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Beyond the Bus // SARAH WINCHELL LENHOFF ET AL. >

Beyond the Bus: Reconceptualizing School Transportation for Mobility Justice

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This essay combines an ecological perspective with a mobility justice theoretical framework to reconceptualize the relationship between school transportation and educational access. Authors

Sarah Winchell Lenhoff, Jeremy Singer, Kimberly Stokes, James Bear Mahowald, and Sahar Khawaja document the problem of “getting to school” that is at the intersection of students’ family, community, and social contexts and how it goes beyond whether there is a reliable mode of physical transportation. Bringing together a historical analysis of the policy landscape and interview data from parents and students in Detroit, they find that school transportation problems reflect the unequal political, social, and economic context in which families navigate enrollment and attendance. They discuss how policy makers can advance mobility justice in school policy by equitably distributing transportation resources, engaging students and parents as experts in developing and communicating transportation policy, and using institutional power to remedy structural barriers to educational access.

Keywords: access to education, attendance, ecological factors, mobility justice, school choice, student transportation

School transportation eligibility and distance to school shape access to educational opportunity, particularly in marketized school choice contexts (Bell, 2009; Edwards, 2021; Lubienski & Dougherty, 2009; Trajkovski et al., 2021). Students are more likely to enroll in schools of choice if they have reliable physical modes of transit or live close by (Trajkovski et al., 2021), and students who ride the school bus are less likely to be chronically absent once enrolled (Gottfried, 2017). Studies on school transportation have focused on whether students have reliable modes of physical transit from home to school and back (e.g., yellow bus, public transit, walk/bike routes) (Bosetti, 2004; Fan & Das, 2015), and school transportation innovations typically focus on increasing student eligibility for physical modes of transit (Burgoyne-Allen & Schiess, 2017;

Edwards et al., 2019). While increasing modes of transit holds promise for transporting more students to school, such initiatives often ignore the unequal political, economic, and social conditions that shape access to school. In doing so, they narrowly target transportation problems rather than identify and address the root causes, which may go beyond access to a school bus.

In this study, we reconceptualize the relationship between school transportation and educational access. We document how the problem of “getting to school” is manifested at the intersection of students’ family, community, and social contexts and goes beyond whether there is a reliable mode of physical transportation. We combine an ecological perspective with a mobility justice theoretical framework, which demands that we consider how transportation-related resources and challenges intersect with the distribution of public goods to produce inequality. We conclude with a discussion of how policy makers and researchers could use this framework to establish new evidence and advance policy changes across social sectors to expand educational access.

<H1>Theoretical Framework

For decades, universal access was the primary emphasis of education policy, which aimed to expand public school opportunities to all children regardless of race, gender, or ability. However, social movements and court decisions in the 1990s elevated concerns for educational equity and excellence (Peurach et al., 2019) and pushed school reformers to consider how to ensure that all students had access to excellent schools. To expand access, policy makers adopted school choice policies that permitted students to attend school far from home. Today, the goal of “access” is almost exclusively pursued through enrollment initiatives, positioning parents as those empowered and responsible for accessing quality schools (Hamlin & Cheng, 2019; Scott, 2013).

In this article, we posit that education policy makers have neglected a basic but fundamental aspect of educational access: school transportation. In doing so, they have invested enormous resources in programming and school improvement efforts that are unlikely to equitably reach students because of mobility injustices in the broader society that are replicated in school funding and policy decisions.

Transportation to school is a prerequisite for accessing in-person public education. Students must have reliable *modes of transit* to and from school, such as walking, riding a bike, driving their own or their parent's car, getting a ride from a family member or friend, taking public transportation, taking a taxi or rideshare service, or riding a school bus. They must also have *favorable conditions* for getting to and from school, including an adult who is available to facilitate the transition to the mode of transit, enough time in the day to get to and from school while managing other obligations, and physically and psychologically safe routes. Scholars in urban planning and environmental studies have argued that transportation is essential for equitable participation in economic and social life (Karner et al., 2020). Transportation access is necessary for a just (re)distribution of opportunity because the ability to move freely and locate oneself geographically is constrained within unequal political and economic systems (Cresswell, 2010). Recent scholarship has connected mobility justice to school transportation, particularly in school choice contexts (Bierbaum et al., 2021). We link education scholarship on school transportation with urban planning scholarship on mobility justice by framing the issue of school transportation ecologically, with attention to the roadblocks and resources for getting to and from school across students' contexts (Lenhoff et al., 2020).

<H2>Transportation and School Attendance

Chronic absenteeism (missing 10 percent or more of school days) even in a single year has been linked to negative academic and socioemotional outcomes (Gottfried, 2014). Having reliable, safe modes of transit is positively associated with school attendance (Burdick-Will et al., 2019; Gottfried, 2017; Patel et al., 2021), both directly and indirectly. The physical mode of transit matters for attendance, and the conditions on the way to school matter for attendance. For instance, on one hand, kindergarteners who ride the school bus have better attendance than their peers who get to school in other ways (Gottfried, 2017). On the other hand, students who use public transportation to commute to school may experience environmental barriers (e.g., late or missing busses, multiple transfers, waiting time) that lead to increased psychological stress (Stein & Grigg, 2019). This “transportation vulnerability” translates to students being tardy or missing school entirely, and students who experience transportation vulnerability are more susceptible to other structural barriers related to poverty and environmental injustices (Patel et al., 2021).

