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The 'walking/wheeling with' framework: establishing walking/wheeling with children as a mobility justice issue

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ABSTRACT

Adopting a mobility justice lens, this review paper brings together the often-fragmented literature on walking and wheeling with children and develops a 'Walking/Wheeling With' framework to understand and address the infrastructural, social, and cultural barriers that constrain these mobilities, and celebrate the many benefits they bring at the individual, family, community and planetary levels. Rooted in the everyday realities of care-giving mobilities, and adopting a disability-conscious lens, this framework emphasises that the removal of barriers to mobility enhances inclusion for all. Drawing from history, geography, disability studies, environmental planning, social policy, mental health, physical activity, and early childhood studies, we argue for a more cohesive, inclusive, and cross-sectoral research and policy agenda that recognises walking or wheeling with children as a site of both challenge and possibility. Ultimately, the 'Walking/Wheeling With' framework demands from researchers and policy makers alike that they systematically consider family/caring mobilities in relation to broader questions of access, inclusion, and movement in contemporary society. In practice, this might mean decentering speed and car-commuting while centering physical safety, slowness, health, civic engagement, environmental justice and inclusivity.

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Introduction

For most parents, that first trip out of the house, with a baby in tow, is a momentous step and the first time parenthood is performed in a public space. For many, however, that moment is tainted by the challenges encountered along the way: the absence of dropped kerbs, the cracks

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in the pavement and the armada of bins that make wielding a pram a cumbersome endeavour; the absence of benches to feed an infant; the smell of exhaust fumes evoking fears of harm to health; speeding cars and a lack of safe crossings; and, not least, the pressure to perform an idealised version of motherhood (Platt 2024). For some, that first walk is a negative experience that creates a barrier to further attempts, depriving parent(s) and their children of the physical, emotional and social benefits associated with walking, and encouraging forms of mobility that may contribute to environmental harm and community disconnection. While caring always involves various forms of mobility (and immobility), we argue that walking (and/or wheeling)¹ is a sustainable, just, and inclusive everyday caring practice, which can create a multitude of benefits not only for caregiver and children², but for the community and the planet at large, if social, cultural and infrastructural barriers at various scales - micro and meso - are removed. In this interdisciplinary review we respond to Sheller's (2018, 31) call to connect the scales of, 'body, street, city, nation, planet'. In this way, attending to the diverse research on children's/families' walking practices provide a concrete entry point for operationalising mobility justice. To do this requires an interdisciplinary approach that has thus far not been applied to this subject. Using our different disciplinary backgrounds, we critically examine the current literature on the subject using a mobility justice lens (Sheller 2018). Each discipline contributes to connecting different scales. Human geographers offer insight into embodied and affective experiences. Physical activity and social policy scholars contribute understandings of mental and physical wellbeing. Environmental planners bring knowledge of how neighbourhood design, transport infrastructure, and policy decisions shape possibilities for everyday movement. Early childhood scholars highlight how developmental needs, caregiving relationships, and educational settings shape young children's experiences of walking and being mobile. Historians provide broader temporal and structural context that explains how current conditions have developed while reminding us of the contingent nature of our present situation and how, in a very recent past, walking/wheeling was the dominant form of movement. Together, this interdisciplinary synthesis enables a more comprehensive and grounded understanding of mobility justice in everyday family walking/wheeling practices which we have visualised in Figure 1. In doing this review, we advocate for future research and policy on children's and/or family mobility to take into account a 'Walking/Wheeling With' framework.

