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CYCLING TOWARDS EQUALITY
Challenges and opportunities of adopting an eco-social approach to urban mobility planning within different European contexts

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CYCLING TOWARDS EQUALITY

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ABSTRACT

La crisi climatica è un pericolo più attuale che mai. L' approccio ecosociale mette in evidenza la stretta relazione tra ineguaglianze sociali e ambientali, considerate come due forze che si alimentanto reciprocamente. Il paradigma di sviluppo Neo-liberista basato sulla crescita ha perpetrato questo circolo vizioso di ineguaglianze sociali ed ambientali, focalizzandosi sugli indicatori economici come il PIL, piuttosto che sul reale benessere degli individui. Questa prospettiva è stata estesa a tutti gli aspetti principali delle nostre vite, compresa la mobilità. All' interno del contest Europeo, questa sfida sta venendo affrontata attraverso il New Urban Mobility Framework, in linea con gli obbiettivi del Green Deal Europeo. Questa tesi indaga su quale può essere il ruolo della bicicletta in tale scenario. Collegato a questa prima domanda, tramite l' analisi di due casi studio, questa ricerca si concentra sulle principali sfide e potenzialità relative all' utilizzo dell' approccio eco sociale per ideare politiche di mobilità in diversi contesti all' interno dell Unione Europea.

ABSTRACT

Climate crisis is a clear and present danger. The eco-social approach considers social and environmental inequalities as strictly intertwined, and jointly reinforcing. The Neo-liberal paradigm based on growth, perpetrated this vicious circle of environmental and social injustice by focusing on economic indicators rather than people well-being. This perspective extended to all the main aspects of our lives, included mobility. In the European context, this challenge is being faced through the New Mobility Urban Framework, which is consistent with the European Green Deal Goals. This thesis investigates about what could be

the role of bicycle in such scenario. In connection with this, by analysing two case studies, this research focuses on the main challenges and opportunities of applying an eco-social approach in devising mobility policies across different EU contexts.

INTRODUCTION

Since when we have human traces in history, the concept of movement shaped the way people conduct their existences. Cultural expressions, discoveries, historical innovations, and diverse modalities of development have been all strongly influenced by the innate desire of man to move. The intersection between this nomadic will and technical progress gave birth to the first rudimental means of transportations, paving the way for a process of revolutionary change in our spatial and temporal perspectives, which thenceforth have backed our life in this planet. Mobility and transportation are essentials part of human being's experience within the environment we live and can foster or hinder the development of our society. But what is development, how can we measure it and what are the best options to follow in order to achieve it? Of course, this dilemma does not call for a single and homogeneous answer. On the contrary, it requires the effort of looking at reality from constantly different and updated point of views, exploring diverse and sometimes contradictory contexts. In a global landscape characterized by an increasingly dense interconnection, this topic assumes further relevance. If hundreds of scholars and observers around the world demonstrated that globalization conceals some deep-dark sides, their bright opposites can help to make inroads over the wall of mono-directional thinking, thus fostering the learning process towards the design of something closer to a globally fair development. From a policy-making perspective in this direction, the easier sharing of information, good practices, knowledge, and innovation are getting more and more importance especially within regional and international organization. The European Union (EU) appears to be now one of the

international actors most sensible to the deployment of a green and socially just path of development.

Since the Europe 2020 Agenda, EU policymakers started to embrace the conceptual and operational framework of the Sustainable Development. The progress towards a greener and less resource-dependent mobility is one of the pillars of this multifaceted strategy. In this framework, bicycle is deemed to be one of the main drivers of more sustainable cities and therefore societies. Notwithstanding this important point, after WWII the majority of European cities have been structured following a motorized-oriented way of transportation, therefore creating obstacles to a less impactful and more active mobility such as walking and cycling. Bicycle-oriented policies can be a powerful means through which re-organizing cities in a fully democratic and wealthier way, but the geographical, economical, and socio-cultural diversity among EU Member States and within cities itself creates gaps for the devising of a shared and efficient approach to this challenge. Cities in wealthier countries of North-western Europe like Netherlands, Denmark and Germany are usually deploying and implementing proper measures to stimulate cycling since years. But the big question is if cities and towns with different economic indexes, geography and cultural patterns can follow their good example. In particular, cities of the Mediterranean area present the most demanding but also interesting challenge. In those areas, low cycling maturity goes along with the increasing number of private motor vehicles, which jeopardizes the possibility for a bicycle culture to flourish and enhances some social bias about bicycle. Transport is an essential aspect of all communities on which movements of people, goods and services rely. Moreover, it contributes to the improvement

(or degradation) of urban landscape, local economy, and urban development. The promotion of active travel modalities like walking and cycling has positive effects through increased physical activity, reduced air and noise pollution and even job creation **(WHO, Regional Office for Europe, 2014)**. At the European level some important steps are being taken given the wider acknowledgment of the need for a more sustainable way of living and moving. The large amount of funds allocated by the Von Der Leyen's Commission through the European Green Deal can be the starting point to stimulate investments in this field but also driving countries and cities to jointly reach the climate neutrality objective will be crucial. For this reason, under the umbrella of the EU Green Deal, the "New European Urban Mobility Framework" has been devised to provide guidance for local actions and offer cities a toolbox for sustainable mobility. The relevance of this measure is due to the fact that:

- 70% of the EU population live in cities today, this is projected to reach almost 84% for 2050;
- 23% of the EU's transport greenhouse gas emissions come from urban areas;
- 38% of road fatalities in the EU occur in urban areas, 70% of deaths are vulnerable road users such as pedestrians and cyclists;
- 6 in 10 people aged over 15 never or seldom exercise or engage in physical activity, such as cycling **(European Commission; 2021)**

These are just some triggers to highlights the need for a shift towards a more sustainable mobility model in order to turn both cities and towns into more liveable, inclusive, and

enjoyable spaces. To obtain this change it is essential to understand how those measures can provoke a switch in the habits of the population, because an empty bike lane is as useless as libraries in a blind world. Factors that affect transportation choices and behaviours must be addressed and studied through a "on field" perspective, thus permitting a deeper understanding of people's motivations related to choosing or not active mobility, as well as public transports.

On paper, sustainable urban planning appears to have just positive sides that for various reasons are not fully explored especially in the cities from the Mediterranean and Balkans areas. But the reality is different. In order to steal space to the motorized vehicles, a wise design, investments and above all political will are essential. The three elements are seldom met all together **(Peter Walker, 2017).** This fertile mix has been hard to reach in because of the potential trade-offs between green policies and social protection, especially for economically vulnerable groups. Lower-income people are usually embedded into the most polluting sectors of production such as energy industry and automotive industry. This means that cuts in the emissions cannot just be forced from above but must be balanced by investments or subsidies in the sectors that are likely to be affected by negative side-effects. This issue assumes a central role in the design of more smart, sustainable, and liveable cities that everyone can benefit from. Otherwise, the concept of sustainability will remain an empty slogan charged of environmental rhetoric. As the recent political and scientific debate on sustainability shows, it is indeed important, to reflect on how green transition can be socially just. An eco-social approach could be the bedrock of this reasoning.

This research originates from a mixture of curiosity and belief. Curiosity about what could be the unexplored potential of European urban areas in terms of sustainable mobility design. Belief in the sense that a people centred sustainable mobility can be the catalyst of change towards a more equal society, with a particular attention to the role that bicycle can play in this bet. These two points are linked together by the necessity of devising the most effective and efficient ways to address the challenges of climate change and social inclusion. These global challenges are deeply embedded in the local contexts of towns and cities in terms of pollution, unhealthy lifestyles, and growing inequalities. The global and the local level are therefore strictly intertwined, while cities increasingly play as drivers of change and innovation.

In the first section of this work, I will explore the eco-social debate underpinning theories and policies for a "just transition". In the perspective of this framework, I will investigate the eco-social approach towards the transition and its practical implications. In particular, the social-ecological nexus that links environmental degradation with social and economic inequality will be both the starting point and the common thread of this research. In the second section I will explore the European Green Deal and the just transition framework in relation to the issue of inequality, looking for theoretical arguments in support of the eco-social perspective. The analysis of the paradigmatic shift pursued by the EU Green Deal in economic, social, and political terms will be useful to better frame the challenges and possibilities of adapting an eco-social approach to the field of mobility. Therefore, in line with the eco-social approach, I will investigate the concept of wellbeing,

connecting it to environmental degradation and social inequality as two faces of the same coin.

The research will then move to the mobility field, focusing on the EU's programmes and initiatives linked to the EU Green Deal. Particular attention will be paid to the New European Urban Mobility Framework, URBACT and CIVITAS PAC initiatives. In this section, I will also provide arguments to the potential of bicycle as propeller of urban eco-social transitions.

Lastly, I will narrow down the field of empirical analysis to the city level. This insight will take into consideration the two case studies of Barcelona and Rome. The choice is motivated by the differences that elapses between the two cities for what concerns the mobility patterns and the cultural, social and economic conditions. In front of these two diversified scenarios, the research will seek for similarities in the approaches, potentialities and challenges for implementing projects of sustainable mobility aimed at transforming cities and towns into more attractive, healthy and equitable places. Since the topic is strictly related to people activities, habits, and way of living I think that a mixed approach which will take into consideration both the physical and psychological concerns of sustainable urban mobility could offer a clearer image, highlighting nuances that would have been poorly considered following an exclusively technical (or attitudinal) method. This perspective requires to devise a comprehensive strategy that can address both social inequalities and environmental degradation with complementary actions, originated from a dynamic top-down and bottom-up dialogue. The hypothesis is that the EU multi-level and integrated sustainable mobility approach can foster similar processes

at the local level, enhancing the eco-social linkage and partnerships.

After the analysis at city level, I will discuss similarities and differences among the two cases in a comparative perspective. The main objective is twofold. On the one hand, the analysis will elaborate on the theoretical assumptions that are at the basis of the eco-social debate in the perspective of policies for sustainable mobility. On the other hand, the empirical enquiry presented in this thesis aims to explore how and under which conditions, projects initiatives and practices are deemed to foster sustainable urban development in a socially just manner. And how these strategies can develop across different domestic contexts. The eco-social approach will therefore be adopted as common lens for the analysis of the selected cases in order to understand if the local policy dynamics follow the path traced by the EU, as well as if the domestic contexts provided useful hints to the Commission. In the concluding section, I will provide some suggestions for further research on how sustainable and "just" urban environments can be achieved.

I. WHAT IS "JUSTICE" IN PUBLIC POLICIES ABOUT? INSIGHTS OF THE ECO - SOCIAL DEBATE

"To begin with, the climate emergency is a human emergency — in fact, an emergency for almost all living things. Human destructiveness, culminating in the Anthropocene, reaches levels of depravity that can hardly be captured in words, at least mine. Nor can words capture the failure to comprehend what is happening before our eyes.

Working people are humans, in fact the large majority of the species. A human emergency is an issue for labour by definition. More specifically, overcoming this emergency will require great changes in the kinds of work that people do, over a very broad range." (**Noam Chomsky, 2021)**

Eloquent thoughts need eloquent words. The adjective "eloquent" [from Latin *eloqui,* literally "to speak out" *ex* (out) + *loqui* (speak)] carries the figurative meaning of something persuasive at the point that is clear, convincing, charged of expressive force by itself. The above Chomsky's eloquent words are surely conveying a strong message, which is calling in turn for eloquent actions about the massive challenge of global warming. The importance of concrete actions for being taken is rising as time passes by, together with the urgency of the "subject" at stake for policymakers. Global society is getting clearly more and more vulnerable to the direct and indirect implications of climate change. This growing exposure touches closely not only human existence on the Earth, but also all the main spheres of most humans' everyday life such as jobs, consumer goods' prices, housing, and social welfare. For example, the crisis of "climate displacement" around the world is estimated to increase exponentially in the next years.

In fact, the Internal Displacement Monitoring Centre estimates that in 2018, 17.2 million people left their houses because of disaster provoked by climate changes such as floods, storms, typhoons, droughts. Even if by his own admission the prediction about climate refugees is very tentative, given the multi-layered aspect of the problem, According to Professor Norman Myers of Oxford University, an estimates daunting figure of 200 million climate migrants by 2050: this means that by 2050 one in every 45 people in the world will have been displaced by climate change. These numbers have been emphasised also in the publications from the International Panel on Climate Change (IPCC) as well as the Stern Review on the Economics of Climate Change **(Oli Brown, 2008)**. This appalling scenario should frighten not only the developing nations but also the Western countries. The global interconnections of current times expose bot rich and poor countries to the climate displacement, making them vulnerable from the material and relational point of view. More specifically, EU countries have recently faced economic and social turmoil as a consequence of ecological degradation and energy crisis, along with growing pressure of migration flows. Western democracies will have to pass the test of unexpected migration fluxes, both internal and external to the borders. Especially for European Union, the value of inclusivity is one of the main pillars of the *acquis Communautaire*. Consequently, the handling of big multitudes of migrants will be a salient issue that could polarize the public opinion and stimulate social disorder. In fact, by welcoming the climate displaced people EU will refrain from the "costs of hypocrisy" at the eyes of the world **(Greenhill, 2010)**, but at the same time will face the challenge of re-integrate the newcomers. The issue here is not merely environmental but rather political,

social, and economic. In order to avoid the collapse, the whole social contract will have to be reconfigured by laying the foundation of a new model of society.

This brief overview summaries the extremely complex and multifaceted nature of the climate change crisis, which is rapidly spreading as a stain. The global nature of the problem is by today clear, exactly as is clear the need for policymakers to take important decisions to mitigate the climate changing effects of the global society, also by acting locally. The faster and the more accurate will be the intervention, the slower will be the breakdown towards the scenario depicted above. In a sense though, a reconfiguration of the society is already happening as the support to green transition has been growing at both policymaking and grassroots level. These two components of the political spectrum are strictly interconnected and can generate a virtuous circle. The grassroots level, including public opinion, social movements, groups of citizens and some NGOs have a relevant role in the agenda setting by demanding stronger attention to the climate issue. The governments, in their turn, hold not only the direct power of policy formulation and implementation but also possess powerful information channels that can further enhance sensibilization campaigns about the necessity for climate mitigation and adaptation. In the European Union, within the framework of EU surveys of 2021, over a quarter of Europeans (29%) chose either climate change (18%), deterioration of nature (7%) or health problems due to pollution (4%) as the single most serious problem we face.[1] But what about the remaining part of population? Which can be the conjunction between public opinion demands

[1] https://ec.europa.eu/clima/citizens/citizen-support-climate-action_it

and government action? What is the balance to keep between national interests and the global call for action? How can this crisis be faced without "leaving nobody behind"? To answer these questions, it is necessary to consider the growing complexity of the last decades' global climate multi-level settings, where both national and international institutions are more and more interconnected. Moreover, despite the huge power of economic giants, political institutions still wield a crucial decisional power and can really ignite or extinguish the sparkle of change. For this reason, it is clear that in order to concretely achieve a shift in our lifestyle paradigm towards a more equal planet, these heavy players must point in the same direction of societal actors.

1.1 Little steps, big actors. The transition in the policy-making venues

With the instalment of the very first *United Nations World Commission on Environment and Development* **(UN 1987)** better known as Brundtland Commission, the topic of the environmental crisis reached the international level. It was the first step towards the global recognition of the problem, followed by a slow but growing engagement into subsequent summits, protocols and agreements regarding the global climate mitigation. That moment gave birth to a process towards the devising of internationally binding commitments aimed at addressing the environmental crisis. Despite being important at least in formal terms, the following international political agendas proved to be flawed for various reasons. Especially during international crises such as wars, economic blockades or diplomatic wrangling, the relevance of environmental issues was

downplayed. In fact, political and economic instability together with geopolitical concerns have been for long time the tiebreaker of national governments' strategies. Climate change has for long been regarded as a secondary issue for two main reasons. On the one hand, until the last few years the impact of climate change on our everyday life was not that blatant - heatwaves, floods, devastating tempests, and natural phenomena like these were mostly considered "extraordinary events". On the other hand, the widespread neoliberal and market-oriented shape of the world economy put the accent on economic growth, financial stability, and exports disregarding growing inequalities and environmental concerns. Little space was left to the seeking of alternative models of development, at least in the dominant narrative of elites and not only in the western societies. As Matthies (**A.L. Matthies, 2017; p. 21**) puts it, "the radical transition approach indicates rather the deep interdependence between the exploitation of nature and increasing social injustice". This approach looks for alternative social work and social policy, the shift from economic growth as financial guarantee to a more comprehensive acknowledgment of wellbeing and justice.

The European Union has been a fertile ground for this debate in the last years and it is now trying to devise a strategic framework which will take into accounts the differences between its member states. Besides the salient issue of diversity among the 27 countries, governments provided another main explanation to the immobility of the status quo during the last decades. Serious climate mitigation efforts will entail very high costs both from an economic and social point of view. Exactly this trade-off between economic growth and social protection related to the climate-mitigation policies is the core of the debate

which is spreading throughout the whole European society. The conflict lines in political decision-making are marked out by the perceived contradictions between economic and environmental interest, but the consideration of the social consequences and impacts of the policies are often completely missing **(A.L. Matthies, 2017; Sabato et Fronteddu, 2020)**. The Sustainable Development conceptual framework proposed by United Nations was one first answer to this challenge through the decoupling of economic growth from social protection and considering the possibilities of stimulating those two aspects simultaneously, linked together by a focus on environmental preservation. This approach has been embraced by European Union already in the Europe 2020 Strategy. The Von der Leyen's Commission has relaunched the sustainability agenda, while at the same time revising and upgrading many of its objectives. But even if there's a widespread consensus about the need to promote sustainable development, the concrete application of this concept remains largely foggy and controversial. When defining sustainability, important international organizations such as the World Bank, the Organization for Economic Cooperation and Development (OECD) and the UN Environment Programme (UNEP) promote the "green growth" approach aiming at reducing global GHG emissions without losing competitiveness. From this perspective, the growth of green sectors in the economy, besides bringing environmental benefits, could also create employment opportunities (e.g. creating new, "green jobs") and an overall increase of citizens welfare **(Sabato and Fonteddu, 2020).** Notwithstanding the important contribute brought by this framework, the "green growth" paradigm presents two main flaws.

The first is about its drift potential. In fact, under this label, some very big and powerful firms (sometimes with the acquiescence of governments) continued their production in the same way than before, while claiming their efforts to turn their plants "green" and promoting a catchy marketing image or a symbolic eco-friendly attitude. This phenomenon, known as "green washing", has been well documented in the recent years and sneaked into the EU institutional venues in various ways. For example, a memo leaked in 2018 showed how BusinessEurope, the most influential big business lobby group in EU, was promoting various direct lobbying strategies to oppose, delay or deflect EU's climate mitigation and in particular emissions reduction policies[2]. Another strategy of legitimacy building is sponsoring UN Climate talks, a tactic that has added danger of making politicians more receptive to the false solution proposed by these economic giants **(Corporate Accountability et al., 2018)**.

Secondly, within "green growth" framework, the concept of climate justice appears to be faced in an inadequate way. Initially devised by Global South activists and scholars during the late 1990s, the concept of Climate Justice is now wide spreading all over the world and researchers, NGOs, politicians, and social movements are developing it deeper and deeper. Basically, the central argument of "climate justice" is a reshaping of climate action from a technical effort to cut emissions into an approach that also addresses human rights and social inequality.[3] From this perspective then, we can realize and better understand the uneven

[2] Euractiv, Leaked memo exposes business rift on climate change, by Frédéric Simon, Sep 27, 2018, available at: https://www.euractiv.com/section/climate-environment/news/leaked-memo-exposes-business-rift-on-climate-change/

[3] Carbon Brief, In-Depth Q&A What is "climate justice"?, 2021 available at: https://www.carbonbrief.org/in-depth-qa-what-is-climate-justice/

distribution of climate mitigation costs among the world population, both at a domestic and international level. But the interesting novelty about this conceptual framework is that it does not only stick into studying and evaluating the effect of climate change among world population, but also emphasizes the side effects of those climate transition policies which are developed without considering the everyday life of all the slices of population. In other words, advocates of the principle of climate justice critics those institutional approach based only on economic growth and transition to greener means and ways of production. Linked to this, comes the concept of just transition.

1.2 How to reach a Just Transition? The eco-social debate

The idea of a just transition is relatively old. It originally appeared in the U.S. labor movement of the 1970s and then broadened with the forging of alliances between labor organizations and environmental justice groups around the 1990s. The concept was then incorporated within the EU's political discourse around early 2000s and now is a guiding principle of the European Green Deal and the general political guidelines of European Commission. Despite this, a just transition both in theoretical and practical terms have not yet been really incorporated in the majority of EU national governments policies for various reasons. This has been partly due to its conceptual ambiguity and polyhedric nature.