<H2>Transportation and School Choice

Policy makers in many jurisdictions have incentivized and encouraged families to choose schools outside of their residential catchment zones (*Open Enrollment 50-State Report*, 2013). In doing so, they have increased the costs of getting to school (e.g., time, money for gas or public transit) while generally not providing additional resources to offset those costs. In many districts, choosing a nonassigned school severs the district’s obligation to offer school transportation (McShane & Shaw, 2020). Therefore, as families choose schools farther away from home, there are fewer supports to help them get there (Deka & Von Hagen, 2015).

The availability of school transportation and distance to school significantly affect school choice decisions (Edwards, 2021; Trajkovski et al., 2021). Parents across the income distribution prefer schools closer to home (Kleitz et al., 2000), and low-income parents often have constraints on school location based on availability of transportation or walkability (Jabbar & Lenhoff, 2019). When students enroll in high schools far from home, they are more likely to transfer to a school closer to home (Stein et al., 2021). Parent concerns about safety are also associated with their willingness to allow their children to walk to school (Kerr et al., 2006). Thus, physical geography, racial and class geography, and distance from home to school all shape school enrollment decisions (Bell, 2009; Gabay-Egozi, 2016).

<H2>Mobility Justice

Research shows that school access (e.g., attendance, school choice) and school transportation have clear implications for mobility justice, but it has not explicitly used a mobility justice framework to advance findings in the academic literature and policy discourse. Over the last two decades, scholars have explored travel within a “new mobilities” paradigm which recognizes that mobility cannot be understood only as the means of getting from one place to another (Hannam et al., 2006; Sheller & Urry, 2006). Rather, “each means provides different experiences, performances and affordances . . . [that] extend to familial spaces, neighborhoods, regions, national cultures and leisure spaces with particular kinaesthetic dispositions” (Hannam et al., 2006, 15). This “new mobilities turn” (Sheller, 2014) attends to the power and privilege inherent in questions of mobility, and the call for mobility justice further entrenches scholars in the project of disrupting inequality in movement (Bierbaum et al., 2021).

Sociologist Mimi Sheller (2011, 2018a, 2018b) developed the mobility justice framework to “theorize justice in relation to liberal and neoliberal power, global inequalities, and colonial histories and postcolonial presents of uneven mobilities” (2018b, 22). Mobility justice has since been applied primarily in sociology, geography, and urban planning as a means of going beyond the documentation of inequality in transit access to an interrogation of the intersectional dimensions of power that create conditions for both physical and societal mobility (Bierbaum et al., 2021; Cook & Butz, 2016; Karner et al., 2020; Martens, 2016). As a critical social justice theory, mobility justice attends to both the *distribution* of mobility resources and the *domination* of institutional power and decision-making that produce unjust constraints on people’s movement in and through society (Cook & Butz, 2016). In other words, scholarship using this frame must focus both on the unevenness of resources for mobility and “why these distributions came to be or how they can be mitigated” (Bierbaum et al., 2021, 203). Included in these dimensions of domination are “embodied differences in class, gender, race, ethnicity, nationality, sexual identity and physical ability that influence accessibility and interact with the mobility regimes and control systems that reproduce uneven mobilities” (Sheller, 2018b, 18).

Mobility justice includes five concepts of justice: distributive, deliberative, procedural, restorative, and epistemic (Sheller, 2018a, 2018b) (table 1). In this article, we describe the distributive dimensions of school transportation policy in Detroit while advancing epistemic justice through methods that center the narratives of families and a research partnership aimed at elevating these narratives to policy makers. Bierbaum et al. (2021) argue that transportation planning and education equity should be integrated through mobility justice to illuminate the “substantial complexity” that must be resolved to achieve both, particularly in school choice

contexts. To our knowledge, our study is the first to apply the mobility justice framework to an empirical examination of educational access and equity.

<INSERT TABLE 1 ABOUT HERE>

In reconceptualizing school transportation for mobility justice, education policy makers and researchers can orient their efforts to understanding and remediating the barriers to “getting to school” that undermine access to educational opportunity. While these barriers are especially salient in a school choice landscape where many children enroll in school far from home, they are just as important when families attend school in their neighborhood. In particular, the mobility justice framework asks education scholars to analyze the implications of school transportation policy within the context of the broader society in which students live and attend school. Rather than focus solely on transportation metrics like efficiency and coverage, school mobility justice requires examination and critique of the structural conditions that shape access to opportunity and individuals’ ability to navigate those conditions (Karner et al., 2020). It also draws on other social justice movements to ask how individuals can exert influence over systems and decisions that affect their lives. In this way, both individual experiences and the ecosystems in which they live are important units of analysis.

We approach school transportation as an ecological issue. By thinking ecologically about educational policy, we recognize specific educational problems as being embedded in multiple contexts and requiring coordinated, cross-sector policy and practice solutions to address them (Lenhoff et al., 2022). This perspective is useful for reconceptualizing school transportation as an

issue for mobility justice. As Sheller (2018b) writes, “Mobility justice offers a new way to think across the micro, meso, and macro scales of transitioning toward more just mobilities” (18).

Physical access to school is shaped by city and district zoning laws, school siting decisions, income, neighborhood safety, and urban form, such as sidewalk characteristics (Deka & Von Hagen, 2015; Kerr et al., 2006; McMillan, 2007), as well as by individual and familial resources, preferences, and constraints (Jabbar & Lenhoff, 2019; Sugrue et al., 2016).

With this study, we advance mobility justice in school transportation research in three ways. First, we take seriously the unequal political, economic, and social contexts in which students attend school and incorporate those contexts in our analysis of access to educational opportunity in Detroit. Second, we approach school transportation from an ecological perspective by considering how factors across students’ educational ecosystems interact to produce conditions that facilitate or hamper educational access. Finally, by highlighting the unique narratives of parents and students, we emphasize the importance of valuing how individuals conceptualize the problem of school transportation and their aspirations for solving it. Using this framework, we answer the following questions: How are school transportation *problems* manifested at the intersection of students’ ecological contexts? And how are school transportation *solutions* created at the intersection of students’ ecological contexts? We explore the implications of these findings for achieving school mobility justice.

