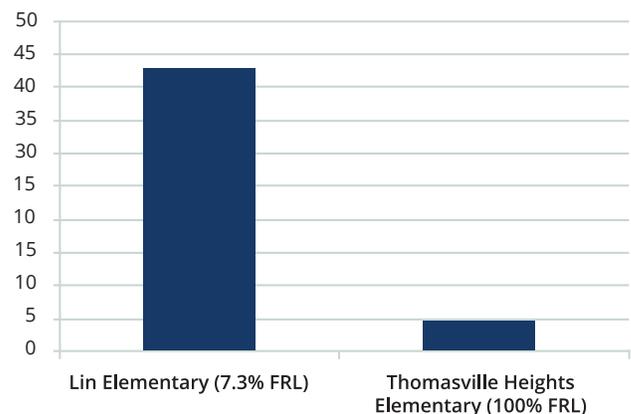


Figure 5

the conditions in which people are born, grow, live, work and age. Analyses of the geographic relationship to health outcomes—most prominently the MacArthur Foundation Network’s *Report on Socioeconomic Status and Health* and the Robert Wood Johnson Foundation’s *Commission to Build a Healthier America*—provided a foundational understanding of the relationship between unhealthy neighborhoods and unhealthy people.

Another major development is the documented decline in economic mobility in our cities. Institutions like the Federal Reserve Banks and the Brookings Institute have been pointing out the apparent decline in social and economic mobility in the United States since the 1990s, but it was Raj Chetty and his colleagues’ work in *Is The United States Still A Land Of Opportunity? Recent Trends In Intergenerational Mobility* that truly raised the alarm. As Chetty later wrote, “neighborhoods have substantial causal effects on children’s long-term outcomes at a highly granular level.”⁷ More specifically, his highlighting of the geographic dimension of the problem has helped to galvanize efforts to understand why one’s place of birth appears to determine one’s economic destiny.

Patrick Sharkey’s book, *Stuck in Place*, provided additional support for the thesis that place needs to be central to any poverty eradication strategy. Sharkey pointed out that “living in poor neighborhoods over two consecutive generations reduces children’s cognitive skills by roughly eight or nine points...roughly equivalent to missing two to four years of schooling.”⁸

Using longitudinal data over several decades, he discovered that when neighborhoods improve “the economic fortunes of black youth improve and improve rather substantially.”

Sharkey’s results have since received further support by Chetty’s most recent Seattle-based study that suggests that low-income children living in healthy neighborhoods can expect to earn \$210,000⁹ more than their peers in distressed neighborhoods over the course of their lives.

Thanks to this work on economic mobility, we have a much deeper understanding of the connection between place and economic success in life. What we have learned is that *poverty is effectively an inheritable attribute transmitted via ZIP Code.*

NEIGHBORHOODS AS SOURCES OF TOXIC STRESS

Tom Cousins once said that if he had grown up in the East Lake Meadows housing complex, “he’d probably be in jail.” What Cousins meant was that, regardless of one’s genetic endowment or personal characteristics, we are all creatures adapted to our habitats. The circumstances of our birth and conditions within which we are raised are hugely influential on our life outcomes.

Nick Boler grew up in the public housing projects in and around the Woodlawn neighborhood in Birmingham, Ala. Nick was one of five boys born to a gambling-addicted mother. With no cash to pay for food, Nick and his brothers would steal bread from the local convenience store and eat ketchup sandwiches for dinner. His noon lunch at school was his last real meal of the day. “Ketchup sandwiches don’t stick to your ribs like beans and bread,” Nick later recalled.

There was no money to pay for gas and electricity, so Nick did his homework by candlelight. Each day after basketball practice, Nick grabbed a ride home from his coach in order to avoid crossing the gang territory that loomed between school and home.

Today, one of Nick’s brothers is dead and two are in prison. Nick escaped those fates, and later described his life growing up in Woodlawn in his book *Footsteps*. He says that growing up in that environment rife with drug addiction, alcoholism, mental illness, neglect, gangs, crime, and violence creates a “poverty mentality that paralyzes your will, decimates your potential, suffocates your spirit, and poisons your soul.”¹⁰

What we didn’t know when Nick was growing up, but what is now clear from the research on the neurological development of children, is that the traumas that Nick Boler and millions of children like him experience are not temporary obstacles to overcome. Instead, they create permanent impairments that have multi-generational impacts.

All children will face adversity at some point in their lifetime. Dealing with that adversity is a critical part of child development. In the first years of life, an infant’s brain builds pathways and connections that constitute the foundation for all future intellectual and emotional development. As Dr. Jack Shonkoff of the Center on the Developing Child at Harvard University has noted, “when we are threatened, our