Just transition refers to the way climate adaptation and mitigation measures are taken, to make up for losses suffered by specific regions, industries, and individuals **(Atteridge & Strambo 2020**). Is a moral imperative to ensure that the green transition does not happen at the

expense of the vulnerable **(UNDP, 2020)**. It also facilitates the participation of all essential actors and is thus an integral part of effective cooperation **(Teevan et al., 2021).** Just transition frameworks have been explored through the lens of political economy, advancing the notion that beyond worker protections, addressing energy access and poverty and adopting climate justice goals are necessary to ensure transition is equitable **(Jasanoff, 2018).**

From these first propositions emerges that the theoretical core of just transition is the dialectic relationship between environmental and social inequality. In fact, the advocates of the social-ecological approach consider the ecological crisis as strictly intertwined with the growing gap between the richer and the poorer groups of the population. In other words, differently from precedent theoretical frameworks which focused singularly on the environmental degradation or on the classic social issues (poverty, unemployment, criminality…) the real novelty of the social-ecological approach lays on the strong nexus between social problems and climate change. This step forward can be the starting point for a more acknowledged and impactful climate mitigation effort at all levels. In fact, what is particularly interesting of this approach is that by focusing on the correlation among environmental crisis and social inequality, the topic is no more prerogative of scientists, decision-makers, or elites. During the last few years, climate change topic demonstrated to be a sort of close domain reserved to the forementioned venues or to a specific category of citizens, usually young, well educated, relatively wealthy and living in the urban areas. Not by chance, the loudest social movements fighting this battle like Fridays for Future or Extinction Rebellion are largely composed by youngsters with the characteristics quoted

above. Moreover, in the majority of cases, the demands of those movements have been perceived as dreamy whims both by policymakers and, even more crucially, by those parts of the population that are less educated and have to struggle every day in order to make a living. This is a very important point that must be addressed in order to build consistency for the social demands regarding climate mitigation policies, especially in front of those governments which carry low attention to the problem. The tendency to underestimate the climate change crisis probably derives from two main problems.

The first is linked to the knowledge gap between citizens and scientists who keep on warning about the disrupting effects of climate change. Some groups of population tended to perceive these alerts as a demonstration of arrogance or an elites' attempt to deflect public opinion from the "real" issues such as unemployment, higher consumer goods prices, taxes and so on. Importantly, the more skeptical regarding scientists or policymakers' declarations about global warning were the less protected from it. Those shares of the population presenting lower levels of education or income. Connected to this, the second main problem causing the low consistency of the social support to the climate mitigation cause was determined by the incapacity of the environmental movement to succeed at articulating a scenario characterized by both human wellbeing and environmental resilience in real terms. Rather, in the last years a growing sense of panic about the climate crisis has been spreading, with the only effect of disseminating anxiety while throwing most of citizens into inaction.

The social-ecological approach is aimed to address the aforementioned challenges through an in-depth analysis of

the strong and multifaceted interconnections between social justice and ecology. On the one hand, social inequalities drive environmental crisis by augmenting the ecological irresponsibility of the richest minority in society and among nations. In addition, such inequalities fuel the demand for economic growth among the less affluent groups of the population. This necessity not only increases social vulnerability, but also overshadows the climatic crisis by lowering environmental sensitivity and hindering collective action for change.

Sustainable development assembles three dimensions: economic, social, and ecological. The connection between economy and social aspects, as well as the link between economy and ecology have been explored in detail in recent years. The "green economy" paradigm and the cohesion policies are manifestations of these efforts. On the other hand, the social-ecological link still has to be addressed in depth both by scholars and policymakers. Despite this, important contributions are recently emerging, also for facing those long-standing critics to the decoupling of environmental preservation and socio-economic development. The French economist Eloi Laurent has discussed a lot the missing linkage of sustainable development with a successful social cohesion. His in-depth analysis of inequality is providing crucial theoretical developments of the social-ecological approach. By devising five macro-ecological dimensions of inequality, he underlines how political economy can be the driver both for a more equal or unequal world [4]. During the last decades, a vicious circle of political and economic counterproductive strategies driven by an inequal

[4] See five macro-ecological dimensions of inequality in Laurent, E. (2015), "Social-Ecology: exploring the missing link in sustainable development"

distribution of income and power have broaden the gap between rich and poor. The problem, argues Laurent, is that the ecological crisis fell on the background both for the rich and for the poor. The first, both countries and persons, are still driven by the capitalist assumption of maximizing the profits in order to keep the wheel spinning. Moreover, the recent financialization of the economy made possible a faster externalization of the costs of massive production, both in social and ecological terms. To use Laurent's words, "income and power inequality, that tends to dissociate polluters from payers, thus act as a disincentive for ecological responsibility or as an accelerator of ecological irresponsibility" **(Laurent, 2015; p. 7)**. Gough claims that "the untrammeled pursuit of individual preferences in the context of egregious inequality undermines the goal of meeting common human needs; where economic 'efficiency' fatally undermines collective sufficiency" **(Gough, 2021; p 7)** taking as example the remorseless purchase of SUVs increasing among upper classes, which has been identified as the second-largest contributor to global carbon dioxide emissions in the world, after the energy industry **(IEA, 2021)**. Ecological irresponsibility in turn connects with the fading away ecological resilience of communities and societies, therefore limits their capacity to adapt to environmental change without exacerbating it. In fact, since the main wealth of the world's poor lies in natural capital, because of the unequal access to other forms of capital (such as technology and education), the massive and disrupting exploitation of those same natural resources leads to further impoverishment. The current degradation of the Niger Delta as well as the huge loss in maritime biodiversity of the Lebanese coasts are just two examples among hundreds. In addition, this produces the need for increasing

environmentally and socially unnecessary economic growth. In fact, Laurent states that in a given country the concentration of wealth in few hands entails that the rest of the population will need to compensate with additional economic development **(Laurent E., 2015: 6)**. But "additional economic development" means in most cases a further intensification of production, which especially in the depressed areas is translated in further land-use, increased resources exploitations, and opening of new plants with general little concern about the environmental impact of these actions. The result is simply the re-affirmation of the prior mechanism, and if we try to question us about who is better-off the answer is obvious.

Therefore, if we really want to build a global society grounded on the values of equality and social justice, the reshaping of our production as well as consumption system is crucial but not fulfilling. The environmental issue must lose its moralistic connotate in order to favor effective climate mitigation actions, with a more profound understanding of the social dangers linked to the bad implementation of ecologist policies. Of course, the political will plays a huge role in this process, since it can strongly hinder or foster the pursuing of an eco-social transition. But even in this regard the relationship between institutions intervention and inequality seems to be a loop. The 2016 World Social Science Report identifies seven dimensions of inequality: economic, political, environmental, social, cultural, spatial, and knowledge-based claiming that these different dimensions connect over time, perpetrating inequality **(ISSC, 2016)**. For instance, children from low-income families and other marginalized groups often have less access to quality education, which later will translate in inequality in

employment and earnings **(ISSC, 2016)**. In the same perspective, more affluent people have in general a more direct access to the policy-making venues through money or other types of boundaries and can therefore exert a bigger influence in the political spectrum. On the other side of the equation, people who are way more sensitive to the dangers of environmental degradation and disasters usually present the characteristics of being poorer, in terms of money, health, and education. Their capacity of being represented at political level is therefore hindered by the shape of the socio-economic system. Among others, Richard Wilkinson and Michael Marmot **(Wilkinson, Marmot, 2013)** demonstrated the connections between social inequality and health. What is particularly interesting about their work is that they consider health as a multifaceted concept pertaining to a lot of spheres of everyday life. Housing, education, and social inclusion are in their opinion essential conditions for the development of wellbeing and wellbeing in turn is crucial for make people productive in terms of ideas, spirit of initiative and work **(Wilkinson, Marmot, 2013).** These are the starting conditions for being proactive in our challenging society and the issue gets even more complex if we think about how intricated our political environments are. Therefore, apart from the street protests, poor peoples have little possibilities, if none, of exerting a leverage on the political agenda of governments driven by political elites. This loop just further hampers the possibility of inverting the direction of climate mitigation policies so that equally distributes costs and benefits throughout the whole population. On the contrary, environmental policies taken by the detached perspective of administrative bureaus can exacerbates even more the gap between the different strata of population producing political polarization and

reciprocal mistrust between elites and individuals. A clear and recent example of this mechanism is the recent "Gilet Jaunes" movement. The decision of imposing a higher tax on fuels (even if of a little percentage) taken with an exclusively top-down rationale not only provoked large protests which immobilized the streets of main French cities for weeks, but also increased the distance between the population and the government officials. Not by chance, the annual barometer of 2019 on the rightwing parties conducted by Le Monde demonstrated that Marine Le Pen's populist and Eurosceptic movement *Rassemblement National* has become more attractive to the eyes of the Gilet Jaunes and their supporter.[5] Moreover, within the context of the French national elections during 2022, Le Pen highlighted the issue of fuel price in her party program in order to seduce the electorate. This political strategy has two main explanations. One is the necessity of deflecting voters' eyes from Le Pen's chummy relationship with Putin during the last few years, nowadays unacceptable in front of Russia's daunting war against Ukraine. At the same time, the shift from far-right classic themes of immigration and crime to issues such as the problem of purchasing power and the fuel price is a clear signal of increased peoples' receptiveness to these aspects of everyday life. This aspect is even more crucial if we consider the fact that RN's electorate is mostly composed by young, not very educated, and low wages people, therefore very sensitive to inflation as well as to the increase of fuel price. During a campaign tour in RN's regional stronghold in Northern France, Le Pen announced the willingness of reducing the fuel tax that rose between

[5] Respectively the 36% of the participants to the movement and the 37% of the supporters : source https://www.affaritaliani.it/esteri/gilet-gialli-la-destra-di-le-pen-non-rappresenta-il-movimento-di-protesta-593034.html?refresh_ce

2015 and 2018, when Emmanuel Macron was first finance and budget minister and then president reports Le Monde. "With me, you will immediately have more money in your wallets" she promised.[6]

Apart from being manipulative and deeply populist, this kind of political narrative reveals us two important interconnected aspects. On the one hand, that fast solutions are usually more attractive for voters, especially for those who do not interrogate themselves too much about the medium-long term future, also because of the uncertainty of the present. On the other hand, people attention to environmental crisis can easily slip on the background because social and economic problems are felt like more real and urgent by the vast majority of voters. This mechanism ignites exactly the social-environmental degradation loophole illustrated by the eco-social nexus. In fact, on the medium-long run this tendence proves to be detrimental to the same social and economic issues that people want to avoid by feeding the vicious circle between environmental and social inequality. But it is important to notice that the misleading political discourse of populist leaders who seek for a polarization of the political spectrum is not the crucial problem here. Rather, if we look at the very starting point of the "Gillet Jaunes" movement we not only see social and economic inequality, but more crucially we do not find a compensation of the environmental policy adopted by the government in terms of welfare enlargement. Just like social or economic policies, also climate-mitigation actions taken by the governments cannot be simply dropped as a technocratic exercise. Gough indeed claims that an eco-social contract cannot

[6] Paris G., " Marine Le Pen's Smart Bet" Le Monde, March 14 of 2022, France, available at: https://www.lemonde.fr/le-monde-in-english/article/2022/03/14/marine-le-pen-s-smart-bet_6117461_5026681.html

prescind from addressing existing deficiencies in the welfare state, by fulfilling the needs emerging by new shifts in technology, demography, inequality, and ecology **(Gough, 2021)**. As underlined by Stiglitz though, growing inequality produces public budget constraints at the macro-economic level by lowering aggregate demand and tax revenues **(Stiglitz, 2016).** This process driven by inequality makes complex and costly, if not impossible, to provide concrete compensation mechanisms aimed at protecting people (especially lower classes) from the possible regressive effects of certain environmental policies. Laurent **(Laurent, 2015)** stress this point making a comparison between French carbon tax reform failure of the 2009/2010, which was opposed by the 66% of the population, with the positive outcome of Nordic countries carbon taxes of the 1990s and 2000s**.** The difference between these two cases consisted in the ability of the Nordic countries the categories most affected by the reforms thanks to very low income-inequality levels, dynamic economies and efficient welfare states able to enhance social consensus **(Laurent, 2015)**.

The lesson which can be drawn from this comparison is that political acceptability is a crucial element for making a climate mitigation policy successful. The eco-social approach towards a just transition underlines this aspect since it requires the understanding of the strict link between social issues and environmental challenge, therefore calling for a re-shaping of the welfare system on the base of the recognition of people's needs. Governments thus would have to identifying the main needs of its population and adopt to fulfill them through policies. The problem here is the risk that governments aprioristically choose what are the need to be satisfied, forgetting about entire

slices of the population. Focusing on the EU context, what is at stake is also the future of European democracies itself. At its height, the transition will shake the social contracts that have undergirded democratic systems. "With governments no longer able to promise or pursue economic growth as their main objective deliverable to voters in the same way as before, there will be implications for the sustainability of welfare states and hence for the social legitimacy of democratic institutions"[7]**.** In order to reduce the dangers deriving from such a shift, governments will have to adopt a strategy based on two axes: decentralised practices informed by professional expertise and citizens involvement as on-field receptors of the everyday-life conditions **(Gough, 2019)**. The decoupling of economic growth from environmental and social protection, as promoted by the Sustainable development theory will have to follow this "principle of inclusion" in promoting redistributive policies, investment in the Research and Development, and the introduction of social-ecology reforms. Rob Hopkins, one of the first theoreticians and activist of the eco-social practices states that transition initiatives mostly function best if a combination of top-down and bottom-up responses appear. In particular, the local level of policies not only applies to national decisions and regulations but can also function as a bottom-up arrow capable to influence larger dimensions of society (**Hopkins, 2008**). This approach could really fit in the European Union if we consider its multi-level governance architecture and the high priority given by Von der Leyen's Commission to social and climate equality. The question that subsequently arises is whether the normative

[7] Youngs, R. (2021), "The Divisive Politics of the Green Transition: Europe's Unmet Challenge", Carnegie Europe, available at : https://carnegieeurope.eu/2021/12/15/divisive-politics-of-green-transition-europe-s-unmet-challenge-pub-85978

assumptions of the eco-social narrative can be translated into real policy measures on the ground.

How has the EU embraced the eco-social approach and the just transition assumptions into its strategies, policies and programmes? And more specifically, how do its mobility policies have included the orientation towards a more equal, just, and inclusive future? I will try to answer these questions starting from the analysis of the EGD as general strategic framework from which specific policy packages originates. The discussion will then proceed along a funnel-shaped line, passing through the New European Mobility Framework consistent with the EGD and ending in the investigation of local level.

II. THE EUROPEAN GREEN DEAL FACING INEQUALITY. A BLUEPRINT TOWARDS THE EUROPEAN JUST TRANSITION?

The climate crisis is real, and it is probably becoming the main challenge of this era. Saliency and urgency are two proper words to define this global issue which calls for global solution. It is important though, to remember Hopkin's **(Hopkins, 2008)** position about the pursue of a real transition: there will be no turning point without a complementary top-down and bottom-up effort. In other words, all the levels of the social-political spectrum must do their part in order to reshape the very essence of our societies. Looking at the EU as supranational organization, the highest political level represented by the Commission appears to be truly convinced about the necessity of shifting various structural paradigms. With the communication about the European Green Deal, Von Der

Leyen's Commission launched a strong message to the member states about the political willingness of triggering a deeply transformative process, at least of the European panorama. The main message has been about the significance of "rethinking policies for clean energy supply across the economy, industry, production and consumption, large scale infrastructure, transport, food and agriculture, construction, taxation and social benefits" **(European Commission, 2019)**. The fil-rouge which connects all these aspects is of course addressing of the environmental degrading externalities of European economies, driving it towards the carbon neutrality with the transition "to a sustainable use of resources in order to improve human health" (European Commission, 2019). Moreover, from the very first pages of the communication COM (2019) 640, a strong emphasis has been put on the cushioning possible social consequences deriving from the paradigmatic change described above. Related to this, the Commission (European Commission, 2019) argue that "careful attention will have to be paid when there are potential trade-offs between economic, environmental and social objectives" and underlines the importance of using all policy levers consistently. In this regard, apart from the classic tools of regulation, standardization, and investments, a participative approach will be pursued to establish local as well as international cooperation and develop a dialogue with social partners driven by the European Pillar of Social Rights to ensure that "no one is left behind" **(European Commission, 2019).** These preliminary statements on the very first pages of the COM (2019) 640 are, at least formally, very important since they push member states in the direction of adopting a new political vision that is informed by a strong accent on the environmental and social aspects of transition. This is

important because in the Commission's opinion, shifting the focus from economy to other priorities does not entails to forget the importance of economic growth. Therefore, the starting point of the renewed Commission's approach is exactly that the real challenge here is to improve the living standards of European citizens not only in the short run, but also in the medium-long run. In this regard, the dominant choice of domestic economic policies over the past years have been pursuing neo-liberal recipes with the main concern about GDP and employment growth. This rationale proved not only insufficient in view of the expected economic development, but also detrimental in the perspective of sustainability. The European Green Deal have been presented by Commission (2019) as the instrument capable of "turning urgent challenge into a unique opportunity". This definition clearly refers to the possibility of transforming the logic of production, consumption, and habits to pursue a more equal society. It is important to notice that if this transformation will follow a sustainable and participative path, the whole society from the politician to the homeless would be better off. In fact, with the EGD the Commission has affirmed the urgency of taking strong measures against the climate crisis in order to tackle the crucial issue of economic and social inequality.

The underlying assumption of this process appears to be the shift of priorities from individual's "wealth" to people's "wellbeing". To better understand this distinction between the two, I think it is worthy taking little step back and briefly investigating how inequality increased during the past years and what has been the role of politics in halting or encouraging this trend.

2.1 A recipe for all, but enjoyable by few

In the aftermath of the WWII many European countries were strangled by the weight of the consequences of the conflict, which devastated lives and places. The majority of survivals was composed by normal people who struggled every day for getting basic goods such as milk, eggs, blankets and so on. In almost all European countries, poverty was a matter of fact. On the other side of the Atlantic Ocean, the real winner of the WWII, US government, was devising a huge economic plan for the recovery of Europe. During the spring of 1948, the Truman presidency launched the "Marshall Plan" after the name of the Secretary of State George Marshall. Devised to help the recovery of European economies with the final aim of stabilizing the European continent both from a political and social point of view and laying the basis for future economic relations, the Marshall Plan was the first step towards a new world economic order. In this period, within the US political and economic milieu it came to believed that "a rising tide lifts all boats". In other words, economic growth would provide increasing wealth and higher living standards to all groups of society. In fact, during the 1950s and 1960s there was some evidence behind that claim. Industry was the driver of an extremely rapid economic development, which provided for an improvement of the life conditions of all strata of the population. Labelled under various names, such as "*miracolo economico*" in Italy or *Wirtschaftwunder* in Western Germany, this era permitted those with lower income to rise even more rapidly than the more affluent ones. The successive step, accepted by the majority of the governments officials and strongly supported by US was the devising and adoption of the "trickle down" recipe. This old-fashioned approach

found justification in the neo-liberal marginal productivity theory. The main assumption is that regressive economic policies, that favor the richer classes, would end up benefitting everyone as resources given to the rich will necessarily “trickle-down” to the rest. In other terms, this approach supported the idea that inequality could favor the whole economy by permitting the rich to invest more and therefore to increase production. The more time passes, the more evidence we have about how far from being either necessary or good for economy this standard recipe is.

2.2 Increasing inequality, some evidence

Robust research demonstrated how starting from the 1980s, inequality experienced a rising trend in most of the Western Countries. US, the birth land of the “trickle-down” theory, experienced more than other countries the widening of the gap.

This political economy recipe finds a theoretical justification in the marginal productivity theory: due to competition, whoever participates in the production process earns a remuneration weighted on her or his marginal productivity. Therefore, following this line of argument, higher incomes derive from a greater contribution to society. This theory entails for example the idea that preferential tax treatment for the rich not only is just, but also better for workers who will benefit from the major contribution of wealthier people to economic growth.

But, in the reality, things went quite far from the theory.

