MOBILITY POSITION PAPER

_Mobility vs Landscape (or cars vs city)

Special to DVN Interior, thanks to INDUSTRIOUS_ who is a design professional, an urbanism researcher, a mobility optimist, but also a Technology enthusiast and an always inspired maker.

Once upon a time, in early 2020, mobility as a whole was put on hold and we were all confronted with a confinement dystopia. We found ourselves looking out of the window into a static urban picture. Movement had become all of a sudden very rare and spotted by reflex. During this period we all discovered some good books to read—"Landscapes in Motion", (*Desportes, M ., Paysages en mouvement, Gallimard 2005*) is a very good read offering historical wisdom about another era and the origins of the perception of mobility, and most of the historical references bellow are drawn from this book. Particularly intrigued by the contrasting appeal of the city of Paris under the exceptional circumstances, the reading of this book and the actual happening outside my window came together.

Mobility during confinement was diluted into its very basics and gradually took another form. Soon enough, delivery vans of all kinds and segments where hovering the deserted cityscape on a quasi-optimal ‘congestion-free’ road grid. Paris' city center appeared as a logistic network of white delivery vans, moving with uninterrupted optimized linear trajectories. Braking, accelerating, avoiding pedestrians, bicycles, and other obstacles and often traffic lights and priority signs, did not matter anymore. Paris looked just like in an imaginary world of virtual mobility or any commercial of urban vehicles that does not have to match reality defined by congestion and chaotic

interference between cars, buses, pedestrians, bicycles, scooters, and all other sorts of conventional means of urban movement.

In just a few hours, an optimized logistic ecosystem was emerging and transforming the city into a new type of mobility platform with all social activity and human interaction kept behind walls. Immobilized citizens relied on all the services reaching out to them. An inverse paradigm: The definition of mobility segregation! It took several weeks before a 'third place' was established when a few restaurants, cafés, bars, bistros have been converted into a hybrid drive-by/take-away type of activity, and consequently the entrance of the establishment became the only place for human interaction. By being limited in our district, we became observers of movement through our windows like snipers targeting the next move in a still panorama. An unusual new experience took place, since we mostly spend our time on the other side of mobility: the moving one, looking out through the window of a car, bus, or tram towards the cityscape.

Moreover, popular premium or central locations have gained value over this notion/practice of observation from the vehicle towards the outside. Our relation to the city values, built by moving on known paths and trajectories, kept augmenting the psychologic and aesthetic value of the specific place, environment, and estate. This period of static observation has helped us to reexamine, reevaluate, study, and revamp the relationship between cityscape and mobility. Our dogma of 'location' has been challenged; real estate and housing, all of a sudden, is defined by 'how we get there'.

Up to now, we have been the masters of our mobility, in charge of driving, riding, and marking trajectories, while observing the surroundings. We have built the modern world by using vehicles to discover new destinations and get to them, and built further and further more. Therefore, the vehicle was creating its own environment a bit at a time and by practice, we have become great observers of the moving cityscape. The contrast with the current situation is stunning since for one moment we believed that we have passed on the other side and we are now part of the static scape observing the path of mobility. What seems to be devastating though is that feeling of not being in charge any more of anything that moves. It feels like we delegated to mobile devices all our needs and we expect to be served. An optimized autonomous mobility scenario was revealed. On the verge of autonomous electric vehicles, often state of the art, and our perspective of mobile infrastructure, the stakes are huge. Pioneering technology is putting together the interface and new participants, who bypass sheet metal stamping and automotive manufacturing practices, are coming on stage as we speak. Covid-19 comes to add an extra layer on this paradigm and draws a different utopia.

The unexpected pandemic splashed our comfortable definitions and perceptions of mobility with a tiny bit of reality, reminding us that whenever hardship came about, mobility was a physical act. It is not about history repeating itself but it is about a new level of infrastructure founded and spread on top of previous ones. Sometimes, what happens is filling the holes, left or generated by earlier technical, social, geopolitical facts, and other times is creating bumps or towers of overwhelming trends to cover and fulfill further on. Layers of history accumulate on top of each other with somewhat

similar patterns; layers of mobility infrastructure develop on similar ways, different context. The interesting observation of history is that more often than not, previous developments coexist within recent modern ones but in another depth. So let's deep dive, instead of going back in time, in mobility infrastructure overlays in an attempt to better perceive—by pure memory or reflex embedded into our modern mobile self—the roots of mobility on which we evolve. This history snapshot is not descriptive and does not aim to draw parallels but rather to inspire new perceptions on the subject under the actual circumstances.