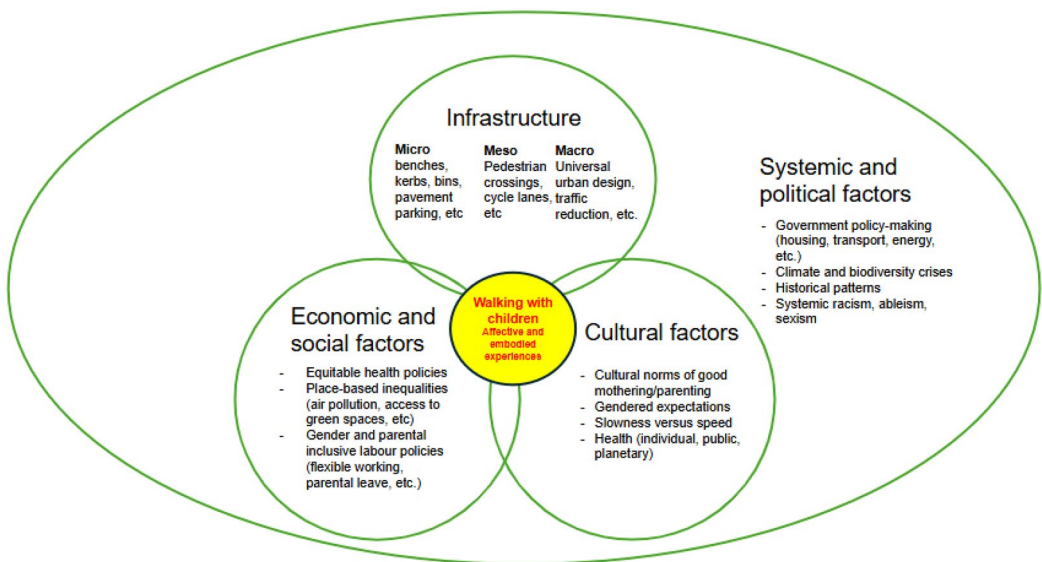


Figure 1. Walking/Wheeling with framework.

Walking in mobilities studies has a well-established body of research exploring its various dimensions increasingly concerned with the sensory and sensual aspects of walking, as well as its affective, relational, and material dimensions (e.g. Holton 2019; Horton et al. 2014; Joelsson, Balkmar, and Henriksson 2025; Laurier, Brown, and McGregor 2016; Mondada and Tekin 2024). In parallel, the influence of feminist theories and gender studies on the social sciences and the humanities at large have increasingly pushed mobility studies scholars to take into account gendered dimensions of walking (Andrews 2021; Männistö-Funk 2021). Studies on children's mobilities have highlighted the co-constitutive nature of age and mobility as socio-cultural categories (Gilbert et al. 2023) and the gendered dimensions of mobility-care work (Middleton and Samanani 2021). Yet, walking women and walking children are often, with exceptions highlighted in this review, treated separately, with studies often failing to examine the specific experiences that emerge when you *walk along with* or *wheel* with someone you care for, more specifically, a younger child (or children), who has their own mobility needs, challenges and desires. We know too little about how historical, geographical and cultural contexts influence these experiences. An interdisciplinary approach, situated within mobilities scholarship, which this review paper surfaces, is needed to interrogate the complex practices of walking and wheeling with children, as these intersect with domains beyond the humanities and unfold across multiple spatial and social scales.

In line with Sheller's (2018) framework, which links mobility to wider structures of power, inequality, and environmental harm, this paper 1) reframes safe and accessible walking/wheeling with as a matter of mobility rights, rather than individual choice and 2) argues that walking/wheeling with is a just, sustainable and inclusive form of caring that does not externalise environmental harms onto others and encourages engagement in the public sphere, a key benefit in the context of increasingly polarised polities. It therefore highlights the infrastructural barriers that shape and constrain these mobilities at the body, street and town/city levels. Further, it argues for an interdisciplinary approach in both research and policy that recognises safe and inclusive walking/wheeling with children as essential to both individual, societal, and planetary well-being. But the 'Walking/Wheeling With' framework is about more than infrastructure. Crucially, it integrates the social regulation of movement and how certain bodies are read, valued, or disciplined as they move through space. As the literature makes clear, pregnant and postpartum bodies tend to be more heavily scrutinised in public spaces and mothers³ are expected to perform caregiving in ways that are visible and deemed acceptable by societal standards (Longhurst 2001). This means that women's movements through public spaces with their children are often subject to judgement, whether in terms of their parenting choices, such as breastfeeding in public (e.g. Dowling, Naidoo, and Pomtin 2012; Grant et al. 2022); or adopting specific parenting 'styles' (e.g. Valentine 1997). These experiences of moral and social regulation underscore the importance of a 'Walking/Wheeling With' framework that embeds questions of care, embodiment, and relationality within mobility studies.