Taking as first example the United States, between 1980 and 2013 the wealthiest 1% have seen their average real income increase by 142% and their share of national income double, from 10% to 20%. The top 0.1% have scored even better: along the same years their average real income increased by 236% and their share of national income almost tripled, from 3.4 to 9.5%**(Piketty; 2003)**. Over the same period, median household income grew by only 9% and this growth was confined only in the very first years of the period, as much as between 1989 and 2013 it shrank by 0.9% **(Piketty; 2003)**. Even if these numbers refers to the US context, the trend contaminated almost all the other industrialized countries. For example, OECD estimated that the Gini index, which is a statistical instrument to measure income inequality within a population, during the period between 1985 and 2010 has increased by roughly 22% in Germany, 13% in UK and 8% in Italy. **(Stiglitz, 2016)**

Across the OECD countries, the average disposable income of the wealthiest 10% of the population has risen from 7 times that of the poorest decile 25 years ago to 9.7 times today. In terms of household wealth, disparities are even starker with the richest 10% holding more than half of all wealth, on average, in OECD countries while the bottom 40% barely own 3%. (**Nozal & Murtin 2019).**

From these data, one can evince that the "trickle down" recipe have failed in its prevision of enlarging the cake for everyone. Rather, it looks like that those with sharper knife have the possibility of eating more. Stiglitz, who focused lots of his studies on inequality, does not deny the role of market forces - demand and supply for skilled workers, affected by changes in technology and education - but strongly underlines the role of monetary policies and politics in this scheme **(Stiglitz, 2016)**.

He states that the rents are increasing everywhere (due to the increase in land rents, intellectual property rents and monopoly power). As a consequence, also the value of these assets which provide rents to the owners (mainly affluent people) are increasing, then stimulating overall wealth indicators. The problem here is that the increment in wealth does not reflect an increase in production. This is due to the fact that those same assets which produce, on paper, an increase of the overall wealth in the reality are not the output of production, nor are "productive" in the usual sense since they are not directly stimulating the production of good and services. The result is a rise of measured wealth, against the stagnation, if not decrease, of wages in terms of purchase power. Monetary policies which favor this process through a decrease of the interest rate can further exacerbate this mechanism by augmenting the value of these "unproductive" fixed patrimony without provoking any increase in the flow of goods and service. The same can happen with a speculative bubble, which takes off together with wealth and social inequality.

Reversing the dusty neo-classical idea for which institutions represent just a façade uncapable of influencing the economy, Stiglitz and lot of others contemporary economists claim that, on the contrary, institutions do matters **(Stiglitz, 2016).**

2.3 Big power entails big responsibilities

The global Financial Crisis of 2008 marked a turning point in the recent history. Everyone experienced what could have been the worst face of the ruling global capitalist system. "The vrisis led to economic distress and political conflict in country after country, and neither economics nor politics fully recovered from the blow" **(Frieden, 2020; p.**

504). It became clear to everybody that the ruling class had played mainly for itself, and not even very well. In fact, the way globalization has been managed has led to lower wages also because workers' bargaining power has been eviscerated **(Stiglitz, 2016).** The asymmetric design of globalization due to the poor regulation on the free flow of capital mixed to the low tariffs has pushed salaried workers to the corner. Countries compete to attract capitals, not workers. This mechanism has been furtherly exacerbated by the insufficient efforts of governments in the field of education, against the necessity of more skilled workers. Big investments in technological development have not been counterbalanced by the same actions in the field of workers' training. Moreover, in most industrialized countries there has been a weakening of workers' unions in terms of membership and influence, which in turn brought to the shrinking of protection from job loss and wage decrease. This was also due to the standard and generalized approach of Central Banks shaped on the inflation rates stability. Stiglitz explains it very clearly:

"As soon as wages start to increase, and especially if they increase faster than the rate of inflation, central banks focusing on inflation raise interest rates. The result is a higher average level of unemployment and a downward ratcheting effect on wages: as the economy goes into recession, real wages often fall; and then monetary policy is designed to ensure that they don't recover" **(Stiglitz, 2016; p. 144-145).**

Competitive market forces and governments blindness towards rising economic distress brought to higher inequality. This latter in turn, proved to be not only detrimental to social conditions, but also to the same capacity of economies to grow. In particular, there are three

main linkages between growing inequality and economic recession.

First, reducing the relative income of the majority weakens purchasing power. The result is a shrinking aggregate demand because those at the bottom spend a larger fraction of their income than those at the top. Less aggregate demand means less job; firms will not expand their production, or it will even reduce it. In the build-up to 2008, rising inequality set various economies on a sustained course of deflation. The political solution to this problem of tightening purchasing power was to pump economies full of private debt, retarding the recessions instead of avoiding it **(Lansley, 2012).**

Second, inequal incomes translate themselves into inequal opportunities. Access to education, healthcare and proper nutrition is jeopardized by the tightening of the living standards creating a medium-long term danger for the future of economy in terms of disposable skilled workforce. Janet Currie - co-director of the Center for Health and Wellbeing at the Princeton University- documented the feedback loop of injustice caused by "mechanisms underlying the perpetuation of lower socio-economic status". She found out that "poor health at birth is associated with poorer adult outcomes, which in turn provide less than optimal conditions for the children of the poor" **(Currie, 2011).** Also, the OECD has recently drawn attention to the downsides and risks of pursuing wild economic growth without considering its consequences on the overall well-being of all segments of population. OECD's economists argued that these downsides translate notably into reduced social mobility and cohesion, as well as lower trust in government and institutions. **(Nozal & Murtin, 2019)**. For instance, an OECD study of 2018 shows how at current levels of income inequality and social

mobility, it would take on average 4 to 5 generations (i.e. up to 150 years) for the offspring of a family from the poorest decile to reach the average level of income in OECD countries **(OECD, 2018)**. This is the path towards "plutonomies": societies characterized by a heavy concentration of wealth and economic decision-making powers in the hands of a tiny minority. Inequality reproducing inequality.

Third, societies with greater inequality are usually characterized by taxation systems and economic policies that tend to encourage those activities that benefit the financial sector against public investments, which would provide an increase in production and employment **(Stiglitz, 2016).** All these arguments point towards the empirical dismantle of the marginal productivity theory. Inequality not only endangers the social and ecological environment, but it is also improper for the economy. Stiglitz, Piketty, Galbraith, Currie and other scholars sustains this argument, but of course there are also voices against it, mainly coming from conservative think-tanks such as the Heritage Foundation, the Manhattan Institute, the Cato institute or the American Enterprise Institute **(Wesley & Peterson, 2017)**. Usually imbued with free-market tenets and the myth of the laissez-faire. Conard for example support the "trickle-down" recipe by suggesting that higher income for those at the top produce a fertile environment for talented individuals to learn skills and take risks that will pay off for the rest of society **(Conard, 2016)**. Watson admits the problematic rise in inequality caused by destructive rent-seeking activities or fraudulent behaviors but consider other sources of inequality as necessary for economic growth **(Watson, 2015)**. These and others critical positions about the importance of reducing inequalities not only lays on poor evidence **(Wesley &**

Peterson, 2017) but most crucially, miss to properly analyze the detrimental side effects of inequality on the social and environmental conditions of the society. In fact, economic inequality clearly plays a crucial role for the social-ecological inequality nexus explored by the eco-social theories. Perpetrating economic inequality clearly became unsustainable for all the main aspects of industrialized societies. The Von der Leyen Commission seems to have understood this very well by claiming that the "European Green Deal is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy […]". The discourse goes much further when it is claimed that EU's transition "[…] must be just and inclusive. It must put people first, and pay attention to the regions, industries and workers who will face the greatest challenges" **(EU Commission, 2019).**

What is particularly interesting in these words, is a renewed focus on individuals which reverse the predominant economic models of the recent decades. Encouraging production alone does not fulfill anymore the real needs of society, a complex interweaving of cultural, social, political and economic factors. Sustainable Development, the Green Deal, and the Just Transition framework are all expressions of this simple but forgotten acknowledgment.
The European Union appears to be a fertile ground for the concrete implementation of these new paradigms of development. In fact, the European Green Deal has been followed by real steps in the direction of its implementation. For instance, the enforcement of the European Climate Law, the adoption of European Semester as tool of good governance, the European Climate Pact to spread awareness and support climate mitigation efforts are

all examples of a concrete commitment from EU. These actions are important because they suggest that Member States are supported in pursuing the eco-social transition from a legal, logistical, economical, and symbolical point of view. The same logic of inclusivity and fairness on which the concept of “just transition” stands is then firstly applied on a macro-level by EU for its member states. Grown-ups must set the good example, right?

But what is the deep underlying assumption of this strategic shift that EU has taken in the last few years?

2.4 Towards a paradigmatic shift

From a practical point of view, the climate crisis is for sure the first and most blatant explanation for EU's commitment in the redefinition of the idea of development. The consequences of climate change are devastating not only places and people, but also the economy. The climate crisis is provoking continuous damage in economic terms across Europe. But the impact varies considerably from country to country. The European Environment Agency considers that the highest economic losses in the period 1980-2020 were registered in Germany, followed by France and Italy. But what is interesting about these numbers is also the capability of insuring these casualties by Member States. In fact, it varies a lot among countries, varying for instance from 1% in Romania and Lithuania to 56% in Denmark and the Netherlands.[8] In this regard, another EEA's report more focused on the agriculture sector underlines how climate change is expected to unevenly distributes its disastrous effects around Europe. While in some parts of Northern Europe climate change could improve conditions for crop productivity, at the same time it would soundly hit other areas where historically social protection have been way poorer than in the North. EEA's projections argue that yields of non-irrigated crops like wheat, corn and sugar beet are expected to decrease in Southern Europe by up to 50% by 2050. At the same time, farmland values are projected to decline in part of southern Europe by more than 80% by 2100, which could result in land abandonment **(EEA, 2019**). Even if projections are to be taken with caution, also the current data shows an alarming scenario; "between 1980 and 2020, weather and climate-related

[8] European Environment Agency (2022), "Economic losses from climate-related extremes in Europe", available at : https://www.eea.europa.eu/ims/economic-losses-from-climate-related

extremes accounted for around 80% of total economic losses caused by natural hazards in the EEA Member States, amounting to EUR 487 billion. This is equivalent to EUR 11.9 billion per year"[9]. Mere economic growth for the growth's sake strongly contributed to this scenario.

Moreover, it has become clear that across the last forty years the dominant economic strategy of most industrialized countries failed to produce the expected growth. Neo-liberal recipes focused mainly on the monitoring and adjustment of average indicators, in particular GDP, proved to be unable to catch the real-life aspects of economy. Linked to this, increasing evidence is emerging about the acknowledgment that inequality hinders not only the proper social and political development of society, but also its economic growth.

> "If we use the wrong metrics, we will strive for the wrong things. As the international Commission on the Measurement of Economic Performance and Social Progress argued, there is a growing global consensus that GDP does not provide a good measure of overall economic performance. What matters is whether growth is sustainable, and whether most citizens see their living standards rising year after year."
>
> **(Stiglitz, 2016; p. 149)**

The need for a more comprehensive assessment of how economy and society should work is an extremely urgent issue. To address the challenge, a paradigmatic shift seems to be knocking at the door.

[9] European Environment Agency (2022), "Economic losses from climate-related extremes in Europe", available at : https://www.eea.europa.eu/ims/economic-losses-from-climate-related

2.5 What is changing and how?

The social and environmental fractural lines alimented by inequality are soundly calling for a change in perspective towards a vision of growth enriched by humanities. Therefore, much more responsive to the social and environmental consequences of last year's standard development doctrines. The same meaning of growth is clearly passing through a reconsideration. At least from a theoretical point of view, what is slowly changing is scholars' grasp of the meaning of "wealth" in real life terms. The main assumption underlying this attempt of society's restructuration at 360° degrees is the crucial difference between "wealth" in neo-classical terms (money, assets, profits) and the humanized concept of "well-being". In fact, in its most concrete sense, sustainable development requires at least achieving the dematerialization of economy, as is to say a decrease in the resources exploitation, a fair distribution of wealth and a new conception of human and planetary wellbeing **(Peeters, 2012)**. Last year's predominant vision of "*homo economicus*" intended as a self-reliant being seeking for the maximization of utility, permitted to theoretically detach economy and society from nature. But outside the economic calculations, this vision is blind in front of the emerging connection among social and environmental inequality. Helne and Hirvilammi, two Nordic scholars expertised in the field of eco-social welfare and social policy, suggested a refreshed version of the "*homo economicus*" with the conceptualization of the "*homo iunctus*". This perspective takes its cue from the idea of human relationality provoking a shift in the idea of well-being: it is no longer individually determined but dependent on the quality of relationships among human

being and between humans and nature. (**Helne and Hirvilammi, 2017)**. This theoretical shift helps to better understand the implications of real sustainability by tracing a line of connection between our social and environmental responsibilities and general human wellbeing. The idea of interdependency is stressed here and what emerges is exactly that individual and social well-being are mutually dependent, while "states of wellbeing (or illbeing) are continually produced in the interplay between social, political, economic and cultural processes" **(Helne and Hirvilammi, 2017; p. 42)**.

On the same line of thinking, Eduardo Gudynas, a leading scholar on the *"buen vivir"*, criticizes the classic Western vision of wellbeing for highlighting mainly the individual benefits deriving from it. Emerging from South America, *"buen vivir"* strictly relates individual well-being to the precise social context of the community in which one lives. Plus, a new recognition of natural world's centrality for the social well-being is also a crucial aspect of this theory.

"Buen vivir explores alternatives in the shape of other types of relationships between society and its surroundings, advocating substantial changes as regards how people understand themselves, the valuations assigned to the non-human and concepts of welfare. This means that "buen vivir" is as much a criticism, of, as it is an alternative, to, development" **(Gudynas, 2012).**

Gudynas recalls that even if *"buen vivir"* practices are by now mostly adopted by South American communities as path of alternative development, it does not mean that this vision is destined to get stuck in the Andean regions. This by no way means that "buen vivir" practices could be easily applied by one day to another, given the fact that it calls into question some deeply rooted dogmas of the global society. It is however interesting to notice the affinity

between the contributions of some European scholars and the ideas coming from advocates of the "buen vivir". There are of course also differences. In particular, "buen vivir" intrinsically underline the importance of sensitivities and spiritualities by holding that these two aspects determine relationships with humans and the environment. This vision not necessarily consists in a form of religiosity or some strange mystical position **(Gudynas, 2012)**, but it still remains poorly explored in the eco-social framework, at least in these terms. Despite some differences mainly given to the cultural underpinnings of these theories, several points in common still emerge. For instance, the French economists Coutrout and Gadrey **(Coutrout & Gadrey, 2012)** brought evidence of how the growth for growth's sake under the "green growth" label proved to be both environmentally impossible and socially pointless. Criticizing the dominant neo-liberal Western approach (still present in the green growth paradigms even if masked) that enslaves society to indicators, they states that GDP and others "macroeconomic indicators lose all meaning within a development model based on 'quality of life' […] we must promote completely different efficiency criteria to guide the decisions of stakeholders, both public and private, and a range of quality criteria enabling us to judge between the various aspects of quality and enjoying a 'good life' "**(Coutrout and Gadrey, 2012; p. 5)**. Gough considers social needs as "universalizable", due to their strong link with social harm, considered also as "impaired social participation**" (Gough, 2015**. The linkages are quite blatant if we focus on the importance given by these theories to the shift from a "growth society" to a "good life" or "buen vivir" society, to be reached by reconstructing the underlying assumptions of relations among humans and between humans and the environment. But every time a

paradigmatic shift occurs, it carries expression and manifestations of tension and controversy. At the same time, it can no longer be denied that in the last 40 years human race has experienced huge extremes in terms of social and environmental inequalities, which in turn brought to tension and controversy. Therefore, a profound change in perspective of what is development and how to reach it, as already stressed in the sections above, seems to be the most intelligent way to address future social and environmental challenges. But In order to avoid the risk of isolated forms of environmentally and socially just behaviours, the shift cannot be as radical as "buen vivir" theoreticians would like to be. Laurent underlines how in "no transition is it possible to hope that all will proceed in a succession of consistent and rational steps", arguing that "the failings and shortcomings of the current narrative will gradually lead to its replacement by a more viable alternative, and awareness of the nature of such a process will generate an approach to transition that is not the 'command and control' variety but is more in the nature of a polyarchy, a process of trial and error, experimentation and finally, the shift to a new position" **(Laurent, 2016; p. 25)**. In this regard, the European Green Deal implemented trough a cautious eco-social approach seems to be the most viable path. Contradictions will still surely emerge, but a solid programmatic framework (EGD) together with a conscious multi-disciplinary eco-social approach can provide the right theoretical-empirical mix to deviate society from its implosion. Human (social) and Natural (environmental) forces are calling for a society restructuration along all its main foundations. Mobility is one of these.

III. A TWO WHEELED TRANSITION? TOWARDS URBAN MOBILITY SCHEMES REDEFINITION

Moving is a defining dimension of our existence. Even before getting in contact with the physical environment around us, each of us moves in her or his mother's breast to prove that is alive. And since the very first moments of our life, we move for many different reasons. To explore, to understand, to communicate, to find something or someone. As children seeking for freedom, our greatest personal gains come from our capacity of moving. I remember how walking until the end of the street to get my favourite type of cheese at the local grocery or cycling for 200 meters until the football field around the corner used to make my day. Then the need of moving become more and more urgent. Our social relations expand, our passions start to burn, our eyes get used to the "good old places" of our childhood and the more we grow up, the more these spaces look small. Human's innate desire of exploration makes us wonder what (and who) is hidden around the corner, outside our little town, or in the city neighbours surrounding our block. Maybe then not everyone is interested in looking for what is next, what there is in another city, another region, another state, or another continent. But the need to move, even if in a circumscribed environment, stays there. Most importantly, the need to move freely is what we really demand. Even looking for something that you do not even know makes perfectly sense in terms of personal freedom. While if that something or someone can foster your well-being, the benefits of easily pursuing it extend to the field of human development. Autonomy of agency is considered an essential need to satisfy in order to pursue well-being,

which is conditioned by possibilities to access to a range of opportunities to undertake socially significant activities **(Doyal & Gough, 1991)**, and this is strongly connected with the ability to move, physically and socially. Accessibility to education, to food and water, to basic goods, to employment, but also to recreational places and centres of cultural exchange is strictly dependent on our capacity to move. But what if, on the contrary, we could not move as we wish in our little town or big city? If we had to feel ourselves in a clear and present danger just for walking or cycling around? If we could not reach the cinema or the library because is too far, we perceive cycling as a danger because there are no easy routes, we cannot afford a motorized vehicle and the public transports are not working properly (or at all). What if, at the extremes, we had to travel for 10 or 20 km just to get some commodities like water, wood for the heating or quality food. In front of all these "what if", which are full-fledged real-life issues, we usually choose to avoid moving, admitting that is possible for our subsistence. Or maybe we demand to someone else that "effort". Our will and possibility of moving loose significance, and we start to perceive movement as an effort hindered by multiple social, economic and geographical/environmental factors. Then our horizons start to reduce, together with our understanding of the (social and ecological) environment that surrounds us. For instance, our bright ideas inspired for example from an interesting conference simply do not shine, because we did not attend that conference. We turn lazy in going to the weekly training because the playground or the swimming pool are out of reach. Our health conditions, both from a psychological and physical point of view slowly deteriorate. For instance, active transportation, which entails some kind of human activity has been

positively associated with a condition of general well-being, also because it reduces the risks of obesity, cardiovascular disease, morbidity and all-cause mortality **(Basset et al., 2008; Wanner et al., 2012)**. In turn, the energies we have to offer to the world as students, volunteers, workers, caretakers, or just human beings start to decrease, with the risk of reaching levels of apathy that jeopardize our role of active agents in relation with other agents and the environment. For these and many other reasons, mobility is a crucial aspect of our everyday life and shapes the way we feel and act within our surrounding. For instance, the world "emotion" (from French émotion, from émouvoir 'excite', denoting public disturbance during the mid 16th) is based on the Latin *emovere*, composed by *e-* + *movere* which literally means 'to move out'[10]. The concept of movement attains, even etymologically, not only to the merely physical space but also strictly connects to the field of our feelings and emotions. For instance, the idea of freedom, proactiveness, enthusiasm, body and mental self-consciousness but also social status, are all linked to the way we move. Moreover, mobility is a crucial dimension of our wellbeing both in an individual and shared perspective. In this regard, a crucial distinction must be made between the use of motorized vehicles and the choice of active mobility or inter-modal mobility options. In fact, the modalities we choose for moving within the surrounding environment have a strong impact on our social relations patterns as well as on the same external settings. Mobility is therefore a full-fledged eco-social issue since it strictly attains to both social and environmental aspects and puts them in a strong reciprocal relation. For what regards the European Union context, this

[10] Oxford dictionary

is particularly true if we focus our lens of investigation on cities, which are more and more becoming the powerhouses of modern economy and home to an increasing number of people. To give some data:

- 70% of the EU population lives in cities today, a number which is projected to reach almost 84% in 2050;
- 23% of the EU's transport greenhouse gas emissions come from urban areas;
- EU economy counts a contribute of roughly €130-150 bn/year from urban and local public transport services;
- 50 bn passengers were carried by buses, trams and metros in EU cities in 2018, saving 100 million car trips everyday;
- 38% of road fatalities in the EU occur in urban areas, 70% of deaths are vulnerable road users such as pedestrian and cyclists;
- 6/10 people aged over 15 never or seldom exercise or engage in physical activity, such as cycling;
- 100 climate-neutral cities by 2030 is EU's milestone. Sustainable urban mobility is key to achieving it **(EU Commission, 2021)**

3.1 The automotive revolution, a controverse issue

The current shape of European cities passed through the continent' long history. Differently from for example the U.S., where a lot of urban centres presents a relatively young silhouette, the "old continent" is dotted with hundreds of examples of diverse architectures in style and age. From old roman ruins integrated with the urban

landscape of Italy's capital, to the composite style of Granada, a Moorish headquarter during the late Middle Ages then contaminated by the Renaissance, the Gothic and Baroque. The little and labyrinthic streets of Lisbon, shocked by a devastating earthquake in the 1755 and then completely rebuilt with the typical "calçada portuguesa" as a cloak for its ground. Or the impressive urban setting of Paris, characterized by centuries of history stratified, cradle of the Gothic style but enriched by many others architectural trends from the Middle Ages to the Belle Epoque and Art Nouveau, to the contemporary skyscrapers. Europe's cities beauty has always been attracting people from all over the world, destination for the young and wealthy artists who embarked on the "Grand Tour" as well as for the tourists of today, of wide and diverse social extraction. But if from a cultural point of view this richness in the diversity of shape and history is simply amazing, it also presents relevant issues from a policy-making perspective in terms of common paths of urban development. Diversity in size, history, aesthetic appearance, building materials and territorial features also shaped the civic culture of each city, paving the way to different experiences of urban progression. But if we think about it, there has been one step in the recent history that for a long period pooled most European cities from North to South and from East to West: the introduction and diffusion of the automobile in the city context.

