The positive and negative influences on the provision of healthy transportation

Life, Home

It is well documented that transportation systems for decades have had a powerful impact on health. These impacts are not new but as cities have become increasingly important and agglomerated, the impacts on health has been more severe and clearly have affected in an unfair manner. An appropriate starting point for any discussion of transportation systems is to establish the definition of the term and identify its components so we can understand this harming relationship. This essay aims for to two things. First, aims to show how current transport systems are linked to: the acceleration of climate change, an increase in mortality rates by worsening the physical conditions of the inhabitants, and also how they are agents for the deterioration of mental health. According to the World Health Organization health is a fundamental right (World Health Organization, 2017), up to what extent are we going to continue to allow the current model of transportation system to stop us becoming healthier? Secondly, I aim to show with clear examples how some cities are attacking this problematic by shifting gears, literally, by empowering active transport and by giving priority to the concept of walkability in our cities. These plans are not just any experiments they tried to conduct but in fact proper studies based on existing theories seeking for a healthy and an increase in social wellbeing for city residents.

The textbook definition of a transportation system or mode is: a system for moving persons or goods consisting of three components: the equipment, the guideway and the operation plan (Boyce, 2006). The systems operate within a larger economic, social, and physical environment, which means that their impact, whether positive or negative, also affects at all levels. As a result of increasing mobility in a globalized world, the impact on health has

become more severe and for the first time we resorted to analyse the data of the negative externalities that transport systems have and how they directly or indirectly affect us. Primarily, the main problem about the current model is that all our transport system depends on fossil fuels. The three components operate under a carbon lock-in which studies shown that in 2014 transportation accounted for 15% of the GHG emissions worldwide (IPCC, 2014), as show in graph A. At the same time, studies showed that 95% of the energy for transportation comes from gasoline and diesel.

This carbon lock-in is what drives the worsening of our air quality and the overall environment, which has been associated with: premature mortality and chronic health problems. The air pollutants from transport affecting citizens are: particulate matter, nitrous oxide, ozone, carbon monoxide and benzene. These toxic particles being “ consumed” on a daily basis increment the risk of a significant number of health problems, including cardiovascular and respiratory diseases, cancer and adverts results at the time of giving birth and are associated with increased rates of mortality in the exposed population (Anon, 2014). Exposure to heavy traffic, for example living near a main road, is itself associated with a poorer health of children and adults and increased rates of death (Brugge et al., 2007, Health Effects Institute 2010b). Furthermore, the same research group found on a study that over 95% of the world’s population is breathing unhealthy air. This contributed to the death of 6. 1 million people in the world in 2016 with diseases such as: stroke, heart attack, lung diseases and lung cancer. So, if 15% of that poor

air quality is from transport, then transport have direct responsibility of 915, 000 of those deaths, clearly an unsafe and unhealthy system.

On the other hand, Monica Keaney and Esben Aslund-Lanthén, research analysts at thinktank Sustainia, say that badly planned urban landscapes are polluted, tend to discourage physical activity and promote unhealthy food consumption. They even increase the risk of depression by 12%-20% from a range of related activities within the urban scenario. This lack of planning is the key ingredient for the car dependency for many years, which in fact is a huge point of concern. The traumatisms and injuries caused by traffic produce 1. 3 million deaths per year worldwide (World Health Organization 2008), with up to 50 million people injured (Peden et al., 2004). The load of traumas caused by traffic is growing along with the increase in motorization. It is projected that by 2030 road traffic will represent almost 5% of the global burden of mobility and will be the third cause of death in general (World Health Organization, 2008c). About 90% of the burden of disease caused by traffic injuries occurs in low and middle-income countries, which tend to have more dangerous travel conditions by the lack of proper regulations. This clearly shows that transport externalities affects negatively but also in an unequal way from the socio economic standpoint and the demographical context. .

After analysing the negative impacts and the transportation projections, the panorama is not the best for our future. Fortunately for our cities, there is a solution at hand and it is called active transport. We define active transport as: the non-motorised forms of transport involving physical activity, such as

walking and cycling. It also includes public transport to meet longer distance trip needs as public transport trips generally include walking or cycling components as part of the whole journey (Villanueva et al, 2008). Active transport needs the space to fundamentally change how our current transport systems actually work. As the WHO has identified that: insufficient physical activity will be the fourth leading risk factor for global mortality (World Health Organization, 2017), with active transport we are tackling these, and all of the problems mentioned before. The best example for this is Copenhagen. This truly city of cyclist have been by far, the leading example for shifting their “ killer” model into a healthy one. The ambition is for the city to become the world best city for cyclist by 2025. The vast network of safe, segregated bike lanes crisscrossing the city has encouraged citizens to choose the bicycle over the car and most importantly their health wellbeing. A health impact assessment shows the following results: “ the increase in cycling and walking reduce the burden of disease in the study population by 19. 5 DALY annually. This overall effect comprised a reduction in the burden of disease from health outcomes associated with physical inactivity (76. 0 DALY) and an increase in the burden of disease from outcomes associated with air pollution and traffic accidents (5. 4 and 51. 2 DALY, respectively)” (Holm, 2012).

Our second method for creating a healthy place is to design to become a walkable city. Southworth defined Walkability as: the extent to which the built environment supports and encourages walking by providing for pedestrian comfort and safety, connecting people with varied destinations

within a reasonable amount of time and effort, and offering visual interest in journeys throughout the network (Southworth, 2005). The underlying idea of the theory is to create fine-grained pedestrian circulation that breaks with the sedentary lifestyle and encourages social interaction. By breaking this lifestyle we will directly strike the high levels of blood pressure and risk of hypertension linked heavily to the car usage (Hunt, 2018). Transport for London have develop an action plan called Improving the health of Londoners which they create a framework to evaluate and improve the health of their streets. On their framework they identify 10 indicators ranging from health to economic impacts and found surprising results just by designing towards walkability. For example, Londoners found themselves expending around 1 billion euros yearly in treating people with asthma (TFL, 2018). With their focus on walkability principles the aim is to reduce that expenditure to 50% in a 5-year window, proving to be one of the most successful health related policies establish outside the health departments.

The positive health outcomes that come with the proper management of the transportation system are undeniable. However, very few cities really want to change the current system. We live in a world where everything that surrounds us in a certain way is in a carbon lock-in. If we want to change we need the support and political will and a multidisciplinary collaboration. In both examples it is noted that collaboration between researchers, the public and private sectors have worked together to be clear on the objective detailing long term goals and detail actions plans. Finally I want to conclude with the concept that cities are living organisms because they have and are

alive. Cities must evolve and adapt to survive in an ever-changing world. A city’s choice is simple, evolve and adapt or perish. So if our roads are our skeleton and blood vessels why we allow them to be as unhealthy as possible.