<H1>Methodology

This study comes out of the Detroit Education Research Partnership (Partnership), a research-practice partnership with the Detroit Public Schools Community District (DPSCD), and the

community-based coalition Every School Day Counts Detroit, which produces research on student absenteeism and other critical educational problems in Detroit (Lenhoff et al., 2020). The Partnership initially produced research focused on identifying patterns in student absenteeism by school type, demographics, and geography (Lenhoff & Pogodzinski, 2018; Lenhoff et al., 2019; Singer et al, 2019); measuring the associations between structural, policy, and environmental conditions and student attendance (Singer et al., 2021); and developmentally evaluating DPSCD's attendance improvement strategies (Lenhoff et al., 2020). The authors of this study were all Partnership researchers during data collection. Our quantitative research suggested that poverty played a significant role in student attendance but we were unable to disentangle the specific mechanisms regarding *how* it operated.

With our community and school partners, we determined that the most appropriate way to uncover the complex factors that contributed to absenteeism in Detroit was to speak directly with parents and students (Lenhoff et al., 2020). In monthly meetings where we discussed our emerging research, we agreed to not only focus on the barriers to school attendance but also identify assets and resources that Detroit families drew on to attend regularly. Focused on generating research evidence to inform school improvement and equitable access to educational opportunity, our partners were closely involved in discussions about how to interpret our findings, what meaning to make of them in the context of Detroit, and what their organizations were going to do in response to our findings. We shared emerging findings with them after our initial interviews. Their questions and theories about the early findings and responses to the initial themes we identified led us to focus our analysis on the transportation and health barriers to attendance and guided additional data collection.

<H2>Positionality and Subjectivity

Sarah Winchell Lenhoff, the founding and current director of the Partnership and a core member of Every School Day Counts Detroit, is a white mother of two children who were enrolled in DPSCD at the time of the study (although they did not attend our sample schools). The other authors were research assistants living in Detroit or the metropolitan area. **** and **** are white men, **** is a Black woman, and **** is a woman of Pakistani descent. All members of the research team have previously worked in K–12 schools as teachers, counselors, or other staff, which positioned us as “insiders” in terms of our knowledge and investment in the school district’s success at supporting students’ well-being. That said, most of our research participants were low-income Black or Hispanic mothers and high school students, to whom we were likely perceived as “outsiders.”

To account for the impact of our subjectivities on data interpretation, we used collaborative processes within our diverse team to ensure multiple perspectives on our data, including writing and reviewing reflective memos for each interview and discussing write-ups for each code in our initial code tree before building consensus around child codes. Also, our school and community partners, which represented a range of constituencies, including parents, educators, and recent DPSCD graduates, gave feedback on presentations of emerging findings, and we incorporated their perspectives when they deviated from or extended our own.

<H2>Data Sources

In earlier partnership research, we studied the implementation of new attendance strategies in the district's twenty-seven lowest performing schools (Lenhoff et al., 2020). As part of that study, we randomly selected three elementary-middle schools and three high schools from the pool to serve as case study sites for deeper qualitative investigation. For this project, we collected data from those same six schools as well as from one additional elementary-middle school and two additional high schools that we selected for their high rates of chronic absenteeism and geographic diversity, since rates of absenteeism varied dramatically by school location (Singer et al., 2019).

In the winter of 2020, through our research partnership with the district, we obtained a list of students' directory information and current attendance rates from each of the nine schools. We randomly selected families from three categories of attendance: "not chronically absent," "moderately chronically absent," and "severely chronically absent" (table 2). We used two recruitment methods. First, we mailed an information sheet and a letter requesting that the parent or guardian call the research team if they were interested in participating in an interview. Second, we called the phone number on file for the student and asked to speak to the parent or guardian. We explained the study and emailed an information sheet to the email address they provided. In the case of high school students, we asked parents' permission to speak with their child. After reading through the information sheet and confirming consent with the parent/guardian or student, we either conducted the interview over the phone immediately or scheduled an interview for a time convenient for the participant.

<INSERT TABLE 2 ABOUT HERE>

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We conducted interviews over the phone or via Zoom in March–June 2020. Each lasted thirty to forty-five minutes. We designed the interview protocols to elicit information about barriers and resources for school attendance across students’ ecosystems. We began by asking participants about why they enrolled in their current schools; we next asked about how the student got to school and what a typical day was like; and we then asked how individual, home, work, neighborhood, social service, and school factors influenced school attendance.

We interviewed 29 high school students and 37 parents or guardians from these 9 schools in DPSCD, including 4 K–8 schools and 5 high schools. One-third of the students were from the same family as a parent participant. The racial demographics of our sample reflected the demographics of the district: about 14 percent were Hispanic, and 86 percent were Black. Table 3 summarizes our interviewees and schools (using pseudonyms).

<INSERT TABLE 3 ABOUT HERE>

<H2>Data Analysis

We transcribed and uploaded the interviews to Dedoose. We conducted an initial round of coding by creating a list of words or phrases that described the general category of barriers to and resources for school attendance. We then reviewed all the coded excerpts from the following barriers codes: lack of transportation, parent schedule conflict, weak social network, safety, and weather. We also reviewed excerpts with the following resources codes: automobile (cab/Uber/Lyft), automobile (nonprimary parent), automobile (primary parent), city bus, school

bus, parent schedule or availability, social network, and walking distance. With these excerpts, we did a round of in vivo coding in which we developed codes that represented the participants' own words or specific experiences getting their children to school (Saldaña, 2012). We then collapsed excerpts into thematic parent codes for the purposes of analysis.