The first prototypes of car dates back to the beginning of the 19th century, but at that time the horse-drawn carriages were still the best options for the few who could afford it. The automotive however initially was just a luxury object full of problems. The car officially enters in processes of massification during the first years of the 20th century, due to the invention of the "supply chain of production"

brought by Henry Ford. This revolutionary method called in fact "Fordism" represented a huge shift in terms of human relationships, laying the foundation for modern capitalism. If that was not enough, it also profoundly influenced the evolution of everyday-life mobility and, therefore, of behaviour:

"The infrastructures that owe their existence to the car are no more than one hundred years old, yet there certainly have not been many technological innovations in the modern era that have entered not only our awareness, but also our standards of conduct, our ways of life – in short, our behavior – as much as anything to do with the car." (**Welzer, 2011)**

The automotive revolution in Europe would have come some decades later, with the end of the WWII. In fact, the overall economic expansion that characterized Western European countries during the late 50's and the 60's turned the ordinary citizen's dreams into reality. The car made possible the impossible. It became a symbol of freedom. Now almost everyone could travel, meet new people, and enjoy a glimpse of what in Rome were called "dolcevita", a lifestyle prerogative of affluent people. But the revolution did not stop here. The passage from a communitarian-based society to an individualistic approach have been strongly fostered by the possibility to consume more, to consume alone and to feel stronger and able of reaching every distance, physical as well as figurative. The myth of automobile has also been the means which enhanced this paradigmatic shift in the values-horizon of the majority of Western European citizens. Not by chance, the Italian Futurist movement strictly intertwined with the Fascists venues, found exactly in the automobile considered as "Vehement god of an iron breed" **(Marinetti, 1921)** the

unifying symbol of its cornerstones. Namely, the speed, the myth of progress, the strength as purest expression of masculinity and the aggressive "élan vital".

As the Italian musician Rino Gaetano provokingly sings in its "L' operaio della Fiat (La 1100)", the automobile represented freedom, but not for everyone.
The growing demand for production followed by the exploitation of resources, preferential treatments at the expenses of other sectors, street casualties, and very importantly, the design of urban spaces for cars and not for people, slowly started to be considered as the negative externalities of the "automobile era". It is funny, to use a euphemism, that the first concrete setback to the rampant use and diffusion of cars has been caused by a war.

3.2 Winds of change, from the Middle-East to Europe

After the WWII, the international geopolitical landscape was in ebullition. The "policy of containment" promoted by the Truman presidency in response to the Greek civil war was not just an ad hoc strategy, but rather a sort of Western power manifesto. In fact, the Truman doctrine declaration of March 1947 marked an historical step away from US's isolationist stand, laying the ground for the next foreign policy guidelines which lasted until recent attempt of Trump's presidency to re-isolate US. This approach, devised in the origins by the Secretary of State George Kennan, came together with huge implications not just for Europe but for the entire world, as the U.S. involvement in the Korean War will then demonstrates. Just a year later, on June 1948, Stalin decided to impose a blockade on the flow of goods and people between the two spheres of influence (initially four, UK, FR, US, URSS) in which

Berlin had been split. Surpassed with the famous 'air bridge', the Berlin crisis deflated when URSS let the plane fly. However, these two major events marked the real starting points of the Cold War period and consequently the transformation of the global arena into a bi-polar system of relations. Even if an open war between the two superpowers fortunately never took place, the tension was simply distributed throughout the international landscape resulting in dozens of "low-intensity" conflicts. This period signed the beginning of an era in which events across the globe strictly intertwined with each other. The speed of circulation of information, goods, services, military equipment, and people, increased soundly, also stimulated by the "race to space" between US and URSS which fostered innovation and technological development. It is therefore quite interesting that exactly from this new global panorama focused on technological advancement, a very simple but genial invention started to be slowly but inexorably rediscovered: the bicycle.

This story starts in the Middle east region, where a game for resources and power was ongoing. Israel, considered by many observers as "the Western extension" in the region was constantly involved in wars against the surrounding Arab states and during October 1973 was surprised by a joint military attack from Egypt and Syria. Apart from the initial crumbling of the Israeli army, the conflict did not bring substantial military gains for the Arab forces. The conflict was cooled by the mediation of the superpowers (which supported the two opposite factions) driven by the fear of an escalation that could have contaminated the global arena. Notwithstanding this, the Yom Kippur[11] war

[11] Yom Kippur is considered the most holy and solemn day of the jewish calendar, falling the 10th of Tishri as is to say the 4th-5th of October. It consists in a religious celebration focused on the preaching and the request for sins' remission in front of God.

signed an important political and propagandistic achievement for the Arab countries and fostered a symbolical power re-affirmation within the region. But maybe most importantly, the crisis shook the whole international landscape. In fact, the Organization of the Petroleum Exporting Countries (OPEC) composed at the time mainly by Arab countries decided to support Egypt's and Syria's actions. As a reprisal for supporting Israel in the conflict, Arab oil exporters imposed an embargo on the Western countries colluded with the Jewish state, quadrupling at the same time the price of oil. This strategy provoked the first international oil crisis, with very harsh economic and social repercussions in the global landscape for at least all the 70s.

But as we all know, from the crises sometimes derive beautiful and unexpected surprises. The Netherlands, known today as the paradise of bicycles worldwide proved this proverb to be true.

The Dutch country, along with US, UK, Canada and Japan was among the countries most structed by the oil shock since it was strongly dependent on OPEC's petroleum supply. This weakness opened a policy window that encouraged the intervention of governmental actors. The first step was taken during a television speech, whereby Prime Minister Den Uyl proclaimed the "car-free Sundays" as a way to save energy and money, but also to improve the quality of living in the Dutch cities. To promote this measure, Den Uyl rode his bicycle in front of cameras. The no drive days were later halted, but the popularity of cycling was at this point rose a lot among the Dutch people. The experience of living in quieter and safer cities, made citizens aware of the merits related to a much more de-motorized mobility. Cycling was regaining its original

popularity, and this brought also to an economic benefit for the bike shops, since the sales of bikes doubled. (**Bruntlett, 2022).**

These happenings gave a strong momentum to the diffusion of bicycle as tool for building up a more inclusive and enjoyable type of city. But before and after the oil shock, others societal actors concerned with the cycling issue and the security on the roads were rising in the Dutch scenario.

It all started the 14th of October 1971, when Simone Langelhoff was cycling to school in the countryside around Helvoirt, a little town in the South of The Netherlands. She usually went to school with her sisters, but that morning she was alone. All of a sudden, a drunken woman popped up from a corner driving at high speed and swept up the little Simone. Clearly the car was not a symbol for everyone's freedom anymore. The Langelhoff family was profoundly shocked by this tragedy, but also in this case something special emerged exactly from a crisis. Vic Langelhoff, the father of Simone, was an accredited journalist for the Dutch newspaper "De Tijd". His despair for the loss of the daughter was furtherly compounded by the ridiculous fine imposed on the killer car-driver (about 270 euros). In reaction to all this, Vic Langelhoff started to scrupulously registers the number of street casualties provoked by cars and the overall mobility trend of Holland. During the previous twenty years, the total amount of kilometres driven by car increased fivefold and the number of street-victims starkly soared: from about 1.000 in the 1950 to 3.300 in the 1971. This last data comprehended 450 kids, among whom there was Simone. (**Walker, 2017)**

Sincerely worried by the direction that mobility patterns in Holland were taking, the 20th of September 1972

Langelhoff announced with a full page of his journal the birth of a new social movement called with an incisive name. “Stop der Kindermoord” (stop the children’ deaths) was born, with the aim of “broking the apathy with which Dutch people accepts the everyday slaughter of children in the streets”. **(Walker, 2017; pg 37)** His statements propagated as a call for all the Dutch parents and people worried about the dangerous situation in the streets. The movement had a reformist soul, expressed through actions like huge sit-in or street occupation and grew very rapidly in numbers and audience. Moreover, an influential campaigner of Amsterdam involved in the burgeoning feminist and progressive transport movement embraced the cause. Thus, the activist and first elected president of the movement Maartje van Putten, started to appear in lots of medias, from early televisions to journals, and managed to furtherly spread the voice all over the Dutch citizens. Then the oil shock came, providing a boost for this and other subsequent societal stakeholders.

In 1975, the Dutch Cyclists' Union (ENFB) was established, initially as a counterpart to the ANWB (Royal Dutch Touring Club), which no longer promoted (solely) bicycle interests, and was therefore originally named the Enige Echte Nederlandse Fietsersbond ("The One and Only True Dutch Cyclists' Union") **(Dutch Directorate-general for Passenger Transport, 1999)**. This association ceased to be a random agglomerate of cycling enthusiasts, counting a wide and organized membership all around Netherlands, roughly 30,000 associates. In the same year ENFB was founded, a new lobby group was created in order to get rid Amsterdam of cars. “Amsterdam Autovrij”- Car-Free Amsterdam – began to stage mass bike ride as a sign of protest. During the years, the affluence grew at an exponential rate with a peak of fifteen thousand

riders in 1978 **(Reid, 2017)**. At the eyes of the government officials, these grassroots lobby movements started to be more and more recognized as efficient and valuable for the urban planning. In fact, in November 1978 a new Traffic Circulation Plan was adopted by the newly elected city council. The plan intended to rebalance the relationship between motors and bicycles in the city, calling for the reduction of motor traffic, and car-parking spaces in the city centre. "In the coming years", the revised plan stated, "the policy must strongly focus on improving conditions for cyclists **(Reid, 2017)**. This was the first step that would have led to further governmental efforts during the next years, a renewed policy vision that brought Amsterdam and The Netherlands to be an example of innovative and sustainable mobility policymaking across the world. But what can be learnt, from this very first episode of urban mobility regeneration? I briefly described the process in terms of events succession, but the actors involved, and their way of interacting played a crucial role in the progression towards a new model of urban development much more focused on the inhabitants' well-being.

3.3 Actors and interactions, a useful example

The actors involved in the redefinition of Dutch mobility are of different nature, they can be divided in three macro-areas which are: the social domain, the media sphere and the governmental venues. The grassroots lobby movements surely did a massive effort in order to get noticed by the authorities. The strength of these societal actors lay on their proliferation and differentiation, capability of gathering consensus among citizens and apolitical connotation. Moreover, the participation of professional campaigners (as for example Maartje van Putten) carried to a

maximization of the impact of the message through the media. This was another important platform that created the basis for a larger spreading of the movements' demands. The third fundamental actor was the government, national and local, that demonstrated an open-minded approach to the bottom-up requests maybe also due to the strange contingence of the times.

Uncommonly, the interaction model related to the policy process described above presents quite low frictions between the actors involved. In fact, it didn't take a long time before the state officials and their social counterparts began to work together in order to address the problem outlined by the first protests. This is also due to the fact that Stop de Kindermoord didn't simply picketed, though offered practical and feasible solutions. An interesting method to do that was the recruiting of traffic engineer Steven Schepel, who had worked with the woonerf - piooner Joost Vahl[12]. Moreover, a vertical deal was adopted by the national and societal actors: Vahl's salary was delivered by the national Government. It must be underlined how the fragmentation of interests between different type of actors was very low. The policy subsystem presented favourable conditions about the emerging of new demands and ideas from below. In fact, a quite strong cohesion between the various players of the policy game stands out. Thanks to the alignment of interests and shared beliefs (namely safer roads, more sustainable mobility, de-motorization of the cities, saving of energy and improvement of the overall well-being) the result is a smooth policy process that brought to positive outcomes for every stakeholder involved. Nevertheless, the links

[12] The "woonerf" or "shared area" is a street or a public space where the most vulnerable road users like pedestrians, children and cyclists boast the priority also because, thanks to various precautions, the car-drivers are obliged to adopt a much more cautious behaviour. A typical public space design in the Netherlands.

between the actors remained strong also after the implementation of the measures and still works well. Also, the external settings of the context fostered the performance of the development of cycling facilities in the Netherlands. A mammoth reserve of inland natural gas was discovered close to the city of Groningen in 1959. This gas field turned out to be the largest natural gas field in Europe. "After it came on stream in 1963, Groningen's gas paid for a great deal, including the famous social welfare policies of the Netherlands" **(Reid, 2017; p 204)**. This discovery made possible the funding of many projects in the Netherlands, among which the renewal of transport policies in favour of cyclists. Thus, a combination of factors carried to reality the revolutionary plans beside the most cycle-friendly State of the world. The main drivers of this shift were however three: the need to overcome a structural crisis, increased public financial capacity and a social interaction model developed both horizontally and vertically, integrated with professional and technical expertise. The first two aspect above recall the current times, respectively to the climate crisis (as well as COVID-19) and the upfront investments provided by the EGD framework. The last instead, is something that must be proactively pursued through a constant relational interaction by civil servants and citizens, in order to make people-centred policies work.

3.4 The New European Mobility Framework

What initially looked like a utopia turned into reality in just a decade. It is undeniable that a fortuitous aligning of events took place in the Dutch experiment, but this cannot be an excuse to do not embark on similar urban landscape redefinition. Rather, the main characteristics of the policy process described above could be taken as a blueprint for brave urban designs nowadays. In this regard, European Union is an actor that really changed its shape if we compare the current period to the 70s. A real sensibility towards the need of pursuing a more just and equal society seems to be sneaking into the policy-making venues since some years. In this regard, the EU Commission has been grasping the worsening of a crisis as stimulus to improve and progress similarly to the Dutch experience of the 1970s. Of course, there are many crucial differences between these two processes.

Firstly, the institutional actor here is not represented by just the member states, but rather by the EU itself. Its multi-level shape presents both weaknesses and strengths that must be managed following a multi-disciplinary approach, also given the increasing complexity of setting up a just transition. Secondly, the climate crisis has the characteristics of a full-fledge global crisis which endangers the whole humanity. This aspect must be clearly understood by governments worldwide, which have to embark on mitigation programmes and policies. The responsibility of guiding this global process should be taken by the most industrialized countries (G20), being both the major contributors to GHG emissions and at the same time the more economically developed. An aspect, this last, which should provide more room for manoeuvre in terms of funding and investments for pursuing an eco-

social transition. Unfortunately tough, a UN environmental programme's report underlined that just five members of the G20 concretely inserted the commitment to reach the 2050-zero emission target in their political programmes. **(UN environmental programme, 2019)**. EU, considered as a unique block within the G20, is among these five. The European Green Deal can be read as the answer to the increasingly worrying global situation but does not look like just a technical response to the issue. As already stressed, EGD also presents the characteristics of a more careful stance towards the sphere of individual and societal well-being, detached from mere and wild economic growth. Therefore, a more careful stance towards the demands of people and not of the system of production. Even if it is not officially stated within the EU documents, this stance goes in the same direction of the eco-social approach. This guideline has been followed also in the field of mobility, recognized by the Commission (and not only) as an extremely important sector to reform, given its centrality in respect to many aspects of both everyday life and the smooth functioning of the society **(European Commission, 2019)**.

On this point, the New European Mobility Framework **(European Commission, 2021)** is the most recent EU's programme for boosting an urban just transition. Trickled down from the EGD, this programme aims to address the main challenges of the last years urban development model. The necessity to do this come from the acknowledgment of the cities and towns importance within the EU borders, especially for what attains social, cultural and economic progress. Europe, in fact, is one of the most urbanised areas in the world, counting for over the 70% of EU citizens living in cities, towns and suburbs. These areas, generate 23% of all transport greenhouse gas

emissions in Europe[13]. In addition, half of a city's GHG emissions are linked to transportation system **(WBGU, 2015)** which in some areas of Europe has been shaped primarily on the dominant and massified use of private automobile. Aware of this big issue, Von der Leyen's Commission identify the "development of public transport, walking and cycling together with connected and shared mobility services" as priority at "national and local level" **(EU Commission, 2021)**. The communication then argues that the "EU needs to take more decisive action on urban mobility to shift from the current approach based on traffic flows to an approach based on moving people and goods sustainably" (**EU Commission, 2021**). The centrality given to the need of finding new and more sustainable patterns of mobility is due to the crucial recognition that "mobility is a critical aspect of social inclusion and an important determinant of well-being, especially for disadvantaged groups" (**EU Commission communication, 2021**). It is quite interesting that, differently from the previous Urban Mobility Package of 2013, the focus on people's well-being is clearly stated in the official document of the New Urban Mobility Framework (2021-2028). The acknowledgment of the need to address this aspect stems from the evaluation of the 2013 Urban Mobility Package, which highlighted various criticalities. The most important and urgent to address are:

-Lack of a systematic urban mobility data collection in the EU, but where the data are available the picture show that current trends in urban transport are not showing concrete shift in the modal share, traffic flows and greenhouse gas

[13] European Commission press corner, 2021 visited on April 21st available at: https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_6729

emissions reduction since 2013. On the contrary, private cars still dominate against a little increase in active mobility trends and public transportation.

-The environmental cost of transport negative externalities still remains very high, counting around €1 trillion annually within the EU (28) caused by GHG emissions, air and acoustic pollution, energy demand and environmental damage. All aspects which strongly affects also overall well-being.

- The situation in rural, peripheral, and remote areas which still presents challenging situation in terms of accessibility and availability of transports.

- Even if the problems of congestion, traffic, pollution, casualties and accessibility are similar to those highlighted in the 2013, the climate change acceleration is furtherly exacerbating the urban mobility situation. (**DG MOVE, 2021)**

In addition to these main issues, the New Urban Mobility Framework has been devised during the COVID-19 Pandemic, which played an extremely important role in the recognition of what is essential to human well-being. In the opening pages of its beautiful book upon the "slowness", Paolo Pileri, professor of Urbanistic Planning at the Politecnico di Milano, argues:

"The Covid-19, by forcibly arresting everything and everyone, showed us not only that we hate to stand still, but that after all we still have an innate need of slow movements, also short, outside our house and that we cannot deny it above all to the children and the elderly, otherwise hardships

will emerge. Suddenly, we caressed the feeling that we could live without velocity more than we used to think. On the contrary, we experimented the vital necessity of the opposite: to go out, to walk, to sit on a bench. […] To put slowness at the bottom of the public policies agenda and not valorising it within the common sense it was and still is a gross mistake in our project of city and territory". (**Paolo Pileri, 2020; pp. 5-6**).

