

Gasp! London's poor air quality, its impact on children and how play activities can be part of the solution

This paper highlights a serious triple threat to the health and wellbeing of London's 1.8 million children, and the grave inequalities that exist between richer and poorer areas. It also presents a solution that can be adopted in urban centres around the world at minimal expense and with instant effect.

London, unlike some younger cities, has a patchwork and at times chaotic design, thrown together over hundreds of years. Special consideration needs to be given as to how we can reconcile multiple conflicting objectives to achieve the goal of a healthy, active and fun city for our young to grow up in.

Children's independence, their health and their environment are all under attack. Their activities are increasingly regulated, access to space is limited and everyday freedoms are taken away. Opportunities to be healthy and socially active are being replaced with sedentary, isolated pursuits. While gaining an education, school children are being forced to breathe air polluted to illegal levels at a time in their physical development when they are highly vulnerable to the lifelong damage it can cause.

'Nearly 25 per cent of schoolchildren in the capital [are] exposed to levels of air pollution that break legal and health limits' (Howard, 2015).

The solution proposed, which could be applied anywhere in the world, is the implementation of temporary road closures, play streets, outside the school gates during the morning drop off and afternoon pick up; the times according to Tottenham Member of Parliament David Lammy when traffic emissions are at their highest.

School gate play streets would not only give children back some of the independence they have lost in recent decades, but it would also significantly reduce the concentration of toxic nitrogen dioxide (NO₂) that builds up during school run hours. London has exceeded the World Health Organization's limits for NO₂ and for particulate matter. As it stands London will not be back within legal limits on NO₂ until 2025 or beyond.

The Mayor of London's recently published 'Analysing Air Pollution Exposure in London' revealed that in 2010, 433 primary schools (out of 1777) exceeded EU limits for NO₂ pollution. Of these 433 primary schools, 82% were in deprived communities. The study also

found that 320,000 children attend schools in London within 150 metres of roads carrying more than 10,000 vehicles per day. This is the level of traffic found to increase the risk of developing or exacerbating asthma in children.

The walk to school is an important part of child development. It is often a child's first act of independence in their community, and an opportunity to widen their social group. It has been shown to improve academic performance as children arrive more alert and creative, and less stressed. It provides them opportunities to get outside and to know their surroundings and the exercise it gives them has long-term health benefits. Britain has the second highest rates of childhood obesity in Europe, and the highest concentration of obese children in the country can be found in London.

It is during the walk to school that previous generations made new friendships and had their first taste of independence as they brought an ice lolly on the way home or got a telling off from a stranger for climbing a wall. These were important life lessons, a daily opportunity to learn where society's lines of acceptable behaviour were drawn.

'Play on the way' experiences, the fun friends once shared as they walked, scooted or cycled together to school or the park or the shops, were also rich in mundane adventures, small moments where they were tested in some way; taking the short cut across the cemetery on a dark November afternoon, or dealing with a gang of big kids hanging out by the phone box.

Children grow up now one step removed from this direct learning with the emphasis on parents and increasingly schools to mark out the boundaries.

Being out and about is an essential part of childhood in most cultures, and with evidence from the University of Bristol that children are three to five times more active outdoors than indoors, they are more likely to achieve the Chief Medical Officers recommendation of a minimum of 60 minutes a day of moderate to vigorous physical activity (University of Bristol, 2015). According to the charity Sustrans a child's average daily walk to school can burn as many calories as a full two hours of PE (Sustrans, 2014).

In Finland, Germany, Italy and other European nations a child walking to school with their friends is still considered normal and unremarkable. However, parents in London are unlikely to let their eight or nine-year-old make the short walk to school without evidence that the threat posed by traffic has been reduced to an acceptable level.

Play space in London is shrinking. Every square foot of London soil has a heightened value compared to other cities, and little legislation exists to protect the spaces that children so urgently need. It is easy to see why cash strapped councils are closing adventure playgrounds for housing (Brent) for pay-to-play companies to monetize the space (Wandsworth) or simply to make savings (Camden). With play space so vulnerable alternatives such as play streets and pop-up playgrounds are emerging. Yet this is patchy and not a daily event and with almost a third of London's children not getting out to play

every day the impact on children's wellbeing is profound. The one place where children can get to play outside with their friends is the school playground. Play in school has suddenly become very important.

Parents want to give their children what they think is best for them. They want to keep them safe, and they want them to receive an education that will serve them well in later life.

However, the modern world can make these same parents behave in ways that directly contradict their own well-intentioned objectives.