The 'Walking/Wheeling With' framework seeks to accompany and reinforce growing calls for dialogue and alternatives to the mobility status quo in the UK (where the authors live and work) and beyond. Over the last decade and a half, new campaigning and awareness groups that demand a greater focus on families and children in transport policy (Mums for Lungs, Solve the School Run) have emerged, while older ones (Living Streets, Walk Wheel Cycle Trust formerly Sustrans) have embraced an inclusive, intergenerational messaging. This trend was aided by the consequences of the Covid-19 lockdowns which arguably unlocked an 'active travel' renaissance in the UK and elsewhere. In parallel, policy initiatives such as the creation of low-traffic neighbourhoods and the introduction of default 20mph speed limits, as in Wales, UK, aim to improve the quality of the pedestrian experience by reallocating road space away from cars and reducing the harmful impacts of speeding (Aldred and Goodman 2020; Milton et al. 2021). The 15-Minute City pushes this further (Moreno 2024), reworking earlier twentieth-century urban planning and feminist critiques of the city (Kissfazezas 2022) and positioning the daily walking journeys of

children and their carers as central to neighbourhood design. Critiques of the '15 minutes' imagined in these planning models are built around a narrow understanding of who moves through the city and how (Soukhov et al. 2025). The temporal benchmarks obscure the diverse mobilities that shape everyday life. Moving with a child, pushing a pram, or accompanying a disabled family member transforms the rhythm and effort of travel, meaning that what is framed as a 15-minute journey for some may take twice as long for others. As Guzman, Oviedo and Cantillo-Garcia (2024) argue, such standards risk embedding exclusionary assumptions about ability, independence and efficiency. Centering access and inclusion requires recognising these varied temporalities and designing urban frameworks that reflect the variety of ways people navigate space.

Taken together, these policy initiatives challenge long-standing patterns in transport planning based on 'predict-and-provide', where road capacity is increased to accommodate predicted traffic increases, baking-in car dependency. Motonormativity (Walker and Te Brömmelstroet 2025 and Walker, Tapp, and Davis 2023), the unconscious bias towards the car as the natural choice for transport, poses ongoing difficulties for those who advocate for systemic change in the context of a system that has prioritised driving for decades (Docherty and Shaw 2019). The historical marginalisation of walking has resulted in its decline in most Western countries over the past century (Pooley 2021). Over this time, driving has become positively connected to mothering in public discourse (McCarthy et al. 2017), despite women being less likely to have access to a car for caring trips even when they live in car owning households (Rahman 2025). Policymakers, politicians and the public continue to have motonormative views, which means walking and wheeling with children continues to be seen as somehow lesser and reinforcing its marginalisation. We need to move away from economic models that prioritise car-commuters and challenge normative views that connect good parenting with driving. Instead, the 'Walking/Wheeling With' framework asks: for what, and for whom, should transport, and our streets, exist? Ultimately, the 'Walking/Wheeling With' framework demands from researchers and policy makers alike that they systematically consider family/caring mobilities in relation to broader questions of access, inclusion, and movement in contemporary society. In practice, this might mean decentering speed and car-commuting while centering physical safety, slowness, health, civic engagement, environmental justice and inclusivity.

The promise and paradox of walking/wheeling with children

Sheller's (2018) multi-scalar, relational ontology in her work on mobility justice illustrates how the everyday experiences of mobility cannot be separated from social and environmental justice concerns. From this perspective, walking/wheeling with children can be seen as more than an everyday practice: it becomes a way of exposing how inequalities in infrastructure, safety, air quality, and accessibility are embedded in wider systems of capitalism, social inequities, and environmental degradation. At the bodily or micro scale, walking is shaped by sensory experience, accessibility, and physical ability, while at the neighbourhood or urban scale it becomes tied to infrastructure, safety, and social interaction. However walking practices intersect with regional planning and transport policy, environmental concerns, and cultural norms, and at the global scale they connect to broader discourses and practices around sustainability, health, and mobility justice. In this way, scale provides a framework for understanding how walking is simultaneously an intimate, everyday act and a practice embedded within larger spatial, social, and political structures.

Throughout this interdisciplinary review we establish that this mobility justice lens exposes walking/wheeling with children as both promise and paradox. We identify robust evidence of the health, wellbeing and environmental benefits of walking with children. Those benefits function in a ripple-like manner, spreading far and wide from the individual, to the family unit, the local community and even more broadly the planet. At the same time, we situate this

discussion within a mobilities justice framework, acknowledging that walking/wheeling with mobilities are shaped by wider structural and scalar constraints.