We could draw 'Minecraft' or 'SimCity' parallels with earlier stages of this relationship between vehicle and environment, but beyond all measurable and objective achievements, there is a less rational parameter that forms environment and motion the way we understand it: Our perception of space.

The appreciation of surrounding space as we enjoy it today is situated in the Renaissance with the invention of the spatial framework. Crossing a landscape on horseback or carriage was an early practice in mankind but assuming the role of a landscape observer and defining landscapes on artistic cues, that happened most likely at the moment that closed carriages with windows (spatial frames) are used often enough to form a public view on surrounding matters. Within a century, a major evolution takes place on the perception and description of landscape: constantly observed through a frame (carriage window) and assimilated to painting. Closer objects are difficult to observe due to proximity and speed and this fact becomes obvious once railways become a common mode of traveling. Looking sideways and not forward is also a condition; meanwhile we are assisting the dissociation of the driver who is in charge, looking forward and we define voyagers as passengers, experiencing lateral landscape view. In the 17th century horse carriages start forming by frequency and density beaten paths through popular destinations while the observers' role is assumed by sitting inside a carriage looking out. Soon after, recharging stations, 'chateaux et relais' appear along the longer paths as the first landmarks of mobility infrastructure often combined with inns to support longer trips. Viaducts and bridges later on are painting the technical landscape.

For governance and policy reasons, the necessity of a coordinated development of the dominant mobility paths emerged. Every road project initially was like a startup, advancing its own way in isolated mode. In the absence of global planning, the first hand-drawn maps appear, called 'partials'. The collection of all this, scanned by traveling, experience info constitutes the first central entity that is set up by the state to coordinate a global road network and unite all mapped information. The Bureau des Dessinateurs was founded in 1743; prior to that all paths were sketched or scribbled without any proportion or reference. The Bureau is responsible for centralizing and updating the route plans, laid out in the form of large maps under the responsibility of a geographer. A few years later, a real corporate structure was put in place under which, official instructions are issued for the management of all teams. Geographers, cartographers, and designers were briefed with the necessary practices to fulfill the

various jobs of bridges and roads with all plans, maps and memories related. The first norms were written and implemented. By 1776, two thousand archived maps representing 14,000 km of roads—and the technical knowledge accumulated—had such an educational value that the Bureau was considered the first engineering school in the world.

In addition, the administration imposed specific standards such as carriages carrying a percentage of their weight in stones (pavés), to further build the road as a contribution/tax on mobility within the network. Later on, more technical norms were standardized such as specific angles and radii on the road surface—for example, on the Paris-Versailles rive gauche, an angle of one millimeter per meter and a radius greater than 800 meters.

The road is a catalyst, not only in space but also in use. It cuts, copies and pastes the canvas of traditional space, shattering and then regroups the preexisting organization inherited from the feudal age into a new territorial framework.

In a parallel technical reality, carriages progress through user experience. Wheels and suspensions became friendlier to passengers. The simple strips of leather supporting the carriage were replaced by spring systems with various joining techniques and continued evolving. This series of progress gives birth to multiple types of vehicles. Most popular were the 2-wheeler chair and the 4-wheeler sedan called the ‘berline’ (made in Berlin). The technical progress of the carriages contributed equally to road maintenance.

Meanwhile, horse-power management became a main financial issue and the idea of “mobility sharing” began with horse carriages and postal services. A protocol of horse management related to speed vs distance became an incentive of social distinction within the ‘Relais’. In *1681,* public services-imposed controls on the weight to optimize horsepower-share and just at this moment berlines became popular. They offered efficient repartition of weight on four wheels and a better ratio of weight vs power, therefore friendlier to paved roads.

Growing remarks of the traveling passengers on visual references (farmhouses, barns, trees, and other landmarks or open views to the sea) gave a good understanding of the first spatial markers allowing a better description of the surrounding space and distance. This new quality is close to what we would describe as a beautiful perspective, term directly drawn from the vocabulary of geometry and painting. Several references also relate to this new man-made element, the road, in comparison to another road and surroundings. The perception of space in this case, is inherited by the conception of the French-style garden. It could be simply defined as a promenade in landscape perspective that offers a walking path and a surrounding view to the infinite, in perfect symmetry, and architecture aiming to demonstrate that man, or rather the Sun-King, controls nature. Engineers of the Bureau are heirs of this elaborate experience.