Linking Early Life Experience to Healthy Outcomes

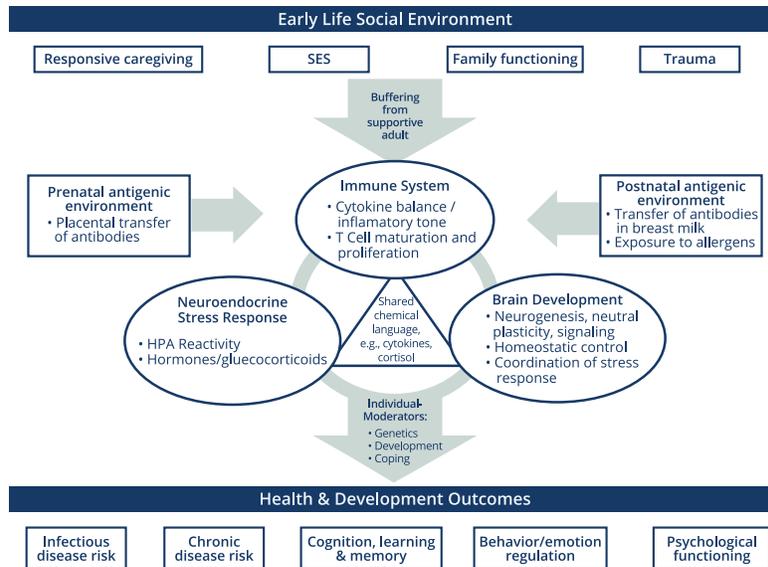


Figure 6

bodies prepare us to respond by increasing our heart rate, blood pressure, and stress hormones, such as cortisol. When a young child’s stress response systems are activated within an environment of supportive relationships with adults, these physiological effects are buffered and brought back down to baseline. The result is the development of healthy stress response systems.”¹¹

The science of pediatrics over the past two decades has made great strides in understanding the connection between the environmental setting within which a child is conceived, born and raised and their neurological and physiological development. The social environment into which we are

born is deeply influential on developmental outcomes, and the science has begun to map these relationships.¹²

A child’s social environment has a direct impact on her neurological and physiological development. The American Academy of Pediatrics (AAP) has called on pediatricians to lead an “invigorated, science-based effort at transforming the way our society invests in the development of all children, particularly those who face significant adversity.”¹³ This formal acknowledgement that health care interventions on their own cannot solve this problem has had a profound impact on how the health care industry addresses these poor health outcomes. There is now an emerging consensus within the health care community that our collective goal should be to reduce the need for treatment interventions by ridding our neighborhoods of the sources of toxic stress that lead to those interventions being required in the first place.

Dr. Shonkoff has been a leading advocate for connecting sources of toxic stress to life outcomes:

“Cumulative-exposure explanations of chronic adult disease are consistent with research that addresses the breakdown of physiological steady state under conditions of chronic challenge—a phenomenon referred to as ‘allostatic load.’ Under such circumstances, activation of stress management systems in the brain results in a highly integrated repertoire of responses involving secretion of stress hormones increases in heart rate and blood pressure, protective mobilization

The Science of Pediatrics

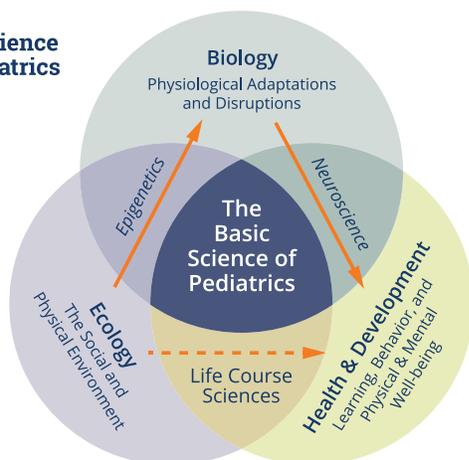


Figure 7

of nutrients, redirection of blood perfusion to the brain, and induction of vigilance and fear. These neurobiological responses are essential and generally protective, but when activated persistently under circumstances of chronic or overwhelming adversity, they can become pathogenic. *Within this context, extensive documentation of the disproportionate exposure of low-income children to environmental stressors, traumatic experiences, and family chaos takes a greater sense of urgency.*¹⁴

GENETIC IMPACTS ACROSS GENERATIONS

Advances in the field of epigenetics (the science of understanding how genes are expressed in response to the environment within which an organism develops) suggest that a child's genetic endowment can be directly undermined by the physical and socio-economic conditions surrounding her. In other words, not only do sources of toxic stress impede healthy development, but they also affect how genes are being expressed. This can undermine the genetic basis for cognitive function. Just because an individual was born with a strong genetic basis for literacy or math or some other talent doesn't mean that those genes will be expressed if the environmental conditions are adverse in some way.

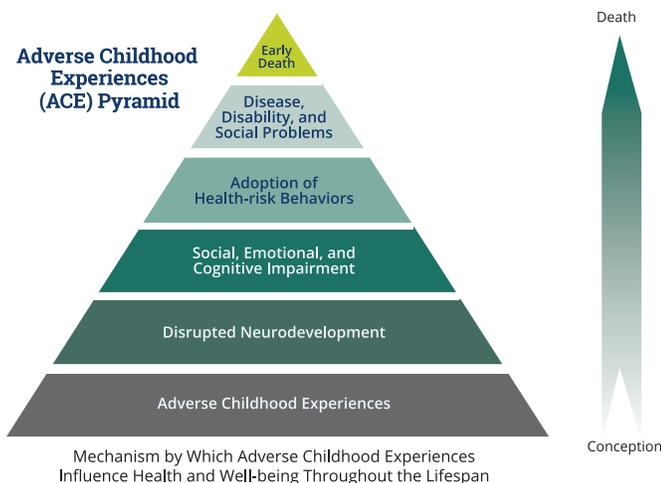


Figure 8

And it gets worse. The research now suggests that these epigenetic impacts can affect the offspring of individuals exposed to toxic stress even prior to birth:

“Our review found an accumulating amount of evidence of an *enduring effect of trauma exposure to be passed to*

TOXIC STRESS AND THE DAMAGE DONE

The damage done to a child's brain in the first two years of life due to exposure to sources of toxic stress is generally thought to be irreversible.