The promise: health, wellbeing and environmental benefits

Even before a child is born, prospective mothers are told that walking is good for them. After birth, this is reaffirmed with the message that regular, low-impact exercise is especially valuable for them, and for young children developing early motor skills. Research evidences that reduced levels of moderate physical activity following parenthood, especially in mothers, is an identified concern (Dlugonski, Das, and Martin 2020), with mothers post-birth identified as a high risk group across a range of contexts (Currie, Boxer, and Devlin 2001; Gilinsky, Hughes, and McInnes 2012; Lee et al. 2016; McInnes, Dickson, and Barclay 2017; Watson et al. 2005). There is also a wealth of research evidencing the social and mental health benefits of walking (Pavlova, Teychenne, and Olander 2020). For many women, walking with children can create moments of social interaction (Platt 2024), connection with nature and green spaces (Milton et al. 2011; Neely and Schindler 2025), a stronger sense of identity as mothers (Boyer and Spinney 2016; McKeever et al. 2003; Platt 2023 and 2024; Qualmann, 2016), and community engagement and place attachment (Albin-Clark et al. 2024; Ergler, Freeman, and Guiney 2021), all of which can positively impact mental well-being. Hall et al. (2024) identified several mechanisms through which being in nature with a child may support postnatal health. These include those of biological/physiological nature (for example natural light optimising circadian rhythm, improving microbiome health, providing opportunities for physical activity), relational/social pathways, and cognitive and creative pathways. Walking groups are seen as supportive and are correspondingly popular (Pavlova, Teychenne, and Olander 2020) and a low resource, low barrier, means of engaging in physical exercise (Watson et al. 2005), and less intimidating than other options (Wagg 2010). They represent a promising intervention to reduce perinatal loneliness for both mothers and fathers (McInnes, Dickson, and Barclay 2017; Naughton-Doe et al. 2025b, Walker-Mao et al. 2024; Pavlova, Teychenne, and Olander 2020; Webb et al. 2023). From a leisure and physical activity perspective, evidence suggests that parental physical activity is a marker for children's later physical activity (Mattocks et al. 2008). This is even more important considering, according to Public Health England (2018), that health inequalities can manifest at as young as two years old.

Parents are also told by health professionals that walking with children has unique benefits for children. Expanding research on outdoor education highlights the important diversity of movement and environment experienced during a walk outdoors (e.g. Kiviranta et al. 2024; White 2011). Whether being carried or pushed along on wheels, the rhythmic movement of a sustained walk is often comforting for babies and, in many families, becomes vital to their daily rhythm of sleep and nap times (Rheinheimer et al. 2024). Once on the ground themselves, toddlers can support their own capacity for walking on the variety of surfaces their feet might encounter, from grass and gravel to mud paths. White (2011) has highlighted that the uneven nature of natural environments is an important element of discovering balance and stability whilst moving. The many sensory elements of weather, nature and the outdoors are experienced through embodied interactions between the child and the environment that shape their knowledge of the world. A child's physical and social interactions during a walk affect their understanding of the local neighbourhood (Clement 2019 & 2020; Rooney 2019). Wintoneak and Jobb (2022) show how this attention to the local neighbourhood when walking becomes an opportunity to disrupt common separations of urban and natural environments and focus attention on the local impact of human activity and climate change. Children's mobility and their everyday walks are also often inseparable from their play (Stenning and Watson 2024). Whether walking on their own, with siblings or friends, they seize every opportunity to climb, jump, touch, look, run, and explore, and to connect with the people, places and objects they encounter en route

(Horton et al. 2014), often with the result that ‘children’s movements are not linear but meandering, pausing, dwelling’ (Russell and Stenning 2021, 5197). Thus, encouraging walking is also a positive reinforcement for a play-focused education.

The everyday walking/wheeling of parents and their children has positive benefits beyond the family unit. Joelsson, Balkmar and Henriksson (2025) explored emotional and relational aspects of walking for families living in disadvantaged neighbourhoods. Not only is walking necessary to support daily routines, including shopping, visiting friends, travelling to schools and places of leisure, particularly for car-less households, but walking can also be understood as a form of mobile ‘caringscape’ that encapsulates self-care, care for others, and community care. This is echoed in work by Stenning and Russell (2025), which reflected on families’ daily walks during the first UK Covid-19 lockdown as spaces of care. From a more philosophical perspective, walking with children can foster a connection to the environment and offer insight into more sustainable approaches that would benefit us all. Rooney (2019) highlights how children’s encounters with weather when supported by adults who slow down and attend to elemental affects can foster open, curious dispositions toward climate challenges. Similarly, research in early childhood contexts by Myrstad, Hackett and Bartnæs (2022) and Wintoneak and Jobb (2022) shows that walking with young children is a situated, relational practice in which movement is intertwined with rich sensory engagement with place. Taken together, these studies suggest that children’s embodied, affective attunement to the more-than-human world provides a valuable model for cultivating sustainable ways of living.