It has been said that *'The road functions like a spatial revelation! There is a certain madness in the act of seeing, since to see is to see from a distance and be satisfied with this de-materialized possession. The new route contributes to this madness: by facilitating movement, it encourages the traveler to lock himself in a pure visual exploration and to enjoy it plainly.' ('M.Merleau-Ponty cited in Desportes, M ., Paysages en mouvement, Gallimard 2005).* The 18th century road was not only a technical achievement but also an artificial landscape scenery.

Following that, the establishing of railways and framed glass windows flag a new stage of perception that helped bring the wilder and invasive landscape into artistic, street-view-like representations of landmarks and private properties, towards a new geography of production and housing. However, another transformation catches our attention: the implications of railway technology on the perception of the spatial framework. Indeed, during train journeys, a new look is formed, described as panoramic. To understand this requires references to contemporary modes of expression such as photography, painting, and motion picture. But the passage was not easy, and the new mode of transportation presented deeper challenges and compromises. During the traditional voyage, the traveler participated in the effort of displacement, by descending from his vehicle on steep roads, and helping the effort provided by the horses. The mechanical culture of railways imposed a blind pulling force that ignored the traveler. Prior to that, on horseback or carriage, it was always possible to look straight ahead, in the direction of the road, and understand the space crossed in all its coherence. In a train compartment, vision is limited to what scrolls past the window frame.

Rail travel broke the contextual approach and sensory experience of surroundings established during previous journeys, whether made on foot, on horseback, or by carriage. The 19th-century traveler experienced instead a bunch of artificial sensations: isolation in his compartment, mechanic noises and vibrations, smoke, and fugitive visions of the surrounding land. Railway pathology also refers to physical discomfort as a result to the close proximity of travelers with social and cultural implications. This common journey brought a certain equality of travelers in front of technology. However, the train—by establishing hierarchical classes—had to function as an instrument of social segmentation. 'Social distancing' on the railways was a real subject at the second half of 18th century, to the point that it created its own market. People within the same cabin kept distance from strangers by reading; some known editors are associated with this event. Book, newspaper, and travel guide sales skyrocketed. In 1848, WHSmith offered a concession deal for bookstores inside stations. The argument was simple: as soon as the traveler enters the wagon, the journey becomes monotonous and boring while they are transported just like a commodity. The idea of converting this static experience into something interesting led the idea of a railway library with works of a convenient format.

The new mode of transport participated in a profound evolution of modern society. The link between man and his immediate environment began to disintegrate. For the last century we have lived in the most intense period of human mobility, resumed as the saga of automobile. Our modern mythology of motion exceeded expectations of all possible or imaginary scenarios of speed, distance and form. It has amplified our previous experience into an embedded muscle memory of movement. Automobile has been the center of our spatial observations up-to-date and with the new tech we are witnessing its rapid transformation into a new era. Is the autonomous shared vehicle another ‘brick in the wall’ or another pavé on the road? Morphological aspects of this new object will change and improve our perception of surroundings and hopefully the side-window reality will be restored through this historic passage.

This static period of confinement, has certainly raised many mobility questions. Within this rapid historical overview, digital intelligence is a new technology layer. Disruption will only come about if we enable creative solutions to go beyond optimization; there are more and different types of intelligence to implement in our cars in order to make a pleasant and exciting ride. If our mobile anthropology is based on the distinction between being mobile and being transported, how does that change with a specific generation? There should be creative ways to break the generation out of the market in order to ensure continuation of this industry and transform our vehicles into an exciting lifestyle-enhancing product. It is easy to project towards technological certainties and economic efficiency, but difficult to make something exciting. It seems like the challenge was never different through every evolution phase of mobility. We learned that when new technology applied at the bid of optimization, it goes beyond human reach and maybe we need to consider perception over optimization. Possibly, we could modify or even delete, if needed, previous infrastructure layers and readdress past paralyzing decisions. The future of transportation could be the legacy to our grandchildren and our future vehicles and infrastructure may resemble to them as heritage of the past. Mobility is a personal choice!

History has proven that any transition is a complex process involving various technical, economic and anthropologic factors. Technology augmented human capacity and amplified social inequality. A paradigm shift cannot be managed singlehandedly; the character of such transformation attempt is participative. It is likely that new applications will far exceed our expectations but at the same time, unforeseen phenomena take place and brand our history. New types of vehicle trajectories will create our new relationship with surrounding space and will establish our new perception of values. Without being physically present and in charge, the ride becomes a blind devotion of technology to us, and not our achievement. Are we there just for the ride? With Covid-19, we took a glimpse of the new era: transportation being the new frontiers.

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