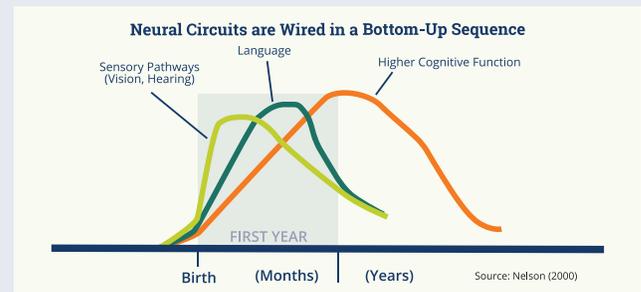


Figure 9

The research indicates that the impacts of toxic stress manifest themselves across several physiological dimensions, none more important than in neurological development. Exposure to sources of toxic stress leads to the elevation of neuro-endocrine-immune responses resulting in prolonged cortisol activation and a persistent inflammatory state, with failure of the body to normalize these changes after the stressor is removed.

It is the failure of these elevated levels to recede normally - given the persistent presence of these threats - that directly impact the neurological architecture of a child's brain. Brains are wired in the first years after birth. The critical period is the first year, when the neural circuits most closely associated with language development are generated.

Brain scans of children living in poverty reveal the extent of this disparity in neural development. By two years of age, obvious gaps in the neurological fabric of children have already developed as a consequence of the physiological impacts of being exposed to sources of toxic stress. This is highly consequential when you consider the fact that most of the resources and formal interventions dedicated to preparing children for school don't start until a child is four years of age. The science suggests that this is four years too late.



Figure 10

Exposure to these conditions early in life eventually leads to health disparities later. Research demonstrates how neighborhood quality influences health across a variety of dimensions including infant mortality, life expectancy and chronic disease. Residency in distressed neighborhood, for example, is “a strong, independent predictor of diabetes.”¹⁵ Similarly, being raised in a distressed neighborhood will increase a child chance of developing a mental illness.¹⁶

offspring trans-generationally via the epigenetic inheritance mechanism of DNA methylation alterations and has the capacity to change the expression of genes and the metabolome.”¹⁷

So it is not simply the environment into which you are born that impacts the way your genes express themselves. It is also the environment within which your parents were born (and their parents for that matter) that drive how your genes ultimately express themselves. This connection is consistent with Pat Sharkey’s longitudinal data that uncovers a direct connection between parental experience and the outcomes for their children: “the parent’s environment during [her own] childhood may be more important than the child’s own environment.”¹⁸

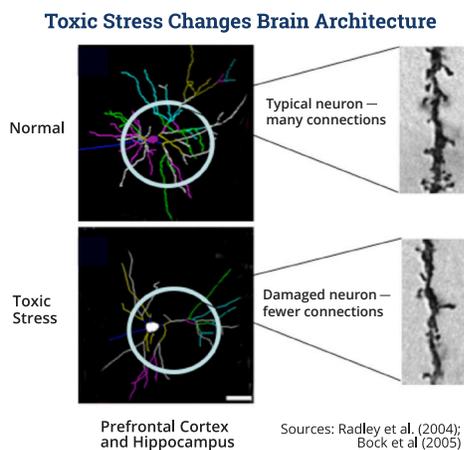


Figure 11

In other words, the relevant biological and sociological science is now providing a biological deterministic explanation for intergenerational poverty that simply did not exist when Cousins began his work in the mid-1990s.

WHAT ARE THE SOURCES OF TOXIC STRESS?

The initial work on the relationship between sources of toxic stress and neurological development—the *CDC/ Kaiser Permanente Adverse Childhood Experiences (ACE) Study* being a noteworthy effort—focused on the impact of trauma on childhood development. These sources of trauma included psychological, physical, or sexual abuse, violence against the mother, or living with household members who were substance abusers, mentally ill or suicidal, or

ever imprisoned. What the research shows is that children with exposure to multiple sources of these types of trauma have much higher risk for adverse health effects including maladaptive coping skills, poor stress management, unhealthy lifestyles, mental illness and physical disease.

It is best to think of the adverse experiences named in the ACE study as a subset of a larger set of sources of toxic stress which have similar impacts on the neurological development of children. We have direct evidence, for example, of what exposure to lead can do to brain development. Childhood exposure to lead is associated with region-specific reductions in adult gray matter volume, specifically those regions of the brain responsible for executive functions, mood regulation and decision-making. Recent studies show that 25 percent of elementary school children in Cleveland have elevated levels of lead in their blood.¹⁹

Additional sources of toxic stress that contribute to the problem include environments with high levels of crime and violence, low-quality housing and public infrastructure, housing instability and high transiency rates, and the lack of access to quality food and nutrition. All of these add up to toxic environments that are endemic to the neighborhoods where we work.

SILO REFORM

One of our main challenges is that a people-based intervention approach to poverty rarely takes “place” into consideration and are instead designed and delivered within programmatic silos.

Take education policy as just one example. Much of the debate around intergenerational poverty over the past two decades has been centered on education reform. The central plank to the education-focused approach to poverty reduction is that if we can simply turn failing schools into high performing schools, then all children will be put on a path to prosperity. It is an enticing proposition for several reasons. One, it is focused on one issue (education). Two, there is someone in charge who can be held accountable (school boards, superintendents, charter operators). And three, it’s relatively easy to measure success or failure (test scores).