High levels of transport-related air pollution increase the risks of numerous physical and mental health conditions (Nobile et al. 2023), and due to historical patterns of racial segregation, road construction and neighbourhood design, low-income and non-white communities are disproportionately exposed. For walking mothers and their children, these inequalities carry particular costs: rising childhood asthma, combined with gendered expectations of care, has made asthma a ‘racialized and gendered disease’ (Sze, 2004, 178). Although decarbonisation efforts often prioritise technological fixes such as electric vehicles, ‘active travel’ can be a highly effective urban strategy for meeting net-zero targets (Brand et al. 2021). Given the unequal impacts of climate change on Global South communities and the Global North’s historic role in producing emissions, choosing walking or wheeling over motorised transport provides an immediate way to reduce the environmental burdens that high-carbon lifestyles impose on distant others. Further, wheeling with, in the context of the Big Ride for Palestine for instance, can also become a means to denounce the planet-threatening elements of colonial racial capitalism. As Munro (2025) argues, children’s safety, whether in the car-dominated city or in Palestine, is a mobility justice issue.

As this section makes clear, a walk/wheel with children can qualify simultaneously as prenatal/postnatal care, early child intervention, active ‘neighbouring’ and community-making, free play, sensory development, international solidarity and harm reduction for public and planetary health. Studies show that, from lowering stress levels to lowering carbon emissions, ‘walking/wheeling with’ is a benefit-multiplicator.

The paradox: challenges and constraints from the embodied to the systemic

Clement and Waitt (2018) highlight that the ‘right to the city’ is uneven and experienced differently by a range of bodies, especially when these bodies have to move alongside and with each other. For mothers, who are often the ones given recommendations for increased physical activity (yet are rarely offered practical support), this can exacerbate feelings of guilt and failure (Lovett, Smith, and Teychenne 2024). Inadequate infrastructure (Stafford and Baldwin 2018; Wilkinson, 2025), social stigma around mothers’ mobilities (Platt and Powell, 2026), and postpartum women lacking in confidence to partake in physical activity (Apostolopoulos et al. 2021) are all elements that can impede engagement in regular outdoor activity and create what public

health scholars call 'lonelygenic environments'; that is, places where urban design and societal systems conspire to increase people's feeling of isolation (Feng and Astell-Burt 2022). Further, addressing parental loneliness through tackling lonelygenic environments is a social justice issue (Barreto, Doyle, and Qualter 2024). At the bodily scale, walking and wheeling with children is impacted by an individual's health, the physical infrastructures at a place-based scale (be that rural or urban) and the 'affective atmospheres' (whether positive or negative) created by such environments.

At a bodily, micro-scale, walking or wheeling with a baby is shaped by the vulnerable and often 'leaky' postpartum body (Platt 2024; Platt and Powell, 2026), which can contribute to isolation, stress and anxiety for caregivers who rely on walking as an accessible form of physical activity and mental health support (Lovett, Smith, and Teychenne 2024). The practical challenges of becoming mobile with a small baby are substantial (Boyer and Spinney 2016); even leaving the house requires managing a significant volume of belongings or 'baby-detritus' (Boyer and Spinney 2016), which can be exacerbated for parents of multiples (twins triplets, quads and more). While prams offer a partial solution for transporting this equipment, they can also be cumbersome in urban environments and particularly difficult to manoeuvre on public transport (Qualmann, 2016). Clement and Waitt (2018) highlight the embodied and affective burdens of pram-based travel. These challenges are intensified for disabled parents and for parents of disabled children; as Larrington-Spencer, Platt, et al. (2025) show, preparing for everyday mobilities requires careful strategic planning to ensure accessibility, comfort and readiness for multiple contingencies. Another overlooked barrier is the difficulty mothers of multiples face when moving through public space. September (2023) highlights the psychological and emotional challenges of transitioning to twin motherhood, including the practical difficulties of navigating the outside world. Building on this, Wilkinson (2024) calls for greater attention to the accessibility of public spaces for parents of multiples, noting how mobility with a double buggy or tandem pram slows movement and attracts unwanted attention from passers-by.