This opening reflection defines in very clear terms the possibility given by the Pandemic crisis to seek for an organic redefinition of the sense of mobility. Fortunately, also the Commission recognized it admitting that even if the COVID-19 has disrupted mobility and in particular public transports, it has also "drove cities to improve infrastructure for active mobility". This process entails that "now it is more than needed to emerge from the crisis with a more resilient, smarter and more sustainable urban mobility system, which is also key to the overall resilience of the transport system and the economy" (**EU Commission, 2021**). To do this, the Commission identified nine main fields of intervention which, addressed simultaneously and coherently among each other, should foster the transition. Namely, they are:

1) **A reinforced approach to TEN-T urban nodes**

2) **A reinforced approach to Sustainable Urban Mobility Plans (SUMPs) and mobility management plans**

3) **An improved monitoring progress towards sustainable mobility indicators**

4) **Attractive public transport services, supported by a multimodal approach and by digitalisation**

5) **Healthier and safer mobility: a renewed focus on walking, cycling and micromobility**

6) **Zero-emission city freight logistics and last-mile delivery**

7) **Digitalisation, innovation, and new mobility services**

8) **Moving towards climate-neutral cities: resilient, environmentally friendly, and energy-efficient urban transport**

9) **Increased awareness raising and capacity building**

Looking closely at these nine macro areas of intervention for which the Commission has been devising and proposing solutions[14] we can easily notice that active mobility, and cycling, could connects with all of them creating successful synergies. Furthermore, there are some fields among these nine where cycling could not only help, but plays a really pivotal role in addressing the "net-zero target" of climate neutrality pursued by the EGD strategy, while also bridging the gap of social and environmental inequality among the

[14] More detailed information are available here: https://transport.ec.europa.eu/system/files/2021-12/com_2021_811_the-new-eu-urban-mobility.pdf, last access on May 25, 2022

population. I will now bring some evidence to this argument.

- **Reinforced approach to TEN-T urban nodes**:

  The Trans-European Transport Network, also known as TEN-T is the EU's principal channel of communication among roads, railways, airports, ports, inland water fluxes and maritime shipping routes. Cities, especially large ones, are primary hubs of exchange within this network. To optimize their function, greater attention should be placed on the addressing of capacity bottlenecks and insufficient network connectivity. Therefore, intelligent active mobility policies could play a significant role in this regard by lowering the pressure on the traffic flows within cities. It has been estimated that the value of congestion easing through cycling for the EU can be estimated at 6.8 bn EUR per year, while the total costs of congestion for the EU economy have been estimated at over 240 bn EUR per year which corresponds to almost 2% of EU GDP **(European Cyclist Federation, 2018).** Despite the fact that the Commission recently (on 14th December 2021) proposed a revision of the TEN-T framework regulation, a proper integration of active mobility still misses. Currently, the ECF is advocating for a greater consideration of the potentials of cycling also within this framework. The organization highlights the need of integrating into TEN-T:

  - Eurovelo, the European cycle route network

  -Elements of active mobility such as cycling and walking in a systematic way

  These proposals are exactly aimed at enriching the revised version of the TEN-T framework expected for the 2023, in line with the New Urban Mobility

Framework axes of intervention. Moreover, TEN-T revision also interconnects with another main point :

-Zero-emissions city freight logistics and last-mile delivery

Within this domain, cyclo-logistics is increasingly proving its positive input for the urban economy. Wrigthon and Reiter estimated a huge shift potential of 51% of motorised private and commercial transport trips, arguing that "cargo bikes are indeed a serious alternative to motorised delivery vehicles in urban areas" (**Wrighton et Reiter, 2014; p. 957**). A brief reference to this simple but efficient solution is contained also in the document, but a more substantial commitment in this direction will just produce positive outcomes. For example, the proposal to revise the CO2 emission performance standards for heavy-duty vehicles to zero-emission vehicles could really mark a game-changing line. Helped by a proper regulation, cyclo-logistics could stop to be an alternative and curious means of transportation, gaining a central role in urban delivery system. Examples of intelligent innovation such as the Move Us Smart (MUS) project[15], if taken into proper consideration by companies and authorities are already at a point of development able of revolutionizing last-mile delivery solutions.

[15] https://musmobility.com/en/, last access on May 20, 2022

- A reinforced approach to Sustainable Urban Mobility Plans (SUMPs) and mobility management plans

Back in the 2007, the European Union provided a Green Paper called "*Towards a new culture for urban mobility"* which two years later was then summarised into a strategic document of central importance: "*The Action Plan on Urban mobility*" **(EU Commission, 2009)**. This document was the starting point for the renewed EU strategy on urban mobility and brought the proposal of the development and implementation of Sustainable Urban Mobility Plans (SUMPs). Since 2013, SUMPs have been the main strategic tool for pursuing a transition towards more sustainable and efficient urban mobility designs all around Europe. The 2013 Urban Mobility Package threw the basis for a first conceptualization of Sustainable Urban Mobility Plans, intended as a tool to be adapted to the different contexts coexisting within the EU. The document states that SUMPs "has as its central goal improving accessibility of urban areas and providing high quality and sustainable mobility transport to, through and within urban area" **(EU Commission, 2009)**. Moreover, the Annex stresses some main points at the end of a proper and effective implementation such as the need for a long vision and clear and coherent implementation, the horizontal and vertical integration of stakeholders and the importance of a solid evaluation process ex-ante, current and ex-post. The document already contained the main guidelines, but these have been recently revised and grouped in a report by the urban mobility observatory Eltis. In sum, the report highlights eight fundamental and synergic principles for the successful SUMPs implementation:

- Plan for sustainable mobility in the entire “functional city”
- Cooperation across institutional boundaries
- Citizens and stakeholders strengthened involvement
- Long term vision definition and clear implementation planning
- Development of all transport modes in an integrated manner
- Current and future performance assessment
- Arrangements for monitoring and evaluation
- Quality assurance

(Eltis, 2019)

What is interesting in this reviewed approach is that compared to old-fashioned transport planning schemes, the SUMP gives centrality to the citizens, rather than on traffic flows. It is an instrument thought to foster the improvement of urban environment under many aspects, seeking an equilibrium between rooted mobility patterns in urban areas and quality of life. In fact, the focus on the public health, climate change, energy saving, and noise-air pollution furtherly stressed in the most recent SUMPs is a signal of change involving also local authorities and especially City councils. Civil servants are encouraged to move from a role of technical implementers which follows a business-as-usual strategy, to a more comprehensive understanding of societal challenges, being sensitive to the sphere of well-being. Active mobility and cycling strongly connects with this discourse, and not by chance they are more and more considered as promising fields of work. For instance, SUMPs and ECF priorities have a lot in common:

-Sustainable mobility

-Inter-modality of transports

-Cleaner and more liveable cities

-Promotion of health

-Promotion of local economy

-Cost-effective solutions

-Accessibility of the solutions in terms of social opportunities

-Major problems addressing such as commuter traffic, congestion, pollution and road safety. [16]

These guidelines are perfectly in line with another main point stressed by the New Urban Mobility Framework, which is the pursue of climate neutral cities characterized by resilient, environmentally friendly and energy-efficient urban transport **(EU Commission, 2021).**

- Attractive public transport services, supported by a multimodal approach and by digitalisation

The quality and reliability of services in terms of public transportation can really make the difference in shifting the mobility patterns away from the predominant use of private motorized vehicles. "According to Eurostat, 20.4% of people in the EU report 'high' or 'very high' levels of difficulty of access to good public transport. This means that one in five of EU citizens have a high lack of convenient access to basic urban services, like jobs, schools, healthcare and so on" **(DGUM European Commission, 2018)**. Therefore, improving accessibility to public transportation services not only will foster the transition towards the EGD climate goals but also will address one of the Sustainable

[16] ECF, https://ecf.com/what-we-do/urban-mobility/sump#, last access on June 12, 2022

Development Goals (SDG 11.2)[17]. Of course, an effort in the direction of green mobility in the field of transportation could address much more SDGs than just one. For instance, R&D can boost technological innovation aimed at reducing oil dependency and energy waste through the optimization of different sources. As part of a broader shift towards zero-emission mobility, hydrogen and in particular battery electric buses already represent a fast-growing share of the public transport fleet across the EU (**EU Commission, 2021**). An increasingly important aspect since resources are expected to get scarcer and scarcer, calling for a shift towards innovative fuels and energy production solutions. Moreover, outdoor (environmental) and indoor(household) air pollution is the biggest environmental risk to health within cities. Environmental air pollution alone kills about three million people each year, while physical inactivity is considered to be the cause of more than 3 million deaths and $50 billion in economic losses (**Sustainable Mobility for All, 2017).** A multimodal approach aimed at functionally integrating walking and cycling with renewed public transportation services will face both these issues. Pérez et al argues that "the availability of walking and cycling alternatives along with the promotion of safer road behaviours can improve equity in terms of both access to transport systems and health outcomes" (**Pérez et al, 2017; p. 317**).

[17] "By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons" (UN) : https://unstats.un.org/sdgs/metadata/?Text=&Goal=&Target=11.2

- Healthier and safer mobility: a renewed focus on walking, cycling and micro-mobility

In this section of the document, the role of cycling is clearly stated thus avoiding us the effort of looking for connections and synergies between the lines. It is worthy to notice that by using the word "renewed" the Commission implicitly admit that during the past years the promotion of healthier modes of mobility, for the single and for the community, has been mainly a prerogative of just some countries or even just local authorities. As it is well known, Nordic countries, Switzerland, Holland, Belgium, and some areas of Germany have been the pioneers of pedestrian and cycle-friendly urban network's design. On the other side of the coin, countries pertaining to the Mediterranean region and Eastern Europe appeared to be, generally speaking, less sensitive to the issue. The reasons for this diversity are manifold. Economic factors surely played an important role in producing this gap. In fact, higher national GDP typical of the Nordic and Western-European countries translates into more opportunities of public investments. But this aspect goes hand in hand with political attitude and civic culture, both from a top-down and bottom-up perspective. Starting from the institutional perspective, Nordic countries in particular, are often taken as example of how a proper welfare-state should work. Thus, the concept of well-being has been largely explored under different lights. Active mobility, but in particular cycling, is a catalyst of well-being for many reasons. The bicycle is healthy, funny, useful, and very equitable. Everyone can afford it (**Pucher & Buehler, 2008**) and everyone can learn to use it, also people affected by mobility difficulties thanks to the

innovations in the sector. Cycling is a feasible alternative to motorised transport, especially within urban settings. They do not produce any noise or air pollution, while the energy needed to produce the movement comes from the user, with largely studied cardiovascular benefits. For instance, various ecological studies have discovered that countries characterized by higher levels of active mobility patterns have lower percentages of obesity and diabetes, given the fact that adults satisfy more easily the minimum weekly physical activity recommended (**Pucher et al., 2010; Basset et al., 2008**). In addition, there are also intangible effects of cycling which are harder to measure respect to economic benefits, physical health benefits or volume of circulation. The psychological effects of cycling are still under analyses, but some trends already emerged. For example, cycling is deemed to foster a culture of mutual and shared respect allowing people to meet more easily in the public spaces (**Hulster et al., 2018**). Moreover, the bicycle is a symbol of normalness, therefore favouring a general egalitarian attitude which can in turn better off both poor and rich people, spreading the benefits across the whole society (**Wilkinson and Pickett, 2010**). These are just some examples of the benefits of cycling, but in order to enjoy bicycle it is also necessary to have proper spaces where to use it. Otherwise, the concept of cycling will isolate to something for just "cycling-enthusiast" therefore creating a barrier rather than unifying the population. This is exactly what happens in those parts of Europe where public authorities did not recognize the importance of conceiving proper infrastructures for propelling the use of bicycle throughout the population.

From a bottom-up perspective in fact, also the trust in the authorities plays a role in fostering or hindering everyday practices. If one knows that at a certain point, the safe bicycle lane will immediately interrupt maybe because the works stopped for a dubious lack of investments, that person will not consider bicycle as a feasible alternative. This perspective further exacerbates if the public transports are not efficient in terms of easy access and reliability. The direct consequences will be complaints about how the things are worsening, the feeling of being left alone by a ghost government and a fierce jump on board of a car. These kinds of vision are very common "bar-discourses" typical of Mediterranean countries, but unfortunately, they contain a glimpse of truth, especially for what concerns peoples' perception. Thus, it is important to notice that civic culture is a crucial element regarding mobility choices and policymakers should also address this sphere in order to produce concrete changes. Going on with the analysis of the New Urban Mobility Framework emerges how this last consideration also links with another aspect stressed by the document:

- **Awareness raising and capacity building**

To do this, the EU has been promoting various initiatives with the aim of extending its dissemination network gathering actors and stakeholder from all over the world. A powerful instrument in this regard is the European Mobility Week, the main awareness raising campaign inaugurated in the 2002 by EU Commission, aimed at promoting behavioural change as well as offering a space of discussion inherent to the main challenges and potentialities for shifting towards sustainable mobility. Across the last editions, active

mobility is gaining a prominent role, positive sign of a change in priorities among stakeholders. 2019 edition titled "Safe walking and Cycling" was expressively about active mobility and its economic, as well as eco-social benefits. But also, in the next two editions until now, the reasoning about social impacts of mobility in terms of health, accessibility and equitable opportunities assumed a central position. The 2020 edition for instance, was named "Zero-emission mobility for all", while the 2021 theme was "Safe and Healthy Sustainable Mobility" and a "record 3200 towns and cities from 53 countries around the world participated" (**EU Commission, 2021).** Also in these cases, the urgency of devising a more equitable mobility environment in an eco-social fashion, was boosted by the COVID-19 pandemic which highlighted in particular the low resiliency of the mainstream mobility designs to unexpected shocks.[18] Moreover, the global nature of this issue underlined the importance of best practices sharing and thus the need to strengthen capacity building processes. In this regard, a number of projects are thriving within and outside EU borders. Each of them is characterized by diversified approaches, which leave space for complementary initiatives coming from different sources. For instance, the Covenant of Mayors, launched by the EU Commission in 2008, born with the objective of engaging and supporting mayors and relative City Councils to really commit to fulfilling the EU climate and energy related targets. The initiative gained a lot of success, also thanks to its voluntary based adhesion and the large space given to bottom-up approach within the

[18] The recent energy crisis caused by the conflict in Ukraine, furtherly proves this sad claim to be true.

multi-level structure of European Union. Therefore, subsequent projects gave birth to new partnerships among local authorities of numerous countries such as the Covenant of Mayors East initiative kick-started in the 2011 or the extension of the Covenant of Mayors to the European Neighbourhood South Region through the "Cleaner Energy-Saving Mediterranean Cities" (CES-MED) project in 2012[19]. Also the URBACT programme, born in the 2002 to favour sustainable integrated urban development across Europe, has contributed to build a fertile ground for experience sharing, knowledge learning and capacity building among institutional and non-institutional actors in European cities. In fact, one of the four main objectives of the URBACT III (2014-2020) programme is exactly "Building and Sharing Knowledge to ensure that practitioners and decision makers at all levels have access to knowledge and share know-how on all aspects of sustainable urban development in order to improve urban development policies" and also in this case, the bottom-up instances have not been ignored, including among the main target of the process also stakeholder from "public agencies, the private sector and civil society"[20]. Being one of the prominent Territorial Cooperation programme of European Union, URBACT III also boasted a co-financing by the European Regional Development Fund (ERDF) with a budget of 74.302 million EUR for the 2014-2020 period (**URBACT, 2015**) and an eligible fund amount of 96,3 million EUR. Differently from the Covenant of Mayors, whose funds for projects have to be obtained

[19] For further information on the initiative, please visit https://www.ceps.eu/ceps-projects/cleaner-energy-saving-mediterranean-cities-ces-med/, last access June 15, 2022

[20] Reference to, https://urbact.eu/urbact-glance , last acces June 15, 2022

(even if through an easier access) by local authorities through call for proposals, the URBACT framework have access to a fund baseline, which offers possibilities for broad and incisive actions. This is also due to the different nature of the two experience which are, in the case of Covenant of Mayors an experimental initiative supported by the EU but solidly relying in a bottom-up approach, while in the case of URBACT a very well-structured Territorial Cooperation Programme.[21]

I think that was worthy to have an overview on these two initiatives for various reasons. Firstly, to obtain a first picture of the panorama of possibilities aimed at raising awareness and sharing knowledge and build capacity in the field of urban development within the EU and also neighbouring countries framework. Secondly, because they entail a participated design which is one of the cornerstones of the eco-social approach. Moreover, being supported by the EU as main institutional actor, if on the one hand this feature can attract critics and mistrust from those who are Euro-sceptical, on the other hand permits to reach much more people, enhancing the network of ideas aimed at pursuing a just and equitable urban transition. Moreover, apart from the European Mobility Week, the Covenant of Mayors and URBACT considers a lot of aspects of urban development such as housing, energy dependency, food waste and recycling, urban areas requalification etc., touching therefore all the main aspects of people's everyday life.

[21] For further informations, please have a look at "URBACT III Operational Programme" available here: https://urbact.eu/sites/default/files/u_iii_op_oct_2015.pdf

As already said, mobility is a major component of urban development. If we imagine cities or towns as human brains where complex interactions constantly and simultaneously take place, the role of mobility could be like that of the neural core. If the core does not work well, nor it will do the whole network. The consequence is a brain and, therefore a body (the territory), affected by ill-being. Thus, in order to heal the sickness, a specialist in neurology is essential. Bringing back the metaphor to the EU policy-making context, this role can be attributed to the CIVITAS initiative.

3.5 CIVITAS

CIVITAS is the EU "flagship programme" thought to foster the achievement of European Commission ambitious mobility transport goals through the setting up of a solid network of actors from different levels of the socio-political spectrum. As suggested in its official booklet, the urgency of creating a network of cities, for cities, dedicated to sustainable urban mobility is given by the raising awareness about the climate emergency. By now, the 70% of EU citizens live in urban areas, where the worrying consequences of transport-related greenhouse gas emissions are felt most severely. Moreover, these emissions count for a quarter of the EU's total emissions, a very big percentage (**CIVITAS, 2021).** Therefore, since 2002 the CIVITAS initiative have been promoted and co-founded by the EU Commission, in order to give cities a wider range of instruments for seeking innovative solutions to become more resilient and able to offer smart and sustainable mobility alternatives to all its citizens.

Therefore, is helping cities to convert into much more equitable and enjoyable places where to live. To do this, the CIVITAS initiative ranges over three main styles of projects that are however synergic and interconnected. The Living Lab project, through which over 80 cities have developed, implemented and evaluated integrated sets of urban mobility measures.

Thematic research projects aimed at complementing the lesson learned through the Living Lab project by exploring the possibilities concealed behind new or improved technologies, ideas, products, processes and services in collaboration with interdisciplinary partners.

Support projects to foster cross-project coordination, and therefore laying the conditions for facilitating capacity building and knowledge sharing.

The CIVITAS initiative has therefore the shape of a network. Its structure is multifaceted and composed by diverse institutional actors which however look for partnerships and support from the civil society and business. The first point of reference is the EU Commission's Directorate-General for Mobility and Transport (DG MOVE) which strive for the application of the Urban Mobility Framework at the local level, while the project implementation is supervised by the European Climate, Infrastructure and Environment Executive Agency (CINEA). Then there are two macro-actors who are the CIVITAS National Networks (CIVINETs) and the Policy Advisory Committee (CIVITAS PAC). The first gathers cities and relevant institutions keen on the CIVITAS approach and build bridges to surpass contextual and linguistic differences for local authorities and organisations participating at the initiative. The second is a group of elected

politicians that meets regularly with DG MOVE and provide a local perspective useful for devising the next steps. It is worthy to underline how this structure reflects the multi-level governance shape of the EU on other fields and can foster a much more sensitive approach to local urgencies and issues. In other terms, the CIVITAS initiative stands on a soft (because it is not linked to hard regulation) principle of subsidiarity which appears to be the best choice for pursuing a new model of urban mobility development, more sensitive to local issues. A model more sensitive to peoples and their well-being, that kicks in a corner the old-fashioned decision-making style which favoured just top-down decisions and largely ignored hardships among the normal citizens. This structure, evolving since 2002 is also instrumental to the achievement of the initiative's ambitious goal. In the booklet they are all stated:

-Making walking and cycling the preferred travel choices for people in cities

-Influencing and changing attitudes and travel behaviour through "soft" measures

-Offering travel options and infrastructure for cleaner vehicles and fleets

-Using public transport and shared mobility to put private cars in the shade

-Managing urban space and travel demand for the benefit of sustainable modes and people-friendly places

-Fostering an integrated and inclusive planning

-Involving citizens and stakeholders in planning to improve the quality and acceptance of urban mobility measures

-Ensuring the well-being of all those navigating urban environments

-Establishing the critical link between new user-friendly transport services and decarbonisation

-Promoting cleaner urban freight vehicles and more efficient goods **(CIVITAS, 2021)**

Any resemblances with the main points of the New Urban Mobility Framework discussed above? Many. But given also the specificity of the CIVITAS' field of action, the importance of involving all possible stakeholders, from citizens to institutions, is even more stressed here, as well as the priority given to attitudes, behaviours, and practices, intended as generative of a shared well-being. In this perspective, even if is not directly stated, the eco-social approach assumes a central position in the CIVITAS initiative and juxtapose with its same guidelines. Climate mitigation and adaptation measures sensitive to the social aspects of the issue, participation, and coordination among actors of different nature and a focus on peoples' well-being are all nuances of the eco-social approach. Within this frame, cycling assumes a prominent position. As demonstrated for the New Urban Mobility Framework main action fields, the bicycle can be the "fil rouge" able of generate synergic relations among

all the CIVITAS commitments. From the enhancement of the participative approach to the design of zero-emissions freight vehicles, from the increased accessibility to renewed public transports to the efforts in promoting softer mobility attitudes and behaviours and therefore, softer models of consume.