This dynamic has produced a school reform movement that has changed the way education is delivered in many places

in the country. The Teach For America program, the charter school movement, choice districts, and school voucher programs have all been birthed from this focus on education reform. Central to these initiatives is the notion that the solutions to poor educational outcomes reside strictly within the education domain. Better teachers, better principals, competition among schools, and other “school-centric” approaches dominate the reform effort. Nick Hanauer has usefully dubbed this type of approach “educationism.”²⁰

School districts around the country have been deploying some mix of these strategies for over two decades now. Although there are certainly successes one can point to, it is hard to conclude that the consequence of all of this policy innovation has been a systemic reduction in poverty.

Fall Reading Achievement for over 1500 Public Schools across the US

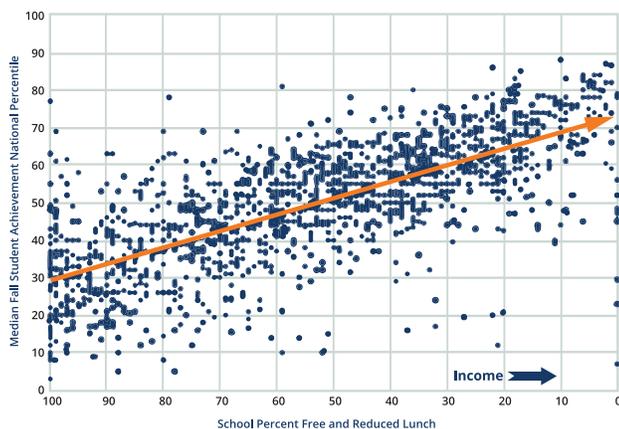


Figure 12

Once you look outside the education silo, competing explanations for poor educational outcomes become readily apparent. For example, poverty rates are a much better predictor of school performance than any internal measure of school management. Once you start looking at the research on the topic, all you find are charts showing highly positive correlations between school poverty rates and test scores.

When you compare the performance of the top 100 and bottom 100 ranked elementary schools in any state – the chart shows those in the state of Georgia – you find that there is not a single top-ranked elementary school serving a high poverty neighborhood in the state. It also shows that there is not a low-poverty school in the state that performs in the bottom tier of schools (the few outliers on the chart are not neighborhood-serving schools.)

Top 100 and Bottom 100 Ranked Elementary Schools in Georgia by Percent of Free and Reduced Lunch Recipients

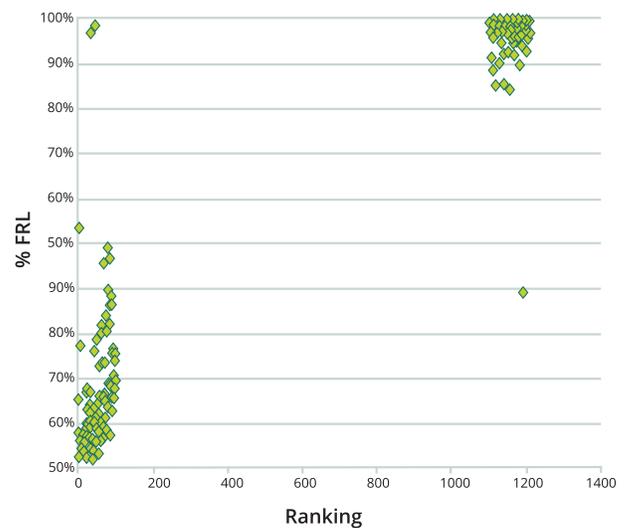


Figure 13

Should we assume that high performing schools just coincidentally serve high-income neighborhoods? Should we assume that bad principals, disinterested teachers and indifferent school superintendents are to blame for the fact that low performing schools tend to concentrate in low-income neighborhoods? Probably not. Our take-away is that schools are not failing due to poor management, but rather as a consequence of the conditions within which they are being asked to operate. A recent study makes the point even more emphatically: “it doesn’t seem that we have any knowledge about how to create high-quality schools at scale under conditions of concentrated poverty.”²¹

Not only are silo-based initiatives fated to under-perform if they fail to address the root causes of the problem, they can actually undermine those efforts if they are not designed properly. For example, if the science suggests that positive educational outcomes are a product of healthy neighborhoods—because children born into healthy neighborhoods and are not subjected to sources of toxic stress and are better prepared to learn and thrive—then school reform initiatives that detach the school from its neighborhood will actually undermine the health of neighborhoods. The local neighborhood-serving school is a critical economic development asset for a neighborhood because it attracts and retains families. School systems with open enrollment policies actually impede the health of neighborhoods, because they provide no incentives for families to move to a neighborhood with a high-performing school.

Based on the research and our own experience, we have concluded that it is neither reasonable nor sustainable to expect a school to outperform its neighborhood. We conclude this, because we know that it is largely the sources of toxic stress to which children are exposed to in their neighborhood that is the driver of educational (and all other) outcomes. Shipping a child outside of their neighborhood—even to a high-performing school—does not address this root cause of the problem. From this we conclude that education reform strategies must be centered on neighborhood-serving schools. It is the necessary (though by no means sufficient) condition for creating thriving young adults.

THE KIND OF PROBLEM A NEIGHBORHOOD IS

Much of the work that goes on in the poverty-fighting field is predicated on the notion that what is needed is a set of narrow interventions that yield specific outcomes. These interventions are typically developed, funded and implemented within the familiar silos of community development: housing, education, health, food & nutrition and economic development. Over the past couple of decades, government and philanthropy have become increasingly oriented to investing in these “point solutions,” because the direct connection between the investment and the outcome can be clearly delineated and specifically measured. This linear connection facilitates the calculation of return on investment and other success measures, many borrowed from the corporate sector.