After coding was complete, we wrote memos summarizing the major themes from each parent code and providing specific examples of how barriers or resources for getting to school were conceptualized by families, with specific attention to the intersection of codes within families' experiences. We used these memos to illustrate how transportation problems and solutions were manifested at the intersection of students' ecological contexts, including through narrative descriptions of three families in each of the absenteeism categories. We purposefully selected three families to profile in our study because, first, their experiences represented exemplar cases for the key themes we found across the families in our sample. Second, their experiences clearly illustrated the intersecting parts of students' educational ecosystems. And third, they described their experiences in such a way that allowed us to use their direct quotes to illustrate evidence of our themes.

We complemented our qualitative data analysis with prior research from our partnership, historical and contemporary analyses of Detroit's socioeconomic and policy landscape, and publicly available information on city and state transportation resources. We use these additional data sources to describe the social policy, structural inequality, and transportation context of the city in which students' micro and meso contexts intersect to create the conditions in which they

enroll in and attend school and to provide additional context about school transportation eligibility and availability in our analysis of parent interviews.

<H1>Study Context: Detroit

Detroit is one of the most school choice-intensive cities in the US. Students can opt out of their residentially assigned traditional public school in DPSCD by choosing a different district school, a charter school in the city, or a traditional public or charter school in the suburbs (Singer, 2020). Fewer than one in five resident Detroit students attend the public school that is closest to their home (Cowen et al., 2018), and elementary and high school students in Detroit live, on average, 2.5 and 4 miles from school, respectively. Over the past decade, around half of Detroit students have been chronically absent (Lenhoff & Pogodzinski, 2018), a higher rate of chronic absenteeism than any other major US city (Singer et al., 2021).

The centrality of transportation to these educational issues is salient given the challenging macroeconomic context that has contributed to poor transportation conditions in Detroit. A combination of suburbanization, deindustrialization, and racial conflict precipitated a significant decline in the city's population across the last seven decades (Sugrue, 2005), from nearly two million residents in 1950 to fewer than 700,000 today (Aguilar, 2020). The city's fiscal challenges persisted into the 2000s more intensely than in other postindustrial cities, exacerbated by the auto industry crisis and a spike in mortgage and tax foreclosures in the wake of the 2008 recession and culminating in the city's declaration of bankruptcy in 2013 (Akers & Seymour, 2018; McDonald, 2014).

These macroeconomic trends have been consequential for transportation in Detroit. Many schools and districts turn to public transit as an important component of school transportation (Burgoyne-Allen et al., 2019), but the city's public transportation infrastructure is weak (Transit Research Team, 2013). Sixty percent of households in Detroit use a personal vehicle daily or almost daily, compared to only 7 percent taking the bus daily or almost daily (Gerber et al., 2017). The public bus system has suffered from significant repair needs, scaled-back route frequency, and a reputation for being unsafe and unreliable (Oosting, 2012). Less than half of carless residents are satisfied with their transportation options, and 43 percent report that they have missed work or an appointment because they did not have a way to get there, compared to just 14 percent for those one-third of Detroit households with access to a vehicle (Gerber et al., 2017).

School-based transportation in Detroit has also suffered from fiscal precarity. School transportation is expensive, costing on average nearly \$1,000 per student who receives transportation services (Institute of Education Sciences, 2019). Additional costs come from school bus driver shortages and transportation needs for students with disabilities (Burgoyne-Allen et al., 2019). Yet, local funding for districts is stagnate, and state funding is still recovering from budget cuts after the 2008 recession (Leachman et al., 2017). The economic challenges of school-based transportation in Detroit are particularly acute given DPSCD's recent bankruptcy and restructuring (Allen Law Group, 2019), Michigan's low growth in school funding compared to other states (Arsen et al., 2019), and the high number of students who receive special education services in the city, especially in DPSCD (Coalition for the Future of Detroit Schoolchildren, 2017).

The financial challenges for transportation also intersect with city geography. Detroit is a relatively low-density city (Linn, 2011), and an uneven history of school closings and openings has meant that schools are not sited responsively to the city's population distribution. For example, while schools have closed throughout the city over the past two decades, many new schools have opened in the downtown core (Green et al., 2019), though relatively few students live in this part of the city (Lenhoff et al., 2019), and the average student attending school downtown travels nearly six miles to get there (Singer et al., 2019). Consequently, Detroit's city and school transportation systems have greater service areas to cover compared to denser cities with more evenly sited schools.

Finally, Detroit's ability to coordinate transportation policies and capture economies of scale is compromised due to the fragmenting of school governance between DPSCD and charter schools (Kang, 2020). There is no uniform transportation policy. School choice also creates a complicated set of home-school commuter patterns as students opt out of their residentially assigned schools (Cowen et al., 2018). Thus, a public transit system that many families consider inadequate (Sattin-Bajaj, 2018), concentrated poverty that leaves many families without access to reliable personal transportation (Gerber et al., 2017), and the distribution of students across multiple school systems (Singer, 2020) complicate efforts to coordinate a robust school transportation system in Detroit.

<H1>Findings

Using an ecological perspective to describe the factors, context, and processes that restrict or create access to education, we present a robust conception of “getting to school” that looks beyond mode of transportation and offer three cases to illustrate the mobility injustices for Detroit families.