In other words, 'bicycle as means of development' acts as common thread which links various phases of the EU project aimed at achieving an eco-social transition towards much more equitable and enjoyable urban environments. Something that we could call "landscapes of well-being". In light of this, cycling intended not as something for just those who are *aficionados* but more significantly for everyone who "inhabits the space" (**Pileri, 2020**), can be easily seen as a catalyst for a just transition under the eco-social approach. I would humbly claim that considering these arguments, the first theoretical hypothesis of this research proved to be true. Now, in the final section I will try to bring this discourse to an on-field perspective by investigating two case studies. The objective will not be to technically evaluate the main projects and policies in question under a quantitative lens, but rather to identify if and with which outcomes an eco-social approach has been considered in the devising of those urban planning policies. It is therefore a question of individuate the main risks are, as well as opportunities, linked to the implementation of an urban landscape which attempt to get rid of cars, promoting active mobility and public transports. An obliged passage to understand the main challenges as well as the main possibilities of adapting an eco-social approach to the urban mobility design of different contexts.

IV. TOWARDS THE CITY OF THE FUTURE?

It is by now generally agreed that cities are gaining prominent importance for the development of future's society. Both in developing and industrialized countries, cities have assumed a central role as core of human vitality and industriousness. They are crucial social-ecological systems (**Krasny et al, 2013; Groove, 2009**) of relations, characterized by a dense social interaction. Especially large cities are shared space where a growing number of different habits, attitudes, rational choices, and ideas interweaves. The high-speed stream of globalization has further accelerated the process of exchange between people, goods, and services, typical of the urban areas. As almost all major human-driven progresses, such acceleration produced manyfold implications. According to the United Nations Statistic Division (UNSD) "cities and metropolitan areas are powerhouse of economic growth—contributing about 60 per cent of global GDP".[22] At the same time though, cities account for the 60% of global energy consumption and 78% of the total GHG emissions worldwide (**UN Habitat, 2020**). Since we have traces in history, cities are places of attraction and encounter for people from all walks of life. Hubs of innovation and discoveries that with the passing of time contributed to polarize the world population in urban and rural dwellers. For most of human history, most people across the world lived in small communities, however it has been demonstrated that in 2007 the amount of city dwellers surpassed the number of people living in rural areas. [23] Rural-urban migration is not a new phenomenon, but issues linked to labour conditions, low income,

[22] UN statistics, available at : https://unstats.un.org/sdgs/report/2019/goal-11/ , last access June 20, 2022
[23] Our World in data, available at: https://ourworldindata.org/urbanization#citation , last access June 20, 2022

precariousness living conditions, low expertise and insufficient social-environmental protection are speeding up this process (**Lacirignola, 2017**). For instance, agricultural land abandonment can be provoked by causes such as low productivity, remoteness or unfavourable soil and climate conditions. But there are also secondary drivers like rural depopulation, worsening regional socio-economic factors and bad agricultural policy-frameworks (**Van der Zanden et al., 2017; Perpiña et al., 2018**). Notwithstanding this, global warming is strongly contributing to this tendence (**EEA, 2020**). The adaptive capacities of many different communities will be put to the test by climate change through the exacerbation of existing problems of food security, water scarcity and scant protection of marginal lands from environmental disasters (**Brown, 2008**). Considering these challenges, rural-urban migration is expected to grow. In 2014, 54% of the world population was esteemed to live in urban areas, by now, about 56% of the world's population lives in cities and the number is projected to increase up to 68% by 2050 (**UN, 2014**; **World Bank, 2020; Ritchie and Roser, 2019).** In this scenario, Europe claims an even higher percentage with roughly the 75% of people currently living in urban areas. It is therefore not surprising that cities boast a crucial role in the achievement of the EGD goals. If on the one hand they are major causes of GHG emissions on a global scale, at the same time they can functions as triggers for an endemic transition towards a more sustainable model of global society. Unfortunately, though, heavy weight players like Russia, India or China, but also U.S, seem less willing to embark on mitigation and adaptation policies than European and some South American countries. However, it must be considered also the fact that lot of the emissions produced by developing countries are

actually determined by the consumption models of more affluent societies, generating further disparities when it comes to mitigation and adaptation programmes due to the difficulty of implementation for those countries who dispose of lower economic resources **(Gough, 2015)**. Despite this, due to the rising importance of cities as economic, political, and cultural hubs, during the last decade urban centres all over the world proved to be able to surpass national boundaries and pursue concrete actions and policies geared towards the creation of a more sustainable and resilient model of society. European Union's framework has been favouring the establishment of transnational bonds during the last decades. For instance, the Covenant of Mayors (see paragraph 3.4) is a transnational network which in recent times has been able to develop and extends its linkages outside the European Territory. After having evolved to the Covenant of Mayors for Climate Energy (CoM 2030), in January 2017 CoM 2030 merged with the Compact of Mayors initiative creating the Global Covenant of Mayors for energy and Climate (GCoM). Such a step, which extended the coverage of the initiative worldwide (**Rivas et al, 2021**) displays the increasing willingness of local actors to actively intervene in the urban policy moulding. In a global perspective, this process has been also fostered by the COVID-19 pandemic. Without any doubts, the pandemic brought hardships and sufferance all over the world, but on the other hand it also provided a huge opportunity of stopping for a while and observe how an enjoyable city for all could be: the opportunity to explore in a deeper way the principles of human development and to highlights the multiplying contemporary contradictions. Even in this occasion social and environmental inequalities diversified the degree of the pandemic's

impact on our life. But in a way or another, this strange period touched the existence of each of us. Especially within the urban context, whose major feature is the co-habitation of a multitude of people in "limited" space, the pandemic brought to the fore crucial questions. It is our mainstream model of development sustainable on the long run? And let suppose that we are not interested in its sustainability, it is at least resilient to overwhelming shocks such as a pandemic? What should be the real role of cities? To be the engine of increasing economic development or to offer a dynamic space where people could live better off? These questions, which strictly relates to the eco-social debate, does not call for a univocal answer. On the contrary, the need to find a balance between economic development and eco-social resilience is more urgent than ever. The urban geographer Paul Chatterton argues that the pandemic functioned as a trigger for the design of progressive urban policies that would have presumably take much more time to become reality, without the insurgence of such a generalized crisis: "yesterday's radical ideas are becoming today's pragmatic choices".[24] Among these progressive steps, sustainable mobility policies assumed a renewed importance at the eyes of policymakers all over the world.

From the global to the local level, the urgent need for quick and low-cost solutions to the crisis has led to an intensified focus on the design of policies and initiatives aimed at boosting active mobility practices. Cities from different areas and continent have experienced with new policy tools inherent to the promotion and diffusion of active mobility. For example, Bogotà opened 76km of temporary

[24] Chatterton , P. (2020) "Coronavirus: we' re in a real-time laboratory of a more sustainable urban future " , The Conversation, available at: https://theconversation.com/coronavirus-were-in-a-real-time-laboratory-of-a-more-sustainable-urban-future-135712, accessed on June 23, 2022

bike lanes to ease the crowding on public transports, help to prevent the spread of coronavirus and at the same time improve air quality[25]. In Paris it has been observed a 60% increase in the share of bicycle trips between 2019 & 2020. Many European cities have encouraged cycling through the extension or creation of cycling infrastructure. In total, 2,591 km of new cycling lanes have been announced by public authorities since the outbreak of the crisis **(EuroCities, 2021)**. The city of Milan, with its "Strade Aperte" plan have enhanced an experimental setting up of low-cost temporary cycle lanes, sided by new and widened pavements, 30 kph speed limits, and pedestrian and cyclist priority streets. The Guardian reports that Janette Sadik-Khan, a former transportation commissioner for New York City, argued that "The Milan plan is so important because it lays out a good playbook for how you can reset your cities now. It's a once-in-a-lifetime opportunity to take a fresh look at your streets and make sure that they are set to achieve the outcomes that we want to achieve not just moving cars as fast as possible from point A to point B, but making it possible for everyone to get around safely"[26] and, I would add, to provide a wealthier urban environment for what concerns quality of relations among citizens and quality of life. This claim is important for two reasons. Firstly, it recognizes the potential of active mobility as resilient solutions to post crisis scenario, as demonstrated by the experience of The Netherlands after the oil embargo of 1973 (see section 3.2) or in the disaster

[25] Wray, S. (2020), "Bogotà expands bike lanes to curb coronavirus spread", SmartCities, available at: https://www.smartcitiesworld.net/news/news/bogota-expands-bike-lanes-overnight-to-curb-coronavirus-spread-5127, accessed on June 24, 2020

[26] Laker, L. (2020), " Milan announces ambitious scheme to reduce car use after lockdown", The Guardian, available at: https://www.theguardian.com/world/2020/apr/21/milan-seeks-to-prevent-post-crisis-return-of-traffic-pollution, accessed on June 24, 2020

recovery efforts after the devastating earthquakes in Mexico City (2017) and Tokyo (2011)[27].

Secondly, because it stresses the need for best practices learning and subsequent policy transfer/adaptation in the field of sustainable mobility.

4.1 The EU context

Even if it has been particularly prompted by the global pandemic, issue of shifting to more equitable and sustainable patterns of urban mobility is not a new one. The European Union has been one of the pioneers in this regard, by highlighting the problems deriving from a car-centred model of urban development already in the 1988 through the adoption of the *European Charter of Pedestrian rights* **(European Parliament, 1988)**. The first article of this document states that "The pedestrian has the right to live in a healthy environment and freely to enjoy the amenities offered by public areas under conditions that adequately safeguard his/her physical and psychological well-being" (**EU Parliament, 1988).** Yet unfortunately, this declaration remained a dead letter for the majority of Member states, more concerned with issues linked to the balance of payments, the requisites of the Single European Act, the last phases of the Cold War period and the reconfiguration of the international relation systems towards a multipolar landscape. Moreover, the concept of wellbeing still had to be properly explored by scholars pertaining to diverse disciplines, therefore that declaration remained just a statement for various years. Despite this,

[27] Laker, L. (2020) "In a Global Health Emergency, the Bicycles Shines", Bloomberg, CityLab Persepctives, available at : https://www.bloomberg.com/news/articles/2020-03-25/in-a-global-health-emergency-the-bicycle-shines, accessed on June 24, 2020

the EU action aimed at turning the tide towards a people-centred model of development did not stop and, on the contrary, produced some positive outcomes. Two years after the adoption of the European Charter of Rights, the Commission (at that time of the European Communities) approved the first *Green paper on the Urban Environment (1990)* **(European Communities Commission, 1990)**. This strategic document has been the first in its genre. In fact, even if the EU has already started to try to address problems emerging from a bad managing of urban spaces, it is the very first attempt of adopting an integrated approach for trying to solve the main issues linked to environment in urban areas. This document is therefore interesting for the fact that EU officially recognized the importance of urban planning as trigger for the solution (or worsening) of economic, social and cultural instability. Despite this, like all first attempts of harmonizing such complex issues, the Green Paper presents some important flaws. In particular, it has been highlighted how the lines of intervention proposed were spoiled by a too generalized vision, which related mainly to the North-western European city model (**Hastaouglou, 2006**). However, the Green Paper **(EC Commission, 1990)** had the merit of sensibilizing European institutional actors regarding the main criticalities which affected the quality of life in cities. At least, it generated some more consciousness about the water and land use, waste management and noise and air pollution within cities. More crucially, it paved the way for the two first European conferences that provided European local authorities a space for dialogue regarding the improvement of urban environment. This opportunity, take place under the name of the *Car Free Cities conference*, held in symbolically in Amsterdam on 24-25 March 1994, and the *European Conference on Sustainable*

Cities, which took place between 24-27 of May in another symbolic place, the Danish city of Aalborg. This last conference has resulted in the adoption of the *Aalborg Charter,* also known as the *Charter of European Cities and Towns towards sustainability* (1994). Its importance lays on the fact of being the first programmatic urban sustainability initiative approved on voluntary basis by a large number of different actors such as individuals, municipalities, NGOs, scientific bodies and national as well as international organisation. Actually, more than 3,000 local authorities from more than 40 countries have signed the Charter, making it the largest European movement of this type and generating the European Sustainable Cities and Towns Campaign[28]. Such occasion was functional to the enhancement of the participation of local authorities and actors belonging to the civil society in the design of successive EU initiatives and frameworks regarding sustainable urban development. In summary, the main steps after the Aalborg Charter have been the EU Commission's *White Paper on Transport* (2001) **(EU Commission, 2001)**, which proposed various measures to make transport more sustainable through an integrated approach towards urban and transport policies. The already quoted (see paragraph 3.4) *Green Paper: Towards a new culture for urban mobility* of 2007 **(EU Commission, 2007)**, which threw the basis for the definition of the *Action Plan on Urban Mobility* of 2009 **(EU Commission, 2009)**. The Action Plan is the link between early EU strategy regarding urban mobility and the design of the Sustainable Urban Mobility Plans (SUMPs). In other words, the Action Plan of 2009 functioned as the concrete point of conjunction between

[28] Sustainable Cities Platform, https://sustainablecities.eu/the-aalborg-charter/, accessed on June 25, 2022

EU framework and local authorities. Thanks to the SUMP instrument, supervised by the Directorate General for Mobility and Transport of the European Commission, local authorities have been empowered in the improvement of the sustainability and efficiency of urban mobility in their cities. The contribute of EU Commission is both material and "immaterial". Material in terms of unlocked funds and regulatory instruments. For instance, in the communication of the New European Mobility Framework is stated that "in the finance period 2021-2027, several funding and financing instruments such as the Connecting Europe Facility, InvestEU, the European Regional Development Fund, the Cohesion Fund, Horizon Europe R&I Framework Programme, Digital Europe Programme and the Recovery and Resilience Facility, are available to support the transition towards sustainable mobility" (**EU Commission, 2021**). This multifaceted and vast disposability is due to the growingly ambitious objectives of the EU, and point out the high consideration given to cities as crucial actors for the achievement of the EGD eco-social goals. For what concern the "immaterial" support of EU Commission for the successful implementation of the SUMPs, Member States and local authorities are helped through technical advisory, sharing of ideas, knowledge and best practices, supervision, and an improved assessment method (**EU Commission, 2021**).

Considering the developments discussed above, it can be stated that EU has worked and is still working to offer a fertile ground to its Member States, at least for what concern the field of sustainable mobility. Yet, it must be also underlined that without a real commitment and collaboration of local authorities, the ambitious European agenda for the climate mitigation and adaptation will never

become a reality. On the other hand, it is important to recognize that the steering of the direct involvement of local authorities in the field of urban mobility is a relatively new topic. It is in fact through the COM (2013) 913 that the EU concretely marked a step-change in the managing of urban mobility challenges across its Member States. In this document, the Commission officially states that "aims to reinforce the support to European cities for tackling urban mobility challenges" through a reviewed logic aimed at ensuring that "Europe's urban areas develop along a more sustainable path" (**EU Commission, 2013**). To do this, "it is crucial to overcome fragmented approaches" **(EU Commission, 2013)** and for this reason, with the help of numerous stakeholders among institutional and non-institutional actors the EU has set up a network to foster lesson learning and best practices sharing. Thus, differently from the first attempt of the *Green Paper on Urban Environment (1990)* **(EC Commission, 1990)** which showed poor consideration for the diversity elapsing among Member States, with the introduction of the SUMP in 2013 the EU tried to harmonize the effort of local authorities towards its common goals rather than adopting a "copying and paste" approach. The refreshed integrated approach presented with the COM (2013) 913 reinforced the EU support to Member States and in particular to local authorities through the set-up of *The Urban Mobility Observatory-ELTIS* and the attached *European Platform on Sustainable Urban Mobility Plans*. The enhancement of the URBACT programme and the improvement of the *Urban Mobility Scoreboard data and statistics platform*. Moreover, the CIVITAS initiative gained a central role in guiding the cooperation among cities and towns towards innovative solutions for the design of sustainable and resource-

efficient urban mobility strategies. The MIRACLES project, that we will consider later on, it is just an example of the multitude of actions undertaken by CIVITAS.[29] Always in the field of European innovation policy, the Commission launched in 2012 the Smart Cities and Communities European Innovation Partnership with the objective of answering to the EU climate action by "improving energy efficiency, increasing the use of renewable energy, and reducing energy consumption, GHG emissions, bad air quality and congestion" (**EU Commission, 2013**).

4.2 Method and theoretical background

The COM (2013) 913 has been for sure a very important step towards the modelling of EU integrated approach to urban mobility which created the conditions for helping those local authorities, burdened by the application of the principle of subsidiarity in the field of urban mobility. Nonetheless, a cautious reader could have noticed that differently from the Communication of the New Urban Mobility Framework (see chapter 3.4), there is no reference to the people. In fact, the word "people" or "person" never appears in the COM (2013) 913 document, while the word "citizen" appears just once (pg.1). Even the sub-title expresses well the focus of the initiative, i.e. the building up of a "competitive and resource-efficient urban mobility". Interestingly thus, the people-centred approach featured in the New Urban Mobility Framework **(EU Commission, 2021)** is a novelty also for the European Union. In other words, the potential of the eco-social approach applied at urban mobility is a quite recent

[29] For further information, please visit: https://civitas.eu/projects

discovery, at least for what concern the EU institutional venues and their communications. The subsequent question that arises spontaneously is whether local authorities assumed a receptive stance in this regard, or whether they even anticipated the Commission in embracing this vision. This is another major research question of this thesis: to grasp if local authorities are devising and preparing to implement urban mobility designs enriched by an eco-social vision, or if they have already started with the implementation of such measures. The theoretical background to define the characteristics of the eco-social approach has been discussed in the first and second chapter of the thesis but I think it is worthy to sum up its main aspect for a better understanding of the research method adopted. The eco-social approach underlines the presence of a strong and bi-directional nexus between social and environmental inequalities. To face this vicious circle, accelerated by the worsening climate crisis, the eco-social approach maintains that the integration of climate mitigation/adaptation policies and social security policies will reverse the course, producing on the contrary a virtuous circle. The operationalization of this approach is undergirded by a new focus on people's well-being, reversing the logic of neo-liberal dogmatic centrality of GDP indicators and austerity measures (**OECD, 2019; Stiglitz, 2012; Gough 2021; Laurent, 2017).** The eco-social approach intersects with the idea of sustainable development along its "three pillars" by putting the individual at the centre of its discourse. But far from being an individualistic approach, it is leaned on a relational paradigm which underscore the importance of the interactions among individuals as well as between humans and the surrounding natural environment (**Helne & Hirvillami, 2017; Gudynas, 2012).**

The conception of shared and equal well-being at the centre of eco-social framework moves away from the theories of welfare economics, preference satisfaction and hedonic psychology. Those lines of thinking are in fact considered inadequate due to their inapplicability on global and inter-generational scale, given the fact that they refer almost exclusively to individual's "wants" rather than "needs" (**Gough, 2015**). Gough consider "wants" as "goals that derive from an individual's particular preferences and cultural environment" (**ibid, 2015**), therefore detached from the social extension of the benefit deriving from the individual actions. On the contrary, the eco-social theoretical framework questions the idea of well-being as self-reliant outcome produced by the actions and behaviours of a single person and puts on the same level the individual and the social sphere. Therefore, as Taylor suggests "a social and public policy which maintains social provisions for a range of personal circumstances beyond those of self- help and its assumed 'independence' are likely to be more supportive of genuine wellbeing" (**Taylor, 2011; p 792**). In turn, such an approach to public policy can be a driver for the eco-social transition through the prioritization of citizens' awareness raising, knowledge sharing, public participation in the policy design and implementation, and a focus on well-being as equality-seeking tool. In the previous chapters (see 2 and 3) it has been demonstrated the willingness of EU to ignite this process, also by unlocking substantial upfront investments with the EGD framework and therefore giving Member States the possibility to turn "utopias" into reality. In this chapter, the analysis will move from the EU to the local context with a specific focus on two case studies. The two cities selected are

Barcelona and Rome. The rationale for this choice is determined by various factors.