Parents walking/wheeling with children encounter challenges to their mobilities that are familiar to people living with disabilities. Infrastructural barriers, particularly in urban spaces, such as poor pavement and road conditions, absence of dropped kerbs and safe crossing points, steps rather than ramps and obstructive pavement clutter (parked vehicles, bins and, more recently, share scheme bikes and scooters) limit and constrain the mobilities of pram-pushing or cargo-bike cycling carers, scooting children and disabled people. Such research, from the social model on disability and walking, has been critical in uncovering how the built environment for walking has favoured non-disabled templates of use (Goggin 2016; Imrie 2000; McKeever et al. 2003; Stafford, Adkins, and Franz 2020; Stafford and Baldwin, 2018). These everyday exclusions at the street scale illuminate what Sheller (2018) identifies as a core, multi-scalar concern of mobility justice: that inequities in movement are produced through local infrastructures yet extend across wider social, political and environmental systems.

Indeed, perinatal loneliness is of particular concern due to its connection with mental illness (Naughton-Doe 2024; Naughton-Doe et al. 2025a). While walking/wheeling with children in groups has been recognised as beneficial for mental and physical wellbeing, barriers to group walks for new mothers include tiredness and low energy levels (Apostolopoulos et al. 2021; Pavlova, Teychenne, and Olander 2020; Rowley, Dixon, and Palk 2007), differing physical capabilities, fitness levels and birth related physical limitations (Apostolopoulos et al. 2021; Daley, MacArthur, and Winter 2007 and Milton et al. 2011). Competing demands on a mother's time also limits the ability for individual engagement (Apostolopoulos et al. 2021; Currie and Develin 2002; Rowley, Dixon and Palk, 2007). Alongside this, participants also mentioned a lack of confidence (Apostolopoulos et al. 2021; Rowley, Dixon and Palk, 2007), the costs of exercise, in particular for single income parents (Apostolopoulos et al. 2021), or in the context of walks in more remote areas which require equipment such as carriers and hiking boots (Rowley, Dixon and Palk, 2007). These intersecting barriers reveal how access to the benefits of group walking

is unevenly distributed, underscoring wider concerns within access and mobility justice about who is able to move freely, safely and affordably through their environments.

Within this mobility justice framework, embodied and affective experiences of walking and wheeling can be understood as both a site of resilience and a point of structural exclusion, a configuration that reveals how urban environments in particular are implicitly designed around normative bodies and temporalities. These experiences underscore that mobility systems remain oriented toward the able-bodied, time-rich, and economically secure individual commuter, while those undertaking forms of care mobility are rendered peripheral or burdensome.

A *longue duree* approach to the mobility justice framework

Reframing previous disciplinary research within a broader justice framework reveals how long-standing structural and systemic factors influence everyday mobility experiences. Bringing a historical perspective to these debates highlights how much of the present challenges experienced by walking families are the product of past political choices. The process through which urban environments have been designed in socially and spatially unjust ways has been an important focus of historians' work in recent years. Scholarship on the rise of automobility in the early 20th century has shown how politicians and urban planners sidelined pedestrians' concerns (Norton 2011 and 2021). Historians of North American and European cities have argued that twentieth-century urban planners prioritised the needs of driving commuters (who were usually male), over those of pedestrians who were more likely to be women and children (Männistö-Funk 2023; Norton 2011; Pooley, 2021; Rooney 2019). Rather than analysing the rise of car dominance in the 20th century as a 'natural', almost 'Darwinian evolution by technological selection' (Norton 2007, 333), they have shown that it was a contested process. The transformation of streets into major thoroughfares was borne out of socio-political struggles that opposed car manufacturers and other interest groups (the oil lobby, etc.) against pedestrians and, more specifically, working-class mothers who cared about the traditional role of the street as a safe space for children to play. We tend to forget the extent to which streets used to be a primary space for children's play (Winder 2024). In the first half of the 20th century, the rising numbers of children's traffic injuries and fatalities generated intense debates in the US and Europe over who belonged in the streets (Cowman 2017; Norton 2011). Around the same time, controversial policies, such as jaywalking in the US, successfully re-defined streets as places where children were only accepted if they followed strict rules (Norton 2007). Twentieth-century road safety education also put the onus on mothers and children themselves to keep children safe from traffic, and new technologies, such as pedestrian crossings, were aimed at subjugating pedestrians' needs to those of drivers (Moran 2006). Nonetheless, mothers and children won important victories when the first play street schemes were introduced in the 1920s in New York City and, roughly a decade later, in the UK. As Cowman (2017) describes, there was an element of class conflict in these debates with the understanding that car owners were middle-class, whereas children playing in the streets were usually working-class.