There is much in this approach to recommend. First, it is easy to explain: “if we provide girls with afterschool programs and mentors, we can lower the teenage pregnancy rate.” “If we improve the nutritional value of school lunch programs, we can reduce childhood obesity.”

But then we ask ourselves a question: in the places where teenage pregnancy or obesity rates are not an issue, is it because of a prevalence of these types of interventions? In other words, is the fact that we have a teenage pregnancy or obesity problem concentrated in a specific community due to the lack of effective programs, or is it some other reason?

Edward O. Wilson once said, “the greatest challenge today, not just in cell biology and ecology, but in all of science, is *the accurate and complete description of complex systems.*”²²

Wilson’s point, largely based on his experience studying ant colonies, was that science based on trying to understand systems through reductionist analysis—by studying individual components of systems rather than the system itself—was coming to a close. Instead, we needed to look at the systems themselves.

Jane Jacobs was among the first to point out that cities (and, in fact, neighborhoods) were problems of “organized complexity.” Her general point was that confronting any urban challenge required “dealing simultaneously with a sizable number of factors which are interrelated into an organic whole.”²³

Jacobs’ most famous example involved her observation that her Greenwich Village neighborhood—which she regularly observed from the stoop of her brownstone apartment—was a very safe place despite the fact that she almost never saw any police officers. She concluded that public safety was not something that was imposed by policing but something that “emerged” independently from a confluence of factors few of which one could name, never mind quantify. Stuart Kaufmann would later label this type of phenomenon “order for free.”²⁴

Since Jacobs’ observation, an entire field of research—the study of complex systems—has evolved to answer the question of how outcomes emerge from complex systems like stock markets, beehives and cities. In all cases, the conclusions are largely as follows: complex systems are networks of individual agents that evolve over time—in response to both changes to their environments as well as to feedback loops within that environment—and from the interactions of those agents emerge system-level behaviors that could not be predicted in advance.

NOTHING INEVITABLE ABOUT SEGREGATED NEIGHBORHOODS OF CONCENTRATED POVERTY

When you work in distressed neighborhoods with the level of intensity that we do, certain patterns emerge. At a recent convening of our Community Quarterback Executive Directors in Tulsa, Okla., we toured the Greenwood neighborhood, once known as the “Black Wall Street.” At the

turn of the 20th century, Greenwood was a dynamic center of the black professional and working class. That all changed in 1921 when a race massacre destroyed much of the neighborhood while killing hundreds of its residents. Despite that history, the neighborhood was able to recover to once again become a thriving center of Tulsan black society right into the mid-1960s. It was then that the State of Oklahoma decided to construct a highway through the middle of the neighborhood. What racists couldn't destroy, transportation planners did.

And what struck us about Greenwood was not that building highways through prosperous black neighborhoods was unusual, but that it is so common it verges on the banal.

Just about every distressed urban neighborhood in America was once a healthy, thriving place, many the center of African American commerce and society. And almost every one of them had a highway built through the middle of it. It is just one of a series of mal-intended public policies that combined to engineer the distressed urban neighborhoods we now confront.

While our anecdotal experience is certainly instructive, Richard Rothstein has done us a much greater service by documenting the public policies and private actions that have combined to perpetuate segregation in our cities and concentrate poverty in certain neighborhoods. In his book, *The Color of Law*, Rothstein inventories these policies and actions and recounts how they were consistently applied across the country (see sidebar).

The consistency with which the policies and actions Rothstein documents were applied nationally is astonishing. It didn't matter whether you were in San Francisco, Dallas, Atlanta or Boston, a concerted and deliberate effort was underway during the post-war period to isolate and ultimately impoverish African Americans. John A. Powell has suggested that residential housing segregation was the most successful domestic policy of 20th century America and that we are living "with the legacies of a *deliberately* segregated past."²⁶

Despite the depth of the moral outrage that such practices might elicit, perhaps the most important lesson from this history, at least for our purposes, is the indisputable fact that the distressed, segregated neighborhoods on which we now are focused were engineered into existence. It raises the core question for our purposes: can that engineering be reversed?

SEGREGATION IS NOT DE FACTO

If we learn nothing else from Richard Rothstein's book, it's that we can dispense with the myth that the causes of residential racial segregation in this country are impossible to identify, or that it was somehow the product of individual choices made by generations of Americans, or even that it was largely a phenomenon of the Jim Crow South. Rothstein definitively puts to rest such notions with this compelling list of the true causes of residential racial segregation:²⁵