First, the purpose is to search for traits characterizing the eco-social approach within the main urban mobility policies of these cities during the last 10 years. Due to the nature of the topic and the focus of the research, the method selected is qualitative. This research is not intended to give a technical evaluation of mobility patterns, but rather to produce an overview of how mobility policies pursued by local actors within the EU can successfully integrate with the EGD and the New Urban Mobility Framework in order to foster the eco-social transition. The content analysis draws from the literature review on urban mobility, official municipality documents, CIVITAS reports and an interview with the responsible of external and international cooperation by the Service Mobility Agency for the City of Rome, Dott. Nussio. In particular, the research is focused on four main channels:

-focus of local authorities on the sphere of well-being and its two main determinants which are health and autonomy **(Gough, 2015)**

-as a consequence of the first point, prioritization of people's needs rather than traffic flow needs

-the re-acquisition of public spaces from the dominance of private motorized vehicles, especially through the promotion of active mobility and the crucial aspect of inter-modality

-fostering of awareness raising and citizens participation in the field of mobility policies

From this first level of the research question, streams the second motivation for the selection of Barcelona and Rome. The two cities have for long been two example of massive traffic congestion and high level of pollution, with a strong impact on residents' quality of life, even if Barcelona has achieved great step forwards in this sense. It would have been quite pointless, in my opinion, to investigate on realities like Copenhagen, Groningen, Amsterdam, Brussels etc. for two reasons. First, it is plenty of literature and research on the mobility pattern, trends, innovations and progresses of those realities. Second, it has been largely demonstrated how these cities already embarked years ago on mobility policy-making strategies which evoke the main aspects of the eco-social approach. On the contrary, Barcelona and Rome, although with different degrees, still presents criticalities in the urban mobility field which can be addressed also with the help of a better understanding of how an eco-social approach can find concrete applicability in urban policy making.

In light of this, arises the third motivation for the two case studies' selection. Barcelona and Rome are two very large metropolitan cities with different features for what concern both demography and mobility patterns. Despite this, these two urban giants encounter similar challenges, such as traffic de-congestion, air quality improvement and noise pollution reduction, although with different degree of criticality. Yet, across the last 10-15 years the two cities are embarking in similar efforts to provide a more liveable urban environment to their residents, but also to the visitors coming in high quantities (except of course during the COVID-19 pandemic). Barcelona has been faster than Rome in starting its shift towards a more socially and environmentally sustainable urban landscape, due to

various factors. Rome, for its part, is making concrete efforts to embark on a transition and experts of the field see it as a promising context where integrating sustainable urban mobility with the city fabric, and make it a more liveable place for residents and tourists alike[30]. The comparison of these two different contexts pooled by similar problems, just like many other large cities, could provide some useful hints for the adaptation of eco-social approaches in urban mobility policy design and implementation. Starting by the assumption that differences do exist between the two contexts, in this chapter I will look for similarities within the strategies adopted in the field of urban mobility focusing on the four main eco-social axes listed above. Following this guideline, it will be possible to adopt a comparative perspective with the aim of highlighting the main risks and potentials deriving from environmental policies, in order to discover practices and initiatives that are transferable to other contexts.

4.3 Barcelona: approach and developments

With 101.9 km2 and 1,650,358 registered inhabitants (1 January 2019), Barcelona is a compact and densely populated city located between the coastal mountain range, the Mediterranean, the Besòs river and Montjuïc mountain. The outskirts of the city of Barcelona are pooled into an administrative unit called Barcelona Metropolitan Area (AMB), composed by 36 municipalities and with a population of 3,225,000 people. At present, it is the second largest city in Spain in terms of population and economic importance, and the eleventh largest in the European

[30] CIVITAS, https://civitas.eu/cities/rome

Union by number of inhabitants. (**Coma, 2019**). Barcelona is the perfect example of the modern city, also thanks to the contribute of visionary architects like Gaudí, Calatrava, Vázquez, Meier, Van Der Rohe and many others which managed to integrate their functional art within the urban landscape. Its beauty together with its dynamism attract people from all over the world, generating an extremely vibrant urban environment. A recent document by the Intercultural Cities Secretariat of the Council of Europe reports that now 179 different nationalities are living in Barcelona, 10 more than in 2015. The most represented nationalities are Italian, Pakistani, and Chinese - each with more than 20,000 residents - followed by French, Moroccan, Colombian, Honduran, Venezuelan and Peruvian, all with more than 10,000 residents (**Council of Europe, 2022**).

The city counts for 360,970 foreign nationals, representing the 21.7% of the total population. 463,857 inhabitants, or 27.8% of the total population were foreign born.

Moreover, in recent years the number of residents from non-EU countries augmented quite significantly. In 2020 the increase was 9.6% compared to previous years.

Ethnic minorities such as the Roma population are very present in the city, although there are no official figures. It is currently estimated that 75,000 people of Roma ethnicity live in Catalonia as a whole. In 2000, the estimate was 6,614 people in the city of Barcelona, a figure that will be much higher today (**Council of Europe, 2022**). Considering these numbers, it can be argued that Barcelona is a very cosmopolitan and intercultural city, in line with the historic tradition of the Mediterranean ports. This big variety in the shape of the population presents of course both potentialities and challenges in many fields of the administration. For what concern mobility, cultural

diversity must be highlighted and well considered to not overlook the needs of the various strata of the population. In other words, cultural diversity, together with inter-generational and gender diversity must play a key role in the design of public spaces if the main end is to produce a liveable and enjoyable public space able to generate opportunities for all. The prioritization of active mobility and public transport over the private motorized vehicles appear the first step to address diversity in an equitable manner. The Barcelona City Council proved to be sensitive to this issue already from the 2000 by starting to adopt various mobility plans thought to reduce the number of private motorized vehicles and improve the quality of active transportation. The first step in this direction was the Road Safety Plan (2000) which clearly spelled out the objective of reducing deaths and injuries due to motorized traffic, also in accordance with the signature of the European target of reducing in half the number of road accidents between 2000 and 2010 (**Polis, 2019**). Several other interventions followed the initiative and progressively moved the focus from the traffic to the people. In the field of active mobility, the comparison with other European cities characterized by more innovative approaches in the field of mobility has shown to be a trigger for the catch-up with those different contexts. After the recognition of the fact that compared to many North European Cities Barcelona boasted a relatively low cycling mode share (just 1.3% of trips in the metropolitan area) **(IERMB, 2014)**, the City Council furtherly accelerated its efforts to promote the transition towards sustainable urban mobility. Already in 2007 Barcelona City Council promoted the bike-sharing service *Bicing,*

which today accounts for 131.771 annual subscribers.[31] Together with this new service, the mobility plan 2013-2018 laid the groundwork for an overall shift in the approach to urban mobility design. The *Pla de Mobilitat Urbana de Barcelona* (2013-2018) **(Ajuntament de Barcelona, 2014a)** contains much information about the previous years' trends of urban mobility in Barcelona and offer a comprehensive picture of the situation. Particularly interesting at the end of our discourse is the paragraph regarding the participatory process in the development of the plan **(Ajuntament de Barcelona, 2014a: pg 478)** which provide information regarding the "*Pacte per la Mobilitat*" introduced in 1998. This is the first participatory forum devised by the Barcelona City Council to create a bridge between the political sphere and the civil society. This arena of stakeholders is intended as a space for dialogue aimed at "building up a mobility model based on the consensus […] to assure the good convivence of all the urban space utilizes" (**Ajuntament de Barcelona, 2014a: pg 478)**. This participatory practice is a first sign of Barcelona's receptive stance towards the citizen's needs, but another document confirms the willingness to achieve a real shift in the mobility patterns and, as a consequence, in the way to interpret the city. I am referring to the document called "*Propostes de mesures a incorporar"* which integrate the PMU with more synthetic and clear strategic document. In this document, four main strategic axes for the implementation of the PMU are highlighted and accompanied by some supporting evidence. The four strategic objectives are safe mobility, sustainable mobility, equitable mobility, and efficient mobility. Significantly, the structure of the document give

[31] For further infromation, please visit: https://www.bicing.barcelona/es/datos-bicing

priority to pedestrians, followed by bicycles, then public transports, urban freights transport and delivery, and in the end private vehicles. Another thing to notice is that for what concern the urban freights, cyclo-logistic is already proposed as a viable and efficient solution in terms of air quality improvement, noise and pollution reduction and traffic decongestion. This demonstrates an updated knowledge of the potentials deriving from cyclo-logistic sector (B4. DUM) **(Ajuntament de Barcelona, 2014b)**.

What is interesting to notice here is that not only a people-centred approach started to be undertaken, but also that in this case the PMU of Barcelona anticipated the European Mobility Framework COM (2013) 913 for what concern the recognition of the importance of putting people's needs first, at least by stating it directly. An example of the positive contamination that can derive from integrating top-down and bottom-up proposals and intuitions, which is deemed instrumental in achieving a comprehensive eco-social transition **(Hopkins, 2008)**.

In this regard, especially during the last 20 years some large cities have been home to experiments that challenged the classic car-centric urban development model. For its part, Barcelona is considered worldwide the pioneer of the "Superblock" planning or "*Superillas"*. The Superblock plan has been at the core of the 2013-2018 (PMU) as a strategy for turning car-occupied street into public green spaces, mainly crossed by pedestrians and bicycles but also open to emergency vehicles, residential traffic, and loading/unloading vehicles in particular circumstances.

Physically, a superblock is a grid composed of city blocks approximately 400mx400m, which consists of nine smaller blocks in a three-block by three-block mesh. In the outer side, buses and car traffic circulate normally, while

the reconfigured space in the interior is reserved mainly for pedestrians and cyclists. Yet, the model allows traffic for residents, services, or emergency vehicles under specific circumstances, and however is open for future public space interventions. Salvador Rueda, promoter of the Superblock model and director of the Urban Ecology Agency of Barcelona conceptualized the *superillas* as "an innovative land use intervention that aims to reclaim space for people, reduce motorized transport, promote sustainable mobility and active lifestyles, provide urban greening and mitigate the effects of climate change" (**Mueller et. al, 2020; Rueda, 2018).** It is therefore an urban development strategy which intersects with mitigation and adaptation measures, and with urban mobility design. In a report from the City of Barcelona, "*superillas*" is also considered a public-health strategy to reduce the "heat island" effect - from which Barcelona is particularly affected – through the introduction of plant species and green corridors all over public spaces, with the aim of providing large shade and naturally refreshed areas. (**Calvet et al., 2014**). But notwithstanding the validity of the model, its implementation has found numerous obstacles during the previous years. The pilot superblock project of 2016 in the district of Poblenou encountered "vocal criticism of technical and organizational implementation shortcomings and a lack of citizen participation during the planning and design process" (**Zografos et al.; 2020**). In particular, the residents protested about the removal and relocation of bus stops, inadequate community consultation and higher traffic volumes along the exterior perimeter of superblock (**Lopez et al.; 2020**). This resistance highlighted some of the shortcomings of such a transformational policy, but at the same time offered important lessons to the City

Council. I will return to this central issue after a brief evaluation of the mobility patterns in Barcelona between the 2013 and 2019.

Looking at the outcomes of the Barcelona's PMU 2013-2018, the picture is composed by multiple elements which highlight the importance of a comprehensive approach to mobility as strictly interweaved with urban and, crucially, suburban development. As a matter of fact, the complexity of human factors characterizing large cities is exponentially enlarging together with those which are considered the "boarders" of the city. "Urban sprawl is a term used to indicate low-density, discontinuous, automobile-dependent and inadequately planned urban development" (**Bruegmann, 2001**). This phenomenon, which is touching most large cities around the world must be addressed also through the sphere of mobility and climate mitigation and adaptation policies. For what concern Barcelona, it has been demonstrated how the phenomena of suburbanization hampered the City Council efforts aimed at achieving a kick-turn in the mobility patterns. In a recent research, Alonso et. al (**Gil-Alonso et al; 2022**) studied the effect of Barcelona's mobility policies extending the field of research to the Metropolitan Area of Barcelona (AMB). This approach permits to evaluate if and how urban mobility policies intervened in the eco-social transition of Barcelona, since it provides a broader image of the situation which takes into consideration not only who can afford to live in the core of the city, but also those who for different reasons decided or were forced to move to the outskirts. This aspect is of rising importance for a fair and sustainable reconfiguration of mobility patterns and social interaction models in large cities.

The comparison between the Mobility Inquiry of 2013 and the one of 2019 give us a useful database to understand how and if the scenario changes **(IERMB, 2014; IERMB, 2020)**. The main point here is that the results are not homogenous and changes a lot between the core and the periphery with an overall impact on equity and sustainability of the urban environment. For instance, if in Barcelona active mobility users have augmented from a 53% share to a 53.7% share, the more we get distant from the core, the more it decreased reaching a minimum of 42.3% in 2019 compared to 43.1% in 2013 **(IERMB, 2014; IERMB, 2020)**. Public transport share shows a diverse picture with a 0.9% decrease for Barcelona and a 1.1% increase in the periphery. These results confirm that overall public policies promoting the active mobility and transports worked and produced some changes. The problem is that if we now look at the share of private vehicle use, it outweighs the positive outcome of active mobility and public transports' choice. Analysing that same inquires it emerges how in Barcelona the car use share increased of 0.2% while in the inner ring periphery (10km-20km from the core) there has been a significant increase in private vehicle use of 3%. In line with these numbers Alfonso et al. highlighted that in 2019, within the AMB, it has been registered a rate of growth of the number of daily trips by private vehicles that more than doubles the growth in the use of public transport or active mobility (**Gil-Alonso et al.; 2022**). It is suggested that the combination of multiple factors contributed to this scenario in the AMB:

- the population ageing which entails a lower use of public transports

- the growing suburbanization, which push mainly working adults or studying young people in the periphery where the private vehicle still wins the match against the public transports or bicycles in terms of speed and comfort

-increment of commuting against other reasons for daily movements with the car as best option especially for inner (10-20km from the core) and outer rings (30km from the core) (**ibid; 2022**).

These insights are important to better understand and address the drawbacks of the measures devised in the PMU 2013-2018. Not by chance, these findings also connect with some crucial flaws and risks of the Superblock model.
We will return to all these points in the discussion session below. For now, we will move the analysis to the Rome's context.

4.4 Rome: the first steps of an old giant

According to the legend, Roma was funded by two brothers, Romolo and Remo, in the 753 b.C. between seven hills on the Tevere river's edges. Rome was firstly the capital of the Roman Republic, then headquarter of the Western Roman Empire until its fall, formally identified by historians in 476 a.C.. After that, Rome started to be a crucial melting pot for Christians all over the world, being the residence of the Pope. From the IV century on, the historical importance of the city was never questioned notwithstanding the numerous wars, palace's conspiracies

and attempts of subjugate the city under external powers. Home for the Renaissance and the Baroque in the Mediterranean, with the passing of time Rome imprinted its name in the history of humanity, magnet of people and cultures from all over the world. The ancient Latin poet Albio Tibullo (I century b.C.) probably understood the course of the history very soon, calling Rome "*Eterna Urbe"*[32]. This is for real the feeling you perceive walking around Rome, everything is huge and ancient. Beautiful ruins of passed times integrates normally with the urban shape of our age, the city dotted by massive churches and monuments as the view from *Parco degli Aranci.* The perception of everyone moving to reach something or someone, even though a lot of people are just chilling around. However, these last seldom attract your attention. Maybe because it seems that there is always something happening, or actually is just like this. Soon you get into that current, that stream of lives weaving together to compose a colourful and dynamic image with nuances borders. And there you are, immersed into the eternal history of human life, such complex, such curious, such diverse. Coming from that little but fascinating Adriatic Island called Venice, this is my perception of Rome. I am sure however that such a beautiful and intense city stimulates thousands of different feelings to those who try to get in contact with its urban soul. But there is a common point in all the narratives, good or bad, that I bumped into on words as well as on paper: "In Rome there are too many cars". Differently from a lot of discourses pertaining to the common sense, this statement is not just a perception but a concrete reality. A recent report shows how the sum of cars and motorbikes bring the motorization rate to 768

[32] Albio Tibullio, Elegie, Libro II, 5

vehicles per 1.000 inhabitants but excluding those who cannot drive (younger than 14 y.o. and older of 85 y.o.) the motorization rate reaches the 923 vehicles per 1.000 inhabitants **(Roma Servizi per la Mobilità Srl, 2021)**. This is the highest motorization rate in Europe, for instance Paris has 415 veh./1.000 inhabitants while London 398 veh./1.000 inhabitants (**Nussio; 2022**). This worrying numbers have of course heavy consequences on the everyday life of citizens affecting both health and the economy. For instance, in 2016 have been registered 13.689 accidents involving people in the urban streets of Rome, with a total of 144 deaths, while in 2019 the total amount of incidents rose at 15.782 with 20.670 injured and 154 fatalities (**Ragioneria generale Roma, 2017; Nussio, 2022**). It is therefore clear to everyone, from the civil society to local authorities that something must change. The problem of cars in fact, is not just annoying but rather it is a real emergency which affects people health and well-being. The causes of this scenario are many and assume various nuances depending on the perspective. Delpirou suggest that the favourable property market of the 2000s prompted the "cubic-metre culture" and the obsession with land consumption of the Roman developers, with the result of suburbanization aggravated by an intensive land use, low-density and an insufficient improvement of the public transport system (**Delpirou; 2012**). Indeed, it has been demonstrated how between 1992 and 2016 the area outside the GRA (the big beltway surrounding Rome's inner city) absorbed an increase of resident population of almost 64%, turning the metropolitan area of Rome into the most populous of Italy, with the 74% of the Lazio Region living therein (**Caravaggi et al.; 2022**). Despite this, the metropolitan area of Rome features a high self-containing trend for what concerns commuting with the 95.8% of

commuting-related movements happening within its borders (**Carozzi; 2015**). Such numbers, furtherly contribute to exacerbate the problems of traffic congestions and the negative consequences of motorized traffic on citizens' everyday life. But it seems that things are changing, the old noisy giant is looking for new modern shoes to start walking and lose weight.

In reality, Rome started to look for solutions to its "mobility diseases" already in the early 2000s. Actually, Rome together with Barcelona, Cork and Winchester, anticipated the same EU Commission's strategy of propelling the implementation of the SUMPs within the larger cities of Member States. These four large cities gathered in 2002 under the supervision of the CIVITAS initiative, and kick-started the MIRACLES project, which lasted until 2006. MIRACLES stands for "Multi-Initiative for Rationalised Accessibility and Clean Liveable Environments", a game of words which recognise some serious problems of the car-centred mobility design. The main strategic goals shared by all the participant were four:

-A reduction in transport-related environmental impacts at the local level

-Increased urban accessibility

-Enhanced economic efficiency through better transport management

-An overall improvement in citizen's quality of life[33]

[33] Information on CIVITAS MIRACLES Project are available at: https://civitas.eu/projects/miracles#knowledge-bank ,accessed on June 28, 2022

Interestingly, the four cities participating jointly devise concrete measures which were then implemented in a coordinated manner. The process was then focused on the evaluation of the impacts of the different measures, in order to exploit the project as a valuable knowledge sharing platform. Moreover, the initiative fostered the cooperation of a total number of 18 different actors picked up from city councils, transport authorities and specialists, transport agencies, research organization, press organizations and technology experts. For what concern Rome, the transport agency ATAC and the Rome Service for Mobility Agency played an important role. In general, the four cities intervened in their city-centres with limited access zones or even the complete closing of some areas to the private motorized vehicles. Each city then, implemented some other measures to integrate the effort of ameliorating the urban and mobility conditions. For its part, Rome introduced a car-sharing service, a trolleybus line, and reformulated parking and pricing policies. Each city learned some important lessons from the implementation of the measures, also thanks to the important contribute of information technology. In the official page of the process, it is stated that "In Rome, a key lesson learned was that the more car restrictive a measure is (i.e. the more it limits a person's freedom to travel), the more effort is required on the part of stakeholders to communicate to the public the potential benefits of implementation. This was considered to require the total revision of the measure implementation process, with an increased need for communication and dissemination at all stages."[34] This lesson is extremely

[34] Ibid.

important not only for Rome, but for all those contexts in which social tensions, deriving from reconfiguration of citizens' habits driven by authorities, wants to be avoided.

Fortunately, not only City Council understood the necessity of an overarching change in the design of urban mobility policies. In 2017, The Ministry of Transports (MIT) convene local governments and stakeholders to a table with the aim of finding the best way to integrate the European Mobility Framework into national policymaking. The 5th of August 2017, the Gazzetta Ufficiale publish a decree from the MIT that define the "guidelines for sustainable urban plans"[35]. The new instrument of the PUMS is officially introduced in the Italian context. From this moment on, to obtain Statal funds for urban transport investments, all the Metropolitan Cities together with all the Municipalities of more than 100.000 inhabitants are obliged to implement a PUMS (or SUMP). The replacement of the prior Urban Mobility Plan (PUM), prevalently focused on the optimization of the traffic flow for economic growth's sake, trace a line in the Italian legal framework of mobility.