<H2>Getting to School in Detroit

<H3>School Transportation

At the time of our study, DPSCD offered school-sponsored transportation to general education students in grades K–8 if they attended their zoned school and lived more than 0.75 miles from it. This policy excluded about 70 percent of K–8 DPSCD students from school-sponsored transit. High school students were able to use their school IDs to ride the city buses for free, although routes were generally not designed for student use. For K–8 students who were eligible to ride the school bus or high school students whose route to school intersected with public bus routes, school-based transportation could have been a valuable resource. One mother of a third grader at Ross Elementary-Middle School shared that she chose that school over another she was considering because “they get the school bus” and “the school bus helps a lot.” Another mom of three children enrolled at Gaye Elementary-Middle School described what happened when her children missed the bus, showing how it normally served as a solution for getting to school: “Now, sometimes they miss the bus . . . walking is not an option. So, if I can’t get them a ride from my neighbors, if I have some money, I’ll have to catch a cab with them to drop them off at school.” Similarly, a mother of a third grader at Gordy Elementary-Middle described why she switched her son’s school: “He was at [another school], but I ended up losing my car, so I didn’t have a way to get him back and forth. So, I enrolled him at Gordy because it was closer to the

house, and they have a school bus.” This illustrates the interaction between an individual-level factor (losing the family car) and the macro school transportation context (school bus availability) to create first a barrier and then a solution to school transportation.

For high school students who lived close to a bus route, the city bus pass policy created solutions to what may have otherwise been transportation problems. For instance, a ninth grader at Jackson High School shared that he rode the city bus to school when he was staying at this mom’s house, since she did not have a car, but that his dad drove him to school when he stayed with him. For students eligible and able to ride the school bus or city bus, the resources provided in the school transportation microsystem created transportation solutions. The ecological approach helps us link these school transportation resources and policies with the factors across students’ ecosystems that contribute to mobility, thereby establishing deeper evidence on the various social, familial, and neighborhood levers that might be available to improve access to school.

<H3>Family and Social Factors

Family and social networks, parent work schedules, and family access to a car shaped both regular and backup mobility to school. Describing how these factors intersected with the available resources across students’ ecosystems creates a more complete and complex way of understanding school transportation problems and solutions than does research solely focused on the physical mode of transit.

Many families shared how social networks were essential resources to help with transportation. Friends, family, and neighbors supported each other to make sure students could get to and from

school. In many cases, parents depended on a family member or friend for transportation support on a routine basis. Others turned to their social networks when their routines were disrupted—such as when a parent had car trouble, was too sick to drive, or had a conflicting work schedule. In general, the families we spoke to made it clear that having social support made a difference in their ability to get their child to school and mediated other transportation challenges. As one parent of a fourth grader at Wonder Elementary-Middle said, “I have people that look out for her. Aunties, friends, they look out for her education.” A lack of this kind of social support, however, made transportation very difficult. A parent of a fifth grader at the same school told us, “I don’t have no help. I pick them up, I take them to school.” As such, even with regular access to transportation, sudden changes in routine made it difficult for families to get their children to school because there were limited last-minute resources available.

A major issue for the families we interviewed was parental employment and work schedules. Many were single parents or in families with only one car. If they were employed, their work schedules sometimes did not align with school schedules, forcing them to go to great lengths to find transportation support or, in some cases, to keep their children home so that they could work. Several parents discussed working twelve-hour shifts at factories and hospitals, some of which ended early in the morning, leaving them too tired to take their children to school. When asked for some of the reasons why he was absent ten days during the first semester, a ninth grader at Robinson High School said, “Probably waking up late. My mom, she works 4 pm to 3 in the morning. So . . . sometimes . . . she couldn’t get up.” When work schedules meant that parents were not available to take their children to school, and when students were not eligible for school or public busing, families tapped into additional resources. Several parents had more

flexibility in their schedules. Some worked before or after the school pick-up and drop-off times and, on most days, were able to get their children to and from school without issue. Others mentioned that their work gave them flexibility to support school transportation for their children or that they made special requests of their employers for certain shifts or break times. When juxtaposed with other parents' unaccommodating work schedules, work schedule flexibility stood out as a resource.

Vehicle ownership also had a significant impact on a family's ability to transport their child to and from school. Many families had access to a reliable vehicle and used a car as a primary mode of transportation or as a backup when buses ran late or did not show up. Some high school students drove themselves, dropping their parents at work to make sure they could get to school on time.

Lack of access to a car, even for families who owned one, presented a barrier. Across the sixty-six interviews we conducted with parents and students, not having access to a functioning vehicle was mentioned as affecting a child's attendance anywhere from once a month to a few times per week. In multiple cases, parents owned a car but lacked money for gas or maintenance. One mother shared: "So sometimes, they'll have to stay home, because there's no gas." Another mother said, "Oh, my goodness. I had for a month, every Friday, every Thursday, my car would break down in front of my house." Parents discussed the hardship of not having access to other transportation options when the household car was not working. In addition, families sometimes could not use their cars for school transportation because another member of the household needed to use it for work. In these instances, some described how they relied on the support of someone outside their immediate family. For others, financial hardship coupled with a lack of

social support left many families without an option to get to school. A parent of a tenth grader at Jackson High School described not having anyone else to call on when her car was not working: “The biggest challenge is her not having another source of transportation. So, if I wasn’t able to take her, then that’ll be a challenge to pretty much get her to school, because I don’t have a lot of people, or pretty much nobody, to rely on to be able to take her to school if I’m not able.”