After World War Two the number of licensed cars increased rapidly, alongside extensive road building programmes and the replanning of cities around the car (Gunn 2011; Gunn and Townsend 2019). Mothers-led grassroots movements in Europe and the US pushed again for measures that prioritised children's safety, using innovative forms of protests, such as barricading streets with bins and prams (Gunn 2018; Männistö-Funk 2024; Norton 2021 and Cowman 2017; Watson 2025). Nonetheless, by the late 1970s such protests had only marginally transformed car-dominated cities. One famous exception is the Netherlands where the successful 'Stop de kindermoord' (Stop the Child Murder) protests of the early 1970s forced important urban design transformations that prioritised children's play and purposefully slowed down car traffic (Katsavounidou 2023). In the UK, there were similar innovations in the 1970s, with the widespread development of 'environmental areas', similar to contemporary low traffic neighbourhoods,

but these were short lived. Meanwhile, mothers in the UK continued to protest against traffic in this decade, but to little or no avail (Watson 2025). In the late 1990s, the UK Labour government, under pressure to tackle climate change, air pollution and rising child obesity, committed to reduce the number of school journeys made by cars by one-third and to encourage walking, and sought to reduce traffic dominance in residential streets through the introduction of homezones. However, these initiatives were not bold enough and had little impact. They were also undercut by cultural narratives (reinforced by automobile manufacturers' advertising) that normalised driving (Devienne 2024). As Sheller (2018) contends, in cultures built on automobility, the pressures of risk management, middle-class security, and pervasive notions of good mothering, often drive middle-class women into intense, car-led routines of mobility. Telling these histories matters, because they open up space for alternative pasts and futures where the car is not as dominant as it is today, and where children and their carers have a say in street design. History, in other words, reminds us that who gets to be considered a legitimate user of road and street space is contested and *can* change.

As such, to connect multiple scales, and to move, as Sheller (2018) suggested, from transport justice towards mobility justice, we need to attend to how caregiving routines - such as 'school runs', walking with babies in prams or carriers, or everyday errands with children - are impacted by inadequate pedestrian infrastructure, safety concerns, and limited access to green or recreational spaces. Such environments make it challenging for caregivers to navigate public spaces comfortably and safely, yet these issues are seldom central in urban and social policy agendas (Clement and Waitt 2018; Jensen 2018; Whittle, 2019; Wilkinson, 2025). These omissions may result from broader cultural assumptions that undervalue the importance of caregiving and family-based mobilities (Gilow 2020). Walking with children is often perceived as incidental or secondary to more productive or efficient forms of transport (Mikkelsen and Christensen 2009). But such practices are also embedded in infrastructure choices made decades ago, which 'lock in' urban mobilities around the car.

The walking/wheeling with framework

What do parents of the future, about to set out on that first walk with baby(ies) in tow, need? What about their children? As the evidence presented here shows, they need easy access to safe, step-free and pollutant-free walking/wheeling routes with inclusive infrastructure (benches, pedestrian crossings, green areas, etc.) and positive public health messaging where they see their families and specific needs reflected. Further, they need a societal sea-change in how we value different forms of transport, with priority given in urban planning and decision-making to sustainable, low-carbon and low-cost forms of mobilities, like walking, wheeling and scooting, that have health, wellbeing and environmental benefits. This can only happen alongside a broader commitment to housing and energy policies that simultaneously combat the climate and biodiversity crises, and wealth and income inequalities. In parallel, we also need new cultural narratives that challenge what we might call 'motonormative parenting' (that is the assumption that good parents drive their children) and reframe driving not as the default mobility for carers, but as a last choice. Approaching these debates from an interdisciplinary and intersectional perspective not only enables a broader view of the associated benefits - at the individual, household, community and planetary level - but can also dispel persistent narratives that present walking as evident, universal and easy. As carers of wiggly toddlers, recovering postpartum mothers and mobility-scooter users know all too well, walking/wheeling is not just a matter of goodwill.