Fear of their child being hit by a car compels them to drive to school, which simply adds just more traffic to the road and raises the risk of accidents, so a pattern quickly emerges.

They want their children to perform well academically, but delivering them by car takes away an opportunity for exercise, independence and to play with their friends, all of which are known to increase academic performance.

If it emerged that any other setting in which a child spends even a fraction of their day was subjecting them to dangerous levels of poisonous gas that could cause them lifelong damage, there would rightly be uproar. Yet the tendency is to pull up to the school gate, engine running, and to fill the air with toxins known to have negative effects on growth, intelligence and the heart and brain.

There is evidence to suggest that some schools might be reluctant to back a measure that could inconvenience parents who drive their children to school. At one London school, the senior staff team rejected the idea of daily play street sessions at the school gates because a local estate agent was a key donor to the school fete. The estate agent was also the head of a group of retailers that fought vociferously against a plan to pedestrianise part of the local high street. But schools have a duty of care to their pupils. If inconsiderate, dangerous motorists and poor air quality are having a detrimental effect on their children's health they must act.

The economic cost to UK parents of all this transportation is also huge, estimated at around £20 billion a year. (Hillman et al, 1990 cited in Freeman & Tranter, 2011).

Poorer neighbourhoods in urban areas lack access to natural green space. Children from such backgrounds therefore have fewer opportunities to access safe, clean public space and are at more risk from environmental problems, such as cramped housing conditions, air pollution and traffic accidents.

Play is a source of consistent and fulfilling enjoyment for these children, and for many school is one of the few remaining places where they can engage in active outdoor play with other children. School can also provide a place of safety for children who are experiencing difficulties at home or in other parts of their lives

Children growing up in poorer neighbourhoods are also less likely to have parents who are able act as chauffeurs. It is these children who have to endure the pollution from their classmates who can afford private transport.

On the other hand, the more affluent child driven to school in a bubble and shielded from the perils of traffic and fumes, becomes oblivious to the ever present dangers their poorer classmate must negotiate every day. Street sense and road safety are essential skills hard to learn nestled in the back seat of a parent's car. Neither child benefits from the traffic generated by the school run.

A child in London faces numerous manmade obstacles that conspire to thwart their natural drive to play. Many of these are the result of a long term trend toward short-sighted urban planning. While cities like Helsinki in Finland and Freiburg in Germany are relatively modern in their design and offer a built environment sympathetic to human activity, including play and children's independent travel, London developed and expanded with no overall plan or sustained consideration for how children might access schools, parks and playgrounds.

Serious thought needs to be given as to how we can enable children to enjoy their basic rights. Play streets which could run at both the beginning and the end of the school day would achieve a number of things. The pollution caused by countless cars arriving, idling, parking and manoeuvring would be significantly reduced. Traffic accidents outside the school, some 65% of which occur during these times of day, would also be reduced (Morris et al., 2001, cited in Malone, 2007).

Children would be able to experience some brief moments of independence, to freely engage in play, to socialise with peers, and to simply enjoy the world around them.

Small-scale trials of daily school gate play streets have been staged in Edinburgh and Birmingham, but it is in the UK's capital where the concept must be adopted as a public health measure first and foremost.

Consideration would need to be given to where cars were making the drop off and collection, so as not to simply move the problem elsewhere. Children with disabilities, or those whose parents have disabilities, would need to be able to get to school without attention being drawn to their special treatment. These are issues that would have to be addressed on a case-by-case basis and the school's staff would be best positioned to find the best solution.

With positive parental engagement this scheme could also see a drop in the number of parents making even the first part of the journey by car. Measures such as walking buses would further reduce the reliance on the car and increase further the child's outdoor time engaged in physical activity with their peers.

We need to rethink how we build our cities and towns. Future developments should prioritise considerations on how their design can support children to be active and independent within their community. They need to be designed to welcome their young.

The Disability Discrimination Act (1995) passed to ensure people with disabilities could enjoy the same services, employment, property ownership and education as non-disabled people. It required all services from five star hotels to public libraries to make reasonable adjustments in order to remove the obstacles that previously made it difficult or impossible for disabled people to access. Within a ten-year period, buildings added lifts and ramps, retail staff received disability awareness training and cinemas and theatres fitted hearing loop systems, just a few of the many changes made.

A similar shift needs to be made to put in place guidance and/or legislation that protects a child's right to play and to engage with and to explore their neighbourhood on their terms in a healthy clean air environment.

When childhood is visibly at the heart of a community the urban child will no longer be threatened by the environment that surrounds them. Rather the environment will support them to unlock the wonders of a city they will one day inherit.

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