<H3>Neighborhoods and Environmental Conditions

Parents and students also spoke about the effects of neighborhood and environmental circumstances on their ability to access school, identifying issues around neighborhood and school location, safety, and environmental conditions. These factors intersected with family and social factors and transportation policy to generate resources for accessing school and complicating some barriers to school enrollment and attendance.

While many families lived far enough from their children’s school that walking was not an option, some lived close enough that their children could walk to school, either as the primary mode of transportation or as a backup if they did not have a ride or missed the bus. Students were especially likely to walk to school if they lived on the same block or only a few blocks away. Walking, however, was often constrained by perceptions of safety as well as distance. Many parents did not feel that their neighborhoods were safe enough to allow their children to walk to school unaccompanied, and several families who lived close to school emphasized that they were comfortable with it only because they could watch their children from their front window or driveway. Others explained that their children walked in a large group, with siblings or cousins

who also lived in the neighborhood. And some parents walked with their children or had other family members who could accompany them most or all the way to school.

Safety issues also affected parents' comfort with the city buses. As one mother put it, she would not let her high schooler use the bus given "all of the stuff that's happening, that's going on in Detroit." Parents and students pointed to the threat of violence or the fear of child abduction, and they perceived walking to and waiting at bus stops, as well as the bus itself, as potentially dangerous. In many instances, these safety concerns were the main reason parents did not want their children to use the city bus to get to school. However, in some cases safety concerns were ameliorated by the intersection of familial and policy factors. For instance, several parents described how they did not worry about safety because they could physically watch their children access school transportation. In another case, the mother of a ninth grader at Jackson High School said that she worried about her son getting home from school in the dark, when he either had to walk or ride the bus, but that she was comforted knowing that neighbors and friends were looking out for him: "I know that I've got a parent that watches over my son, as well as he watches all the kids at the bus stop in the morning." Parents and students also indicated that winter weather affected transportation to and from school, mostly around safety issues.

<H2>How Ecological Factors Shaped Access to School

The ecological factors that shaped access to school are most clearly illustrated by analyzing how they intersect within families. We profile three families for whom factors across their ecosystems created both barriers and resources for accessing school.

<H3>Daisy, Terriah, and Jasmin

Daisy was a Black mother of two teenage girls who attended Jackson High School: Jasmin, a freshman, and Terriah, a sophomore. They lived in their own home with a friend who contributed to household expenses but was not involved in getting the girls to school. Daisy had a regular work schedule, a car, and social resources. Yet, she worried about the safety of her neighborhood and shared that she hated the fact that her children were not “allowed to be a kid . . . go to their friend’s house, ride bikes, and stuff like that. I don’t allow my kids to do that because it’s very dangerous over here.” Jasmin and Terriah were eligible to ride the city bus for free, but Daisy did not believe that at ages fourteen and fifteen they were old enough or responsible enough to do so. Therefore, although her children only missed a couple days of school a year, Daisy characterized transportation as a major challenge that shaped her decision about where to enroll them and one that created daily stress. When asked why she chose Jackson High School, she said:

<EXT>It was really the only school in the neighborhood. The only school that was close. I work, so it was kind of hard for me to get the girls to and from school. So, I would let them take a Lyft in the morning and I would pick them up in evening. But then it got very expensive.

</EXT>Daisy’s experience highlights the complex, intersecting factors and contexts that create transportation challenges for families. After Daisy determined that she could not afford to continue paying for a Lyft to get her children to school, she developed a new plan:

<EXT>My shift starts at 7:00. Up at 4:00, so I can make sure I get breakfast, take my medication, not forget anything, fix my lunch, whatever. Before I leave the house at 6:00, I'm waking my daughters up. They leave at about 7:30. So, since I no longer use the Lyft, I allow a friend of mine to take me to work, come back, grab the kids and take them to school. Then he picks me up at the end of the day and we drive over [to the high school] to get the girls.

</EXT>In a separate interview, Terriah shared similar details about her routine for getting to school and added that she sometimes asked her mom if friends could help: “Because I was a cheerleader, I would have to ask somebody, like one of my friends, to take me home or to come and get me.”

This case demonstrates how simply having access to a physical way of getting to school—a rideshare or a personal automobile—was insufficient for reliably getting to school every day. Rather, it was at the intersection of this family’s ecological contexts—the mother’s work schedule, a close family friend, owning a car, and access to a neighborhood school—where they found a solution to their school transportation problem. Indeed, despite having a physical way to get her children to school regularly, Daisy recognized transportation as a problem that affected her, and she expressed concern that, if one thing in her plan went wrong, it was difficult for her children to make it to school:

<EXT>It’s been working fine. But I mean, God forbid if something happens to [my friend], then I don’t know where we are, because I really have reservations about putting

them in the Lyft anyway, because one, they're so young, and two, you really don't know who these people are that are driving my kids to school.

</EXT><COMP: NO NEW PARAGRAPH>When we asked what would make it easier to get her children to school, she said, "Maybe if I didn't have to worry about [transportation]."

<H3>Lisa and Her Boys

Lisa, a Black mother of four boys in preschool through fifth grade, initially enrolled her oldest child, James, at Wonder Elementary-Middle when the family lived across the street from the school and then subsequently enrolled all her children there. For Lisa, Wonder felt like the only option, even though there was nothing in particular that she liked about it and she was even bothered that the school did not require any homework. After their initial enrollment, the family moved several times, and at one point they were living in a hotel. Lisa maintained enrollment at Wonder to provide stability for her children, but the family lived a fifteen-minute drive away from the school, which meant the children were not eligible for school busing. Lisa shared that, for an entire school year ,her mother arranged for a cab to take her children to school. The family used the same cab driver every day, and he sometimes took the children to school even if Lisa did not have money to pay him.