- Federally funded public housing that was explicitly racially segregated, both by federal and local governments. Projects were officially and publicly designated either for whites or for blacks.
- The federal government subsidized relocation of whites to suburbs and prohibited similar relocation of blacks.
- The Federal Housing (FHA) and Veterans Administrations provided federal loan guarantees on the explicit condition that no sales be made to blacks and that each individual deed include a prohibition on re-sales to blacks, or to what the FHA described as an "incompatible racial element."
- The FHA refused to insure individual mortgages for African Americans in white neighborhoods, or even to whites in neighborhoods that the FHA considered subject to possible integration in the future.
- Although a 1948 Supreme Court ruling barred courts from enforcing racial deed restrictions, the restrictions themselves were deemed lawful for another 30 years, and the FHA knowingly continued—until the Fair Housing Act was passed in 1968—to finance developers who constructed suburban developments that were closed to African Americans.
- Some cities took the lead in organizing homeowner associations for the purpose of enacting racial deed restrictions.
- Bank regulators knowingly approved "redlining" policies by which banks refused loans to black families in white suburbs and even, in most cases, to black families in black neighborhoods—leading to the deterioration and ghettoization of those neighborhoods.
- Although zoning rules assigning blacks to some neighborhoods and whites to others were banned by the Supreme Court in 1917, racial zoning in some cities was enforced until the 1960s.
- Some cities, Miami being the most conspicuous example, continued to include racial zones in their master plans and issued development permits accordingly.
- Urban renewal programs forced low-income black residents away from universities, hospital complexes, or business districts and into new ghettos. Relocation to stable and integrated neighborhoods was not provided; in most cases, housing quality for those whose homes were razed was diminished by making public housing high-rises or overcrowded ghettos the only relocation option.
- Where integrated or mostly-black neighborhoods were too close to white communities or central business districts, interstate highways were routed by federal and local officials to raze those neighborhoods for the explicit purpose of relocating black populations to more distant ghettos or of creating barriers between white and black neighborhoods. State policy contributed to segregation in other ways.
- Real estate agents openly enforced segregation through "racial steering," directing clients to neighborhoods of similar racial composition. A recent study in the *Sociological Forum* shows that this is still ongoing.

The application of this idea to our work is obvious: if the outcomes that we worry about in education, public safety, health and economic mobility are the consequence of the underlying dynamics of cities and neighborhoods, perhaps our focus should be on creating the conditions that best support the independent emergence of those positive outcomes rather than trying to engineer them through silo-based programmatic interventions.

Luis Bettencourt, who leads the Mansueto Institute for Urban Innovation at the University of Chicago, suggests that we should take the “view of cities in terms of social networks emphasizing the primary role of expanding connectivity per person and of social inclusion in order for cities to realize their full socioeconomic potential. In fact, cities that for a variety of reasons (violence, segregation, lack of adequate transportation) remain only incipiently connected will typically underperform.”³⁰

Distressed neighborhoods certainly underperform for these and related reasons. Think of these as the fundamental constituent elements of the neighborhood. Healthy outcomes do not emerge because high-performing non-profits and government agencies are delivering targeted solutions. *Healthy neighborhoods produce healthy outcomes, because they contain the conditions out of which those outcomes can emerge independently.*

Examples abound. Chances are that most people reading this right now live in healthy neighborhoods. When asked about what makes your neighborhood a good place to live, we doubt that the “quality of the non-profit providers” makes the top of the list. You might say “because it’s safe.” But is it safe because you have police officers on every corner? Surveillance cameras on every light pole? You might say it’s a great neighborhood because there are plenty of restaurants and grocery stores around. Is that because someone you can point to is focused on ensuring that those services are in place? You might say the school is great. Is that because the school district is doing something unique and special in your neighborhood school that they are neglecting to do in the failing schools on the other side of town?

Perhaps the most important lesson for us over these past ten years is that if we want to permanently eliminate intergenerational poverty, we need to address the root causes of the problem. As Raj Chetty has said, “we’ve created certain structures through government policy that lead to the development of a certain set of cultures and norms that in turn affect behavior.”³¹

What the research and science is telling us is that those “certain structures” are the sources of toxic stress endemic to distressed neighborhoods. As Bettencourt says, “the ultimate challenge for all of us...is to translate, apply and further develop these new ideas to promote types of urban environments *that can encourage and nurture the full potential of our social creativity, targeted at sustainable and open-ended human development.*”

THE QUEST FOR “POSITIVE GENTRIFICATION”

The challenge, of course, is how to promote these types of urban environments that encourage human development, while at the same time, ensure that those environments remain accessible to the people we most specifically want to reach.

As mentioned earlier, we estimate that there are just over 800 urban neighborhoods in this country that are highly distressed. We are not sure exactly how that number may have changed over time, but we know that, in 1970, 28 percent of the urban poor lived in distressed neighborhoods and that today nearly 40 percent do.³² So, in that sense, the problem appears to be getting worse.

On the other hand, we know that the re-urbanization of many of our cities that began in earnest in the 1990’s has led to the gentrification of many neighborhoods. Gentrification, in general, is a gradual—almost stealthy—process of changing the character of a neighborhood through the influx of more affluent residents. Gentrification is generally triggered by a variety of “micro” decisions made by individuals and businesses in a given geography. While there are certainly times when gentrification might get started or accelerated by a public decision to make an investment in some asset such as a park or transit line, for the most part, it is very difficult to make any direct connection between a set of policy interventions and the onset of gentrification. Gentrification typically simply *emerges* as a consequence of a set of circumstances quite unique to the neighborhoods where it takes root.

It is the stealthy nature of gentrification that makes it such a challenging issue to deal with. On the surface, the revitalization of residential and commercial properties is a welcome sign of improved neighborhood health. However, if the process unfolds in a manner that leads to rapid increases

A FLIGHT FROM THE MIRACLE

When Albert Einstein was asked what was the biggest factor in developing the theory of relativity, he said, “Figuring out how to think about the problem.” What this often required, he later said, was a “flight from the miracle.”²⁷ His point was that advances in the understanding of a problem often stem from an observation or notion that do not align with conventional thinking.

Jane Jacobs’ observation that public safety and policing are not connected is an instructive example of such thinking. It raises the question that if policing doesn’t generate public safety, as conventional wisdom (and most police chiefs) would suggest, what exactly does?

In 2000 Stephen Hawking—in response to a question on the future of science—said, “I think the next century will be the century of complexity.”²⁸ Jane Jacobs would likely agree. They would both encourage us to redefine the problem we are trying to address—that is the poor outcomes we see in specific geographies in our cities—by thinking quite differently about that problem. Perhaps the science of complex systems can provide that “flight from the miracle.”