Our review highlights a growing body of work on walking and wheeling with children, but also reveals a significant limitation: with a few exceptions, this research focuses on white, non-disabled, neurotypical and heteronormative families. Studies of parent-and-baby walking groups show that participants are predominantly, and often exclusively, white women from

economically advantaged two-parent households. We still know too little about how cultural diversity, gender, disability and socio-economic disadvantage shape both engagement in, and benefits derived from, walking groups (Daley, MacArthur, and Winter 2007; Rigby, Dodd-Reynolds, and Oliver 2020). This lack of support for everyday family walking practices reflects broader systemic neglect, limiting caregivers' ability to integrate physical activity into daily life and underscoring the need for a justice-oriented approach to designing inclusive, health-promoting environments.

More diverse research is also needed to illuminate mobility and environmental justice issues - such as inadequate walking infrastructure or higher exposure to pollution in low-income areas - that disproportionately affect some families. Attention to multiple-child families remains limited: beyond Wilkinson's (2024, 2025) work on the mobilities of parents of twins and triplets, little research explores how walking and wheeling are complicated when caring for multiples alongside other siblings. Similarly, research on families with disabled children rarely approaches walking and wheeling through an everyday mobilities lens; when it does, disabled children are still often framed as 'constraints' (Landby 2024). Bringing disability studies and mobilities research together can challenge the primacy of normative 'walking practices' by recognising wheeling as walking, and by highlighting disabled people as active access-makers across transport, leisure and everyday movement (Dokumaci 2023; Larrington-Spencer, Platt, et al. 2025).

Further work is also needed on walking/wheeling with children as a practice of activism, international solidarity, neighbouring and social connection. Historical research could deepen our understanding of the role parents, particularly mothers have played in 'persistent pedestrianism' (Norton 2021): everyday resistance to car dominance, air pollution and the erosion of the street as a legitimate space for children's play. Such histories remain underexamined in both Global South contexts, where automobilisation is ongoing, and Global North contexts, where many movements for clean air and safe streets were led by ethnic and racial minorities. Further research should also foreground the experiences of the car-less, not just the transition from car to walking that dominates transport studies. Examining the legacy of 20th-century urban design and road-building on family walking can help explain the roots of present-day environmental injustices, including the disproportionate exposure of racialised communities to traffic-related pollutants. Interdisciplinary collaborations across childhood studies, public health, urban studies and environmental justice could help uncover these untold histories and articulate mobility and clean air as basic human rights.

Methodologically, researching walking/wheeling with children and carers requires approaches that can capture its embodied, relational and multi-scalar qualities. Throughout this review we have seen how mobile and sensory ethnographies, walking interviews, participant-generated mapping, and multimodal/visual diaries can enable researchers to attend to pace, rhythm, affect and the micro-negotiations of moving with children, prams, scooters or mobility aids. Feminist and disability-informed methodologies further urge attentiveness to interdependence, fatigue, pain, care labour and access-making processes typically obscured in conventional transport studies (Larrington-Spencer, Verlinghieri, et al. 2025; Parent 2016). Participatory and co-produced methods, especially those designed with (a diverse range of) parents, disabled caregivers and children themselves, can help surface experiential knowledge that is often absent from policy discourse. At the same time, a multi-scalar methodological stance is needed. While street-level observations reveal infrastructural barriers and affective atmospheres of walking-with, policy analysis, archival research and spatial data can illuminate the broader structural forces, planning regimes, environmental injustice, automobility norms that shape these everyday mobilities. *Combining* these approaches can produce accounts that are both grounded in lived experience and attentive to the systemic conditions that enable or constrain walking/wheeling as practices of care, resistance and belonging.

In conclusion, advancing mobility justice requires more than accommodating strollers, push-chairs and prams or widening footpaths; it demands a reimagining of mobility infrastructures and policies through feminist, postcolonial, and disability justice lenses. This involves valuing

the slower, interdependent, and care-based mobilities that sustain everyday life; recognising them as central, rather than supplementary to urban design. In this sense, mobility justice becomes a call to reconfigure not only who moves easily, but whose movement is socially and politically valued, transforming the right to mobility into a right to belong, to care, and to be cared for within public space.

Notes

1. By referring to 'walking/wheeling' we include the use of mobility aids, pushchairs, carriers, scooters, trikes and bikes etc.
2. We use 'children' hereafter as shorthand unless otherwise necessary. We define this from newborns and, in the main, the works we examined for this paper focused on children who are not yet old enough to be independently mobile and are therefore accompanied with a caregiver.
3. There is a societal expectation that women provide the main care after birth and, in part due to social norms and inadequate policy, women are more likely to take longer periods of parental leave than men. This paper is not setting out to address these inequalities per se, but it is important that we frame our perspective in relation to wider systemic issues.

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