<EXT>Sometimes I'd be broke and I couldn't pay but I could pay him later . . . He didn't mind taking them to school because he said that he don't know a parent that [wants to get their kids to school] but they can't attend school because they got to catch a cab every day.

</EXT>At the time of the interviews, Lisa had a car and drove her children to school. However, her sons still missed more than 10 percent of school days in the first half of the 2019–2020 school year and were categorized as “moderately chronically absent” by the district. Lisa explained that she worked at a car parts plant from 10 pm to 6 am and that sometimes her “eyes are burning” and that she did not feel it was safe to drive her children to school, especially when she often encountered bad traffic. When discussing how her children felt about missing school, she shared:

<EXT>They understand because they know I’m the only one that takes them to school and picks them up after working 10 or 12 hours for 7 days. But when I come in and I’m tired, and my eyes is burning, do you want to get in that car with me if my eyes burning? That’s kind of risky.

</EXT>Like Daisy, Lisa had some resources to help her access education for her children. She had a car, income to pay for cab rides or buy gas, and some social support, through her mother. Though these resources allowed Lisa to enroll her children in school and support their attendance on most days, she still faced barriers to regular school attendance. The housing instability she faced created disruptions to regularly accessing education for her children. And while the district’s open enrollment policy encouraged her to remain at Wonder even after moving, it did not provide her children access to a school bus or another way of getting to school. In addition, Lisa faced challenging socioeconomic conditions that forced her to work seven days a week, exhausting her on some days to the point that she could not drive her children to school.

<H3>Tamara and Marcus

Tamara was a Black mother of three. At the time of the study, her son Marcus, a ninth grader at Franklin High School, was her only child enrolled in the school district. Marcus was “severely chronically absent” from school in the fall of 2019, missing 47 percent of enrolled school days. Through interviews with both Tamara and Marcus, we learned that although he missed a few days due to suspensions and skipping class, the primary reason he missed school was unreliable transportation.

Tamara had enrolled Marcus at Franklin High School because it was the only school in the neighborhood. They lived about two miles away—about seven minutes by car and thirty-five minutes on foot. Tamara felt it was “too far for him to walk to school,” however. Also, Marcus shared that he had experienced a traumatic event the year before when a friend was killed while they were walking together. This made him feel that walking in the city was unsafe, and he avoided doing it.

Although as a high school student he was eligible to ride the city bus for free, there was not a city bus route between their home and the school, and Tamara did not feel that Marcus was ready to ride the city bus by himself even if there were a route. The family had access to one car, which was the primary way Marcus got to school. While this car provided a solution to their transportation problem, it was not a reliable means of getting to school, as Marcus explained: “[My mom] ain’t had no transportation, because her car was messed up. My grandma had to go to work every morning, so she couldn’t take me.” Tamara confirmed that her car did break down

often. When that happened, Marcus took a rideshare service to school. However, Marcus said that, as a regular mode of transportation, this was cost prohibitive:

<EXT>But I ain't go for a whole week, because I ain't had no car, and my grandma said she ain't want to keep on Ubering me, keep on sending me Lyfts and stuff. . . . She said it cost \$40 just to come pick me up from my school.

</EXT>Marcus did not have access to a school that was within walking distance, and the city bus did not offer a route between his home and school. In addition, Tamara and Marcus's concerns about the safety of their neighborhood shaped their willingness to use certain modes of transportation. Finally, the family had a limited income. Tamara supported her three sons by working at a fast-food restaurant, and they often did not have the resources to fix their car when it needed repairs. Rideshare services were expensive, and while the family stretched their resources to use them when necessary, they often could not come up with the money, leaving Marcus home from school for extended periods.

<H1>Discussion

This study builds on the theoretical connections among transportation, educational access, and educational equity (Bierbaum et al., 2021) by empirically demonstrating how families experience school transportation problems and create solutions. In highlighting transportation barriers and resources at the intersection of students' micro, meso, and macro contexts, we find meaningful evidence of unevenness in the *distribution* of school transportation resources, limited evidence of *deliberative* and *procedural* justice in creating and implementing school transportation policies, and important implications for realizing *restorative* and *epistemic* justice in future school

transportation policy and research. While the specific findings and implications are embedded in Detroit, they are relevant to many school choice contexts where educational access and transportation equity may be at odds, including in the dozens of states that permit intra- or interdistrict choice and in regions with many charter school students and inequitable transit infrastructure, such as New Orleans, Chicago, Miami, and Phoenix (McShane & Shaw, 2020).

Documenting inequality in the distribution of resources is an important foundational step toward justice. Our analysis of the macro conditions in which Detroit students attend school shows how historical and contemporary governmental and institutional decisions have exacerbated, rather than ameliorated, the unequal resources at the micro and meso levels of the educational ecosystem. While families across the income distribution face similar challenges at the macro level, they have varying resources in their family, social networks, and neighborhood contexts. Students, therefore, have dramatically different modes of and conditions for getting to school, resulting in varying levels of satisfaction with school choices and levels of attendance when enrolled. These differences reinforce existing inequities in society, such that physical mobility to access school translates into social mobility (Cresswell, 2010). For instance, while lawmakers have expanded school choice options in Detroit and all but required families to “choose” schools, they have not expanded school transportation resources. Therefore, those students with greater material and social resources can transport themselves to any number of choice options in Detroit or the surrounding suburbs, while students with less can only access the neighborhood school to which they are assigned, where they may be eligible for the school bus or can walk.