Figure 14

Complexity science is the interdisciplinary study of how behaviors emerge in dynamic, non-linear systems. The hope is that this level of macroscopic understanding will inform efforts to encourage favorable behaviors and discourage unfavorable ones in any given system.

Complexity science is fundamentally non-reductionist in the sense that it asserts that the root causes of any system-level behavior or outcome cannot be identified through the study of its component parts; instead, it is predicated on the notion that system-level behaviors “emerge” independently and unpredictably due to the interactions of those component parts within an environment that is constantly evolving. In such circumstances, trying to engineer outcomes through interventions based on “cause and effect” and focused on the behaviors of individual components are not only likely to fail, but may in fact cause more harm than good.

What makes systems complex? They generally:

- Consist of many, diverse autonomous agents that are interconnected but act independently in a defined but evolving environment.

- Generate patterns of behavior that emerge from the actions of the individual agents in an unpredictable manner. These patterns impact the evolution of the system.
- Evolve in response to feedback loops and endogenous changes to their environment.
- Exhibit higher levels of durability and adaptability, the greater the variety of agents.
- Are sensitive to initial conditions and to small changes in the system, which can have large downstream impacts (“the butterfly effect”).
- Lack hierarchy and top-down rules. Agents are autonomous and act in their own self-interest based on their understanding of how best to maximize their access to system resources.

Neighborhoods appear to check all of these boxes:

- Neighborhoods are comprised of autonomous individuals and families that function within a network of familial and social ties.
- Individuals and families make decisions on a constant basis about how they will live, with whom they will associate, and how they will compete for the limited resources available to them. These decisions have impacts on others and on the system overall.
- Neighborhoods are subject to feedback loops that encourage or discourage positive outcomes, as when a neighborhood improves or declines in a self-reinforcing manner based on the economic health of its residents.
- Neighborhoods are constantly evolving in response to changes in its environment, with the drivers of that change—either for the positive or the negative—difficult to identify and usually unique to the particular neighborhood and its history.
- No one is “in charge” of a neighborhood; instead, the neighborhood is a product of the many decisions made by individuals over its history.

If we were to conclude that neighborhoods are complex systems, it would have considerable implications on how we address the outcomes that concerns us. Instead of investing in “point solutions” that assume that the world is governed by simple cause-and-effect, highly linear relationships, we would focus our resources on interventions that generate the fundamental conditions out of which those outcomes will emerge independently and in a self-sustaining fashion. Such a shift might significantly change how we design our efforts to fight poverty:

“To solve today’s complex social problems, foundations need to shift from the prevailing model of strategic philanthropy that attempts to predict outcomes to an emergent model that better fits the realities of creating social change in a complex world... Emergent strategy focuses on strengthening the systems and relationships that can generate solutions, rather than on constructing the solutions themselves.”²⁹

in property values, there is a risk that legacy residents will be displaced and therefore unable to benefit from that improved health. Protecting accessibility to these neighborhoods is therefore a critical priority.

And yet we are in a strange point in this history, because while gentrification is certainly an issue in places where it is in fact occurring, perhaps the more serious problem is the lack of investment in the vast majority of distressed urban neighborhoods in our cities. In 2013, the Federal Reserve Bank of Cleveland observed that broad-based gentrification is really only happening in a handful of cities such as San Francisco and Washington D.C.³³ Another estimate suggests that seven cities accounted for nearly half of the total number of gentrifying neighborhoods nationally.³⁴

Recent studies suggest that for every neighborhood that is gentrifying, there are ten that are stagnant or declining.³⁵ As one recent report stated, there is “no metropolitan region in the nation where a low-income person was more likely to live in an economically expanding neighborhood than an economically declining neighborhood.”³⁶

Hence the dilemma. There is a real risk that, by focusing our attention on the impacts of gentrification where it is occurring, we will not place adequate attention and resources on the far more numerous neighborhoods where revitalization is not occurring at all.

Perhaps the more nuanced approach to these challenges is to prioritize the revitalization of all of our distressed urban neighborhoods but to do so in a manner that protects and defends the accessibility of those neighborhoods.

How the process of improving the health of neighborhoods is managed is therefore critically important. Proactive approaches—that is, ones that are focused both on generating improved neighborhood health but also charged with ensuring that its benefits are shared—are more likely to yield equitable outcomes. Fundamental to that strategy will be protecting and creating wide channels of housing affordability for low-income residents.³⁷

Even when those efforts are successful, the revitalization process will still be disruptive. While the deconcentration of poverty creates the opportunity to reduce the social isolation of low-income residents, it also can create tensions around who is included and excluded from the benefits associated with changes in the neighborhood. Social challenges “such

DISPLACEMENT AND HOUSING AFFORDABILITY

There may be no topic of conversation regarding our work of more interest than displacement and housing affordability. It may also be the least understood. A couple of research findings we try to keep in mind:

- Distressed neighborhoods have very high transiency rates, usually in the 20-30% range (2-3 times than that of healthy neighborhoods). At that level of transiency, the entire neighborhood is “self-displacing” every three or four years on average. Of course, the average disguises a more invidious fact, and that is that seniors tend to stay put and families tend to move frequently.⁴⁰ This shows up in the schools’ data, where transiency rates are generally twice as high as the neighborhood average.⁴¹
- Transiency rates among low-income residents actually go down in gentrifying neighborhoods.⁴² Once a neighborhood begins to improve, existing low-income residents are incited to stay and find a way to do so. Since half of low-income transiency is due to people “fleeing” these last-resort neighborhoods,⁴³ it makes sense that the rate would come down as the neighborhood improves.
- Original residents in revitalizing neighborhoods have higher levels of satisfaction with their living circumstances and real income gains compared to those in non-revitalizing neighborhoods.⁴⁴
- Housing affordability is primarily a function of housing supply.⁴⁵ Although securing housing affordability through direct subsidy (e.g., low income housing tax credits) and regulatory action (e.g., inclusive zoning) can be helpful, increasing the housing supply and ensuring that design standards incent smaller, more affordable units must be a central pillar of any long-term strategy to secure structural affordability in a given housing market.
- Home ownership rates among African American families is in steep decline, worsening the wealth gap (which currently stands at \$171,000 for median white family compared to \$17,600 for the median African American family.)⁴⁶ Since residential equity is the largest component of household wealth,⁴⁷ ensuring that African American families are living in neighborhoods with appreciating property values needs to be central to any strategy to eradicate intergenerational poverty.

Homeownership Rates including for Hispanics and African Americans Peaked in the mid-2000s

Homeownership rate 1983-2017

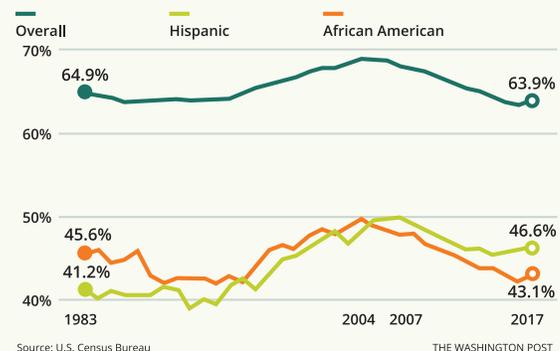


Figure 15

as the differential influence over accepted behavioral norms, stigmatization based on race and class, and general discomfort and distance based on perceptions of difference”³⁸ are serious issues that need to be confronted in any place-based revitalization effort.

Robert Chaskin and Mark Joseph have helpfully coined the term *positive gentrification* as the overall descriptor of this type of effort to transition distressed neighborhoods into healthy and yet inclusive ones.³⁹ Positive gentrification might involve ensuring that legacy residents feel ownership over the changes in their neighborhood. Being thoughtful about how public spaces are designed and ensuring that they are operated and branded in an inclusive manner is also critically important. “Cultural sensitivity” is perhaps the best guidepost by which to navigate these efforts, while always acknowledging that change of any type will always be disruptive.

THERE IS STILL MUCH TO LEARN

Research and science related to the root causes of intergenerational urban poverty in the United States have increasingly focused attention on the role that “place” plays in perpetuating poverty and limiting economic mobility. Specifically, a consensus is emerging around the following points:

1. Intergenerational poverty and the outcomes that we worry about—high crime, low performing schools, health disparities and low economic mobility—are highly correlated with geography, and are, in fact, concentrated in specific neighborhoods within our cities.
2. These neighborhoods exhibit high concentrations of low-income residents, vicious cycles of disinvestment, and highly segregated populations that were largely engineered as a result of a set of mostly mal-intended public policies and private actions.
3. As a result, these neighborhoods are characterized by sources of toxic stress—environmental hazards, low-quality housing, high levels of crime and violence, high levels of transiency, etc.—that impede the healthy neurological and physiological development of children through now-understood specific biological processes.
4. Most of our efforts to improve outcomes in these areas—public safety, health, education and income immobility—are through “point solutions” that focus on alleviating the symptoms of these root causes, and

not on the elimination of those root causes themselves. This approach places a serious limitation on their long-term success.

5. Instead, efforts should be directed at eliminating the sources of toxic stress that serve as the root causes of intergenerational urban poverty. By transforming the fundamental conditions of these neighborhoods, such that the outcomes we care about will emerge independently and in a self-sustaining fashion.

Robert Sampson described the charge well:

“The basic argument that unites our assessment is that research needs to *take seriously the measurement and analysis of neighborhoods as important units of analysis* in their own right, especially with regard to social-interactional and institutional processes. We focus on five directions for designing research on the neighborhood context of child and adolescent well-being that build on the idea of taking neighborhood social processes, and hence econometrics, seriously: (a) redefining neighborhood boundaries in ways that are more consonant with social interactions and children’s experiences; (b) collecting data on the physical and social properties of neighborhood environments through systematic social observations; (c) taking account of spatial interdependence among neighborhoods, (d) analyzing the dynamics of change in neighborhood social processes; and (e) collecting benchmark data on neighborhood social processes.”⁴⁸

Sampson put a finer point on it in a later article when he claimed that “attempts to change places and social environments rather than people”⁴⁹ might deliver better results in the fight against poverty.

Despite what we have learned, there is much still to be discovered about revitalizing neighborhoods. While it is one thing to arrive at the conclusion that it is neighborhoods that matter, it is quite another to truly understand what makes a healthy neighborhood, how neighborhood health generates positive outcomes for its inhabitants, how we can most effectively transition neighborhoods from distress to health, and what allows healthy neighborhoods to sustain themselves in a largely independent manner.

There is a tremendous amount of research being done on these and related issues that we hope will shed further light on the problem of intergenerational urban poverty. We hope to take full advantage of those insights in our own work at Purpose Built Communities and by doing so make a small contribution to this national effort.

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