In Rome, together with the law, the approach also changes. The hierarchies of the road are modified in favour of a renewed focus on people needs. "The point is no more to build roads, but on the contrary, to use them better"[36].

Therefore, after the definition of a priority list called "fixed intervention plan" the authorities directly involved the people, creating a line of dialogue between institutional actors and the citizen to talk about mobility. In the last months of 2017, it has been open an online

[35] Gazzetta ufficiale della Repubblica Italiana, 5/10/2017, available at : https://www.osservatoriopums.it/wp-content/uploads/2017/10/linee_guida.pdf

[36] Interview of the author to Dott. Fabio Maria Nussio, Responsible of Fund Raising and International Cooperation

portal to pool residents' proposals. The Rome Service for Mobility Agency (RSM) supervised the process also through some proposals schemes or graphic renders aimed at eventually inspire citizens, but these last were however free of propose their own ideas. About 4.000 submissions were received, among which 2.800 referring to the SUMP. Each contribute was analysed and each one received a motivated answer. Moreover, in order to surpass the risks of digitalization and avoid the exclusion of those who are not comfortable with the internet (especially the elders), 7.000 telephonic interviews have been carried out during the second listening phase of the process. By phone the priorities expressed by citizens have been:

-**reduction of accident rate**

-**reduction of traffic jams and congestion**

-**reduction of polluting emissions (Nussio; 2022)**

Online the proposals highlighted also different topics:

-**Strengthening of the infrastructure for LPT**

-**Reduction of traffic jams and congestion**

-**Urban cycling promotion (Nussio; 2022)**

After this second listening phase a draft of the plan was approved by the City Council, but differently from the old methods, another participation process took place. In this last participatory phase, the city has been divided into six

homogenous macro-areas where three meeting for each area were held. As it can be imagined, various clashes of interest took place among different stakeholders but in the end five main needs of the population were individuated, in order of importance:

- Public transport improvement
- Inter-modality
- Cycling promotion
- Environmental and pedestrian areas creation
- Sharing and freight logistic safety

The Official Observation Phase was concluded in 2019 with the adoption and publication of the SUMP during August 2019. Along with the participation process, also institutional and business stakeholders encountered. Of primary importance have been the meetings with the Metropolitan City and Lazio Region, to properly include the challenges of suburbanization in the vision of the SUMP. During the approval phase, this objective was put in practice through a Strategic Environmental Impact Assessment (EIA), a crucial instrument for the successful implementation for an urban plan thought to create synergies rather than frictions with the surrounding territories of the Capital. After the Region Approval of the EIA in February 2021 the plan was almost ready to enter into force. But in the beginning of the Autumn of 2021, a consistent change occurred in the political spectrum of Rome, with the passage from the Five Star Movement (M5S) to the Democratic Party (PD). This reconfiguration of course impacted on the course of the SUMP project, but Dott. Nussio confirmed to me that, overall, the process was smooth in terms of political bargaining. When political

frictions occurred, they took place mainly at formal level rather than on the substance of the project, therefore not hindering too much the final approval of the SUMP[37]. In fact, on February 22 of 2022, the SUMP was officially approved by the Rome City Council. This major step forward is the result of a four years-long process of shared effort and collective bargaining. The approach itself is innovative. Participative policymaking in mobility in fact, on the one hand better inform the government about the on-field perceptions of daily criticalities, on the other contributes to bridge the gap between local government and residents, assuring in turn the design of more equitable policies. Consistently with the five main containers of needs expressed by citizens reported above, the SUMP will develop along the major issues of:

-Multimodality enhancement and integration of mobility resources

-Improvement of the public transportation network in terms of efficiency, safety, reliability, and connectivity

-Soft and active mobility promotion

-Congestion and road traffic reduction

- Increasing of the sharing mobility offer **(Città di Roma, 2021)**

[37] Interview of the author to Dott. Fabio Maria Nussio, Responsible of Fund Raising and International cooperation by Roma Servizi per la Mobilità Agency

Although not directly stated in the guidelines, from these lines of action emerge a concrete willingness of renovating the patterns of the old mobility scheme, in favour of a more equitable distribution of the mobility options across all the citizens. Moreover, between the lines of Rome's SUMP, emerges the need, perceived both by citizens and institutional bodies, of give back to the city and its residents the precious space stolen by the growth of wild motorization. In this sense, the enhancement of multimodality between public transports and active mobility appears to be the most valuable and efficient solution. In line with this reasoning, the SUMP predisposes the building of the GRAB, Rome's first cycle route.

The GRAB born officially as a touristic project prompted in 2016 by the MIT together with the Municipality of Rome, as integral part of the 2017-2022 Extraordinary Tourism Mobility Plan **(Ministero delle Infrastrutture e dei Trasporti, 2017)**. Being a touristic project, it has been developed with the idea of touching the principal cultural interest sites of the Heritage City. But the interesting feature of this touristic infrastructure is that it has been developed also as a service to the citizen. It is in fact integrated within the SUMP, because its functionality extends over the touristic sector, impacting also on the residents lives through the expansion of urban mobility options, in particular those linked to active mobility. The supervisors of the project are the associations Legambiente and Velolove, sided by a thick number of other stakeholders. The GRAB design phase, similarly to the SUMP's one, was tainted by an innovative approach throughout the process, which highlighted the role of mobility in shaping the everyday life experience of people.

Two main pillars undergirded the project during its development: public participation and firm planning principles. The first consisted in the creation of five territorial open participatory workshops carried out through Facebook and Zoom, due to the pandemic and a questionnaire which received 240 submissions. These occasions of dialogue registered a good affluence both from single citizens and groups and several topics were discussed, among which the synergies between the cycle path and other sustainable mobility modalities (multimodality), as well as the arising potentials of developing local green economies (**Caravaggi et al; 2022).**

For what concern the planning principles, they were shaped also on the base of the proposals gathered and summed up in key guidelines: accessibility, simplicity, continuity, safety, environmental and economic sustainability, interconnectivity, and public space redistribution.[38] All these principles are complementary and if properly fulfilled they can produce self-feeding synergies.

Continuity for instance, can be granted by seeking homogeneity between the various sections of the route. Homogeneity in turn means to offer a route which is as much as possible simple to follow and to access. The main criterion in this sense was to avoid, when possible, the intersection of the route with vehicular traffic. Indeed, if the weakest links of the route is properly treated, the cycle path is perceived as much safer and more enjoyable by all **(Bruntlett, 2022**), propelling an equal diffusion of the use of bicycle. Also, the aspect of interconnectivity with the urban environment is crucial for accessibility, intended as offering a service to the whole community, rather than just

[38] For more informations: https://www.velolove.it/grab/#detail

to who can afford it. This feature of the GRAB has been devised through the optimization of a system of *diverticula*, which consists in small branch-offs from the main route that connects the cycle path to local services, green and recreative areas, and urban cultural sites (**Caravaggi et al., 2022**). This is also consistent with the SUMP, which aims at bridging the gap between the core and the periphery in terms of mobility services by applying a concrete and efficient intermodal mobility scheme (**SUMP, 2021; pg. 7**). Finally, "GRAB is a landscape device and itself a landscape of proximity, understood not only as physical proximity but as a relational spatial and temporal contact among people, places and activities (**Caravaggi et al., 2022, pg 11)**. This characteristic can bring people to meet each other, to cooperate, to perceive the surroundings like something which in small part belongs also to them, and therefore something they cares. Caravaggi et al. reports that 71% of those who took part to the participatory workshops declared that they are willing to contribute to the implementation of the GRAB, through dissemination of information, maintenance of a section of the route, contributing to planning, organizing initiatives, and providing services (**Caravaggi et al., 2022**). A perfect example of civic ecology which Krasny defines as "practices refer to local, hands-on environmental stewardship actions taken to enhance both green infrastructure and community well-being in human-dominated systems" (**Krasny et al., 2014**). Thus, the GRAB can be a catalyst of what Pileri calls "generative slowness" (**Pileri, 2021**), triggering a urban soft mobility model which benefits not only who is walking or pedalling, but the community as a whole. This is a truly eco-social approach, which seeks to not forget about people while the city is getting greener and more attractive. A vision that

looks for synergies between innovative urban development and social inclusion, in line with the perspective embraced by the SUMP.

4.5. Discussion

The image we get from the analysis of these two case studies is multifaceted. Barcelona and Rome in fact, surely present differences in their path towards the implementation of sustainable mobility policies, but at the same time various points in common emerge.

First, public participation processes revealed crucial and thus they must be managed by local authorities following a precise and, possibly, an easily reproducible scheme in order to be equally assessed. In Barcelona, in order to face the possible reprisals caused by the implementation of the *superillas*, a Superblock steering group have been set up in each of the six already existing superblock districts. The group plays the key role of "link between the technical team and residents" as support in the definition of the different participation spaces and stages, therefore the "public participation is present throughout the entire program, from initial diagnosis to implementing the planned actions" (**Lopez et al.; 2020).** Rome for its part, demonstrated a completely innovative approach in these terms, by creating a line of dialogue between the citizens and the authorities for the whole process of the SUMP design. Moreover, the experience of the GRAB went even further by trying to directly involve the citizens not only during the design phase, but also in the implementation phase. Unfortunately, we cannot measure the outcomes of such a project here, given that the work just started. The same counts for the SUMP, which on paper will be accomplished in 10 years. It would be interesting to see

persisting the participation process throughout the whole implementation phase of the plan, in order to have direct feedback from the ground. This will permit to effectively assess the project in eco-social terms, i.e. considering the impact of the project in terms of well-being, as a value which comprehend both economic efficiency and environmental benefits, but putting social equality at the forefront. Linked to this, Gough suggests that "any rational and effective attempt to resolve disputes over how best to meet needs in specific contexts must bring to bear the codified knowledge of experts and the experiential knowledge of those whose basic needs and daily life world are under consideration. It requires a dual strategy of public policy formulation" **(Gough, 2021; p.1201)**.

Second, the new SUMPs of Barcelona and Rome are extremely ambitious projects, in line with the New European Mobility Framework. The shifts pursued in the plans are of course long-haul model which will require an extra-effort to address both infrastructural changes and the behavioural response to it. In Barcelona, the Superblocks represent an extremely innovative approach which in its completeness aims at developing a total number of 503 Superblocks over time. The New PMU (2019-2024) will point towards the realization of 18 Superblocks by 2023, which is projected in a 21% traffic reduction (**Barcelona City Council, 2020**). This will require a major change in the habits of mobility, especially in such a limited time-frame. As pointed out vehemently by Welzer, "all modern transport, residential and consumer structures are built around the car. Automobilism, a phenomenon that spread throughout the postwar world like a strain of bacteria, dominates the entire configuration of public mobility" (**Welzer; 2011; p 32**) to pursue a real change in the

citizens mobility schemes on a vast scale it will be necessary a shared effort, triggered by authorities through proper information and sensibilization campaign, enhanced public participation processes and committed bargaining with penalized stakeholders such as car retailers, mechanics, and touristic operators. The same will be true for Rome, which as we have seen is afflicted by the highest motorization rate in Europe. It is therefore of crucial importance to avoid the creation of detrimental social tensions that could derive from such structural shifts. For what concern the promotion of softer mobility solutions, the first requisite will be to create the possibility of choosing among different options instead of imposing just the one which is deemed preferable. The enhancement of inter-modality in transport, will be essential in these terms, possibly sustained by reduced costs on the public transport tickets especially for the most marginalized categories. In this way, a real paradigmatic shift could be achieved step after step, giving people the time to adapt to such a change in the patterns of everyday life.

Third, the Poblenou example is illuminating about the shortcuts of a friction-ridden interaction model. Zografos et al. demonstrated how local political struggles influenced not only the implementation of the project, but also the feedback of the civil society and the media: "resolves local struggles for authority is a necessary condition for transformational urban adaptation. […] This is the main lesson of the Barcelona case. In order for an initiative to move beyond incremental approaches, the initiative itself must have transformational outcomes, but must also be accompanied by a transformational process of resolving local struggles for authority". (**Zografos et al, 2020; p. 9-10).** In this sense Rome differs, at least from what I found about the theme. Anyway, the Barcelona

lesson about political frictions remains very useful for the next stages of the projects in both cities. Tensions in fact could emerge also during the implementation, and not only between political factions, but also developing vertically. The Netherland experience of the 70s (see chapter 3.3) is helpful to understand how things could go, in order to reform classic mobility schemes. In that occasion we observed a relatively frictions-free interaction model between the various stakeholders, which in turn fostered an overall shift towards new schemes of mobility. For sure the curious conjunction of the times fostered the Netherland's story, but the backbone of the process has been for sure a consistent civic culture which fostered a relatively smooth bottom-up as well as top-down relation. It is therefore important to invest in this aspect, often forgotten of the life of a city.

Fourth, suburbanisation trends should be considered during the development and implementation of urban mobility strategies modelled for propelling an eco-social transition. Gil Alonso et. al. demonstrated that interventions to reduce the use of private motorized vehicles can be negatively counterbalanced by socio-demographic trends and residential dynamics occurring at metropolitan level (**Gil Alonso et. al., 2022**). These findings must be taken in cautious consideration by urban planners and policymakers during the development of the next Urban Mobility Plans. The increasing entrenchment between the core city and its outskirts cannot remain poorly addressed, especially for what attains the crucial sphere of mobility. There is various emerging evidence calling for a more holistic approach able of taking into account the whole metropolitan area of large cities as a continuum, aimed at improving both physical and social infrastructures' network. Also in this case, the focus on

the improvement of inter-modality seems to be the most equitable and efficient solution. Both Barcelona and Rome, are in fact proceeding in this direction, by offering hub of exchange combined with an enhancement of public transports.

Finally, an eco-social urban mobility policy aimed at producing a structural change of the citizens' life conditions, cannot prescind from focusing on social equality. Environmental and social injustice are strictly interconnected and together feed the loop of inequality. In Barcelona, the implementation of the Superblock project and of the New PMU (2019-2024) will have to properly consider the challenges of urban sprawl and gentrification in order to be succesfull. Recent studies are exploring how environmental urbanistic measures such as Low Emission Zones (LEZ), Limited Traffic Zone (LTZ) or requalification, could contribute to expel low-income residents. This mechanism has been called environmental or green gentrification **(Cole et al., 2021; Trigueiro-Mas, 2021**), a "socio-cultural and physical exclusion and displacement linked to rising rents and housing-related cost, often accompanied by underprivileged (long-term) residents perceiving or experiencing a neighbourhood's new amenities and interventions less positively (if not negatively) than new residents" (**Triguero-Mas et al., 2021**). This negative externality of environmental urbanism may be beneficial to the health of some while harming or not improving the health of others (**Cole et al., 2021).** As a consequence, an overarching social equality criterion should take a more central role in the devising of such measures. The aspect of green gentrification should be further explored by the literature, with the aim of providing solid bases to assess if social inequality take place as consequence of environmental policies. Such

assessment would be useful to stimulate policymakers to embark on more holistic approaches in the adoption of environmental urban planning. Of course, this criterion can be applied to each context. In Rome for instance, given the redevelopments objectives stated in the GRAB manifesto, a cautious consideration should be given to the possible negative social externalities that can derive from the project. The fact that also the implementation would be participated somehow by citizens could be a first answer to the challenge of green gentrification, but this could be not enough, especially if the regulations on the housing market will not be thought to cushion this possible risk.

CONLCUSION

In this research we moved across many fields, I say “we” because I hope not to be alone in this process of exploration, which I would like to consider as relational in its same foundations. The starting point of this research is in fact a query about the challenge brought by inequalities. By adopting the eco-social lens, we explored how environmental and social inequalities are intertwined by a strong nexus, which perpetrate itself. This nexus has been alimented by individual and groups’ choices driven by the myth of economic growth. Unfortunately, the Neo-liberal paradigm that governed the global development of the last century, resulted uncapable of providing the expected growth that should have benefitted “everyone”. Moreover, by focusing exclusively on economic indicators like GDP, such political-economic theory demonstrated unable of grasping those aspects which shapes people’s everydaylife. To talk to strangers, to enjoy some shade under a big tree, to have the pleasure of learning, to eat something fresh, to be able to move freely in space and time and feeling autonomous. All these basic needs have been little by little become “privileges” that implies a cost. This condition inevitably exacerbated the already sedimented differences among the various social groups, fuelling social tensions. Moreover, the worsening climate crisis contributed to propel this mechanism by exposing the less affluent to major risks for their physical and psychological health. Some governments tried to face this challenge by implementing climate mitigation and adaptation policies, with the aim of hampering the impact of climate change. The problem is that in the majority of cases poor consideration has been given to the social consequences of such policies. If in fact, the environmental and economic aspects have been properly

examined, a serious integration of social equality as overarching criterion for such policies missed. The direct consequence has been that environmental policies, furtherly created divisions among the population. This scenario calls for a reconsideration of the concept of welfare, from guarantor of "wealth" to guarantor of "well-being". Well-being is a complex concept which can assume various meanings. In this research, our definition of well-being is based on the idea that relationality among individuals and among individuals and their surroundings should rest on a principle of equality. Such relational approach could in fact provide crucial hints to better off everyone, from the social, economic, and environmental point of view. The three pillars of sustainable development are therefore resumed in the relational conception of well-being. This last can offer a solid theoretical background to different types of stakeholders as starting point for implementing concrete projects and initiatives within the umbrella of realt sustainability.

Our route then proceeded towards the field of mobility, a crucial aspect of everyday life that shapes the quality of our social interaction and therefore produces or not well-being. Also mobility thus, is an intrinsically relational concept, while representing a crucial field in the climate crisis. Especially cities in fact, by modifying their mobility patterns, could give a great contribute to the fight against climate change, or on the contrary can worsen the scenario even more. Cities are therefore a very important field were to play this game of chess. The European Union, under the Von Der Leyen Commission, proved to be sensitive to this issue and promoted a New European Mobility Framework as crucial extension of the European Green Deal. With this intervention, the EU supports member states both economically and technically, paving the ground for a real

shift in the mobility policies across Europe. Nonetheless, the EU effort alone will not be sufficient to reach the ambitious objectives of the EGD without the crucial contribution of local actors. A dynamic relationship between top-down and bottom-up initiatives is essential to dampen the impact of increasing climate and social injustices, in order to avoid the perpetration of society composed by "winners" and "losers", affected by ill-being. With specific reference to the field of mobility, the bicycle can function as catalyst of the just transition, being generative of improvements in the health of the citizens, but also in the reduction of economic losses deriving from the wild motorization, while at the same time remaining ecologically sustainable. The problem, however, is that just like in the case of environmental policies not enriched by a focus on social equality, the promotion of bicycle must consider all the groups of the population. In fact, if the bicycle can be a very equitable means of transportation in economic terms, the same could not be through in terms of possibilities to use it. This logic fits also with public transports, which must be rejuvenated both in their components and in their routes' network, to be at the same time environmentally friendly and people friendly. It is important to underline that bicycle is an instrument and not an end. Therefore, in order to foster real changes in people's mobility habits it will be fundamental not to fall in the promotion of cycling targeting just some groups of individuals, otherwise the status quo will just be reinforced under an environmentally friendly veil. On the contrary, bicycle related policies, projects and initiatives should come in tandem with a general reorganization of the public spaces following a human-size lens. But still, this is not enough. In front of the growing challenges caused by the enlarging of cities in extension and complexity, two other

main features should inform urban planning. The first is the enhancement of inter-modality between different means of transportation. The second is the improvement of social protection also in the field of mobility to the marginalized or categories of population, which are more exposed to the structural inequalities of the society. The two case studies of Rome and Barcelona are illuminating in this sense, since it emerges how a good combination between active mobility and public transports can be really a game-changer in the match against climate and environmental inequalities. On the other side of the coin, the analysis of the two contexts showed also the risks attached to "sustainable" projects that are not characterized by a holistic approach. In this sense, green gentrification and suburbanization are two major challenges to be seriously tackled in the devising of Sustainable Urban Mobility Plans. Policies based on the public participation can be instrumental in this challenge, because they shorten the distance between civil society and political authorities in the understanding of what are the real needs of everyday life. In an eco-social perspective, mobility policies should ensure inclusion rather than exclusion, both in the design phase as well as in the implementation phase. Such a vision could really foster a serious consideration of what is well-being and how we can satisfy our needs related to it, in a socially and environmentally equitable manner.

Our route has come to an end for the moment, but I hope that this will be the starting point for others travellers wo wants to explore how the society could develop in a real sustainable manner.

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