While future research should more fully explore the deliberative and procedural dimensions of the transportation policy process, our research suggests that the students and parents in our study were not actively involved in creating or communicating about transportation policies in Detroit. While some parents and students were aware of their own eligibility for the school bus or a city bus pass, few had a meaningful understanding of the school transportation system across all their school choice options, suggesting that they made enrollment decisions based on incomplete information. We found no evidence that families had consented to or were fully supportive of the transportation resources, policies, and procedures governing their schools, and we found many examples of families who shared that transportation resources would be most helpful in improving their children's attendance.

The inequality in school transportation conditions and resources that we document calls for a move toward distributive and restorative justice through deliberative and procedural justice. As detailed in table 1, there are several school transportation equity concepts that align with dimensions of mobility justice. First, policy makers could work toward distributive justice by acknowledging the unevenness in access to school and designing initiatives to disrupt it. In Detroit, this might look like expanding the eligibility criteria for the school bus to include students who attend school outside their neighborhoods or live closer than 0.75 miles to school. DPSCD could also offer transportation to students attending a group of schools in their area rather than a single assigned school. Distributive justice, however, must go beyond expanding modes of transit. Equitable school transportation policy that attends to the complex interactions of micro, meso, and macro factors might also include state or district policies to equitably locate schools across unequal geographic landscapes, collaboration between employers and schools to

coordinate work schedules with nearby school schedules, and investment in childcare and aftercare availability and affordability. Reconceptualizing school transportation for mobility justice means considering how any number of policy and planning decisions may influence whether and how children access school.

Arriving at the appropriate set of school transportation policies will require policy makers to view students and their families as experts who are integral to decision-making around school transportation. This may mean a significant shift for many school systems, where policies like school bus eligibility are often made in district offices far from the immediate needs of students and educators in schools. In moving toward deliberative and procedural justice, school leaders could seek out parent and student input and trust it as expert testimony to inform policy; in addition, parents and students could be active participants in designing information about the transportation resources available and ensuring that their peers have a deep understanding as they make school enrollment decisions.

At the macro level, institutions like city and state governments, school districts, and philanthropic organizations could seek restorative justice by acknowledging and seeking to repair the harm of developing or advocating for policies with little parent and student involvement that ultimately created uneven access to school. In the Detroit context, this might involve major funders of school choice publicly acknowledging how expanding choice without improving the school transportation ecosystem has led to inequity in school access. In turn, it might mean major new investments in parent- and student-led coalitions to develop and advocate for school transportation policies.

Finally, scholars and policy makers can contribute to epistemic justice by “acknowledging and addressing the historical processes that have led to current disparities” (Bierbaum et al., 2021, 199), including by seeking to remedy power imbalances in who has school transportation resources and who is involved in creating transit solutions. Researchers who study school transportation should consider how to collect and analyze data that honor the expertise and values of students and families seeking to access school, putting them in conversation with the financial, logistical, and efficiency considerations of school districts (Martens, 2016; Sheller, 2018b). In turn, policy makers and school leaders who want to address mobility injustices should consider implementing and working with researchers to study innovations that include and go beyond increasing modes of transit.

Understanding school transportation ecologically demands that policy makers and researchers alike look beyond the school bus to how the macro policy context, the built environment, employment and economic opportunities, community bonds and safety, and individual social networks influence which students can get to school and where (Bierbaum & Vincent, 2013). Addressing school transportation problems will take more than just transit solutions. Policy makers can look to the creative resources families used to solve their transportation problems for potential answers, and they must also work to address the inequality in our broader society that has created mobility injustices and, in turn, limited the potential of social mobility through educational opportunity.

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TABLE 1 *Dimensions of mobility justice and related school transportation equity concepts*

Dimensions of mobility justice	Definition	School transportation equity concepts
Distributive justice	“How benefits and burdens are distributed in society” (Sheller, 2018a, 23)	Acknowledgment of the unevenness of familial, community, social, and policy resources for school transportation
Deliberative justice	The recognition of and respect for community members in the decision-making process (Sheller, 2018b)	School transportation policy designed to create equitable access to school
Procedural justice	“The meaningful participation of affected populations in the governance of transportation systems” (Sheller, 2018a, 28)	Students and families viewed as the experts in creating school transportation policy
Restorative justice	Those who have contributed the most to injustice bear the greatest responsibility for repair (Sheller, 2018b)	Students and families have access to and help generate information on school transportation policy with the aim of meaningful understanding and informed consent
Epistemic justice	“Allow participants to represent and perform their mobilities in forms and contexts that enable intelligible self-expression and . . . foreground the interests, power relations and social contexts that shape the epistemological characteristics of those self-expressions and mobility performances” (Butz & Cook, 2019, 83)	The institutions that created uneven school transportation policy (e.g., city and state governments, school systems, philanthropy) seek remedies

<TFN>*Note:* “School transportation policy” includes the resources, policies, and procedures for accessing publicly supported transit to school.

TABLE 2 *Absenteeism status of interview participants, fall 2019*

Absenteeism status	Parents	Students
Not chronically absent (<10% days absent)	9 (24%)	10 (34%)
Moderately chronically absent (10–20% days absent)	13 (35%)	11 (38%)
Severely chronically absent (>20% days absent)	15 (41%)	8 (28%)
<i>TOTAL</i>	37	29

TABLE 3 *Parent and student interviews by school*

School	No. of parents interviewed	No. of students interviewed
Ross Elementary-Middle School	5	-
Wonder Elementary-Middle School	6	-
Gaye Elementary-Middle School	5	-
Gordy Elementary-Middle School	6	-
Robinson High School	-	7
Franklin High School	6	7
Knight High School	-	2
Jackson High School	4	6
Reeves High School	5	7
<i>TOTAL</i>	37	29

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