INAUGURAL-DISSERTATION

zur

Erlangung der Doktorwürde

der

Gesamtfakultät für Mathematik,

Ingenieur- und Naturwissenschaften

der

Ruprecht-Karls-Universität

Heidelberg

Vorgelegt von

Hamid Alberto Abud Russell

Tag der mündlichen Prüfung: 23. Juli 2025

Thema

Entrenched mobility.
A study of the conditions of unequal urban travel in the Yucatan Peninsula

Gutachterinnen: Prof. Dr. Ulrike Gerhard

Jun. Prof. Dr. Yaatsil Guevara

Abstract

This thesis investigates the phenomenon of entrenched mobility, a concept developed to capture the ways in which systemic forces—material, social, political, and economic—produce and perpetuate patterns of unequal mobility within urban environments. Grounded in the interdisciplinary tradition of human geography and mobility studies, the research situates Mexico's Yucatan Peninsula as a compelling case through which to interrogate the mechanisms that limit mobility, particularly for marginalized peoples. By bridging theoretical innovation with empirical analysis, the thesis advances a critical framework for understanding how mobility is not simply the technical act of traversing space, but a deeply social process that reflects and reproduces broader structures of privilege and exclusion.

The study first traces the transition from transportation geography, with its focus on the infrastructure and economics of movement, to the more nuanced and critical perspectives of mobility studies. This shift, often described as the 'mobility turn,' foregrounds the relational, experiential, and political aspects of movement, challenging the sedentarist assumptions that have long dominated social science. Drawing on the foundational work of scholars such as Cresswell, Sheller, and Urry, the thesis elaborates key concepts – automobility, hypermobility, motility, and kinetic space– that constitute the conceptual bedrock for a new understanding of urban mobility. These analytical tools enable a move beyond the limitations of positivist, quantitative approaches, allowing for a richer account of how mobility is experienced, negotiated, and contested.

At the core of the research is the concept of entrenched mobility, defined as the routinized, systemic, and often invisible restrictions on movement that disproportionately affect those at the margins of society. These restrictions are not incidental; rather, they are the cumulative result of intersecting infrastructural, socio-political, and economic factors. Over time, such constraints become embedded in daily routines, solidifying into persistent patterns of limited movement that both reflect and reinforce existing social hierarchies and spatial inequalities. The thesis demonstrates that entrenched mobility is not merely a matter of inconvenience or inefficiency, but a manifestation of deeper social and political dynamics that restrict access to the city and its resources.

The research focuses on two case studies, to wit, the cities of Campeche and Merida, employing an approach that combines statistical analysis, critical cartography, and the

comparative method pioneered by Lijphart. The case studies reveal that mobility in the Yucatan Peninsula is profoundly shaped by the intersection of ethnicity, class, and infrastructural provision. The mobility of the Maya community is entrenched due to material barriers and the constant threat of violence. These limitations are further compounded by the spatial distribution of housing and employment, which result from a legacy of colonial urban development.

The comparative analysis of Campeche and Merida underscores the heterogeneity of entrenched mobility, highlighting both the context-specific and generalizable aspects of the phenomenon. While the empirical focus is necessarily limited in scope –constrained by the available data and the practicalities of fieldwork– the findings offer broader insights into the ways in which urban mobility regimes are structured by, and contribute to, the reproduction of inequality. The thesis argues that efforts to address mobility injustice must move beyond technocratic solutions focused solely on infrastructure, instead engaging with the intersecting social, economic, and cultural barriers that shape everyday movement.

In sum, this thesis positions mobility as a central lens through which to interrogate the social, political, and experiential dimensions of urban life. By introducing and applying the concept of entrenched mobility, it offers a framework for understanding how systemic forces shape not only the possibilities but also the constraints of movement within urban environments. The research insists that mobility is a fundamental right, essential to full participation in society, and calls for a reconceptualization of urban travel that centres on equity and social justice. In doing so, it contributes both to the advancement of critical mobility studies and to the ongoing struggle for more inclusive and just urban futures.

Zusammenfasung

Diese Dissertation untersucht das Phänomen der verfestigten Mobilität („entrenched mobility“), ein Konzept, das entwickelt wurde, um die Art und Weise zu erfassen, wie systemische Kräfte materieller, sozialer, politischer und wirtschaftlicher Art Muster ungleicher Mobilität in städtischen Räumen hervorbringen und aufrechterhalten. Verankert in der interdisziplinären Tradition der Humangeographie und Mobilitätsforschung, nimmt die Arbeit die mexikanische Halbinsel Yucatán als einen aufschlussreichen Fall, um die Mechanismen zu analysieren, die Mobilität einschränken, insbesondere für marginalisierte Bevölkerungsgruppen. Durch die Verbindung theoretischer Innovation mit empirischer Analyse entwickelt die Dissertation einen kritischen Bezugsrahmen, der Mobilität nicht nur als technischen Akt der Fortbewegung, sondern als tiefgreifenden sozialen Prozess versteht, der bestehende Machtverhältnisse widerspiegelt und reproduziert.

Die Studie zeichnet zunächst den Übergang von der Verkehrsgeographie, mit ihrem Fokus auf Infrastruktur und Ökonomie der Bewegung, hin zu den differenzierteren und kritischeren Perspektiven der Mobilitätsforschung nach. Dieser Wandel, oft als „mobility turn“ bezeichnet, rückt die relationalen, erfahrungsbezogenen und politischen Dimensionen von Bewegung in den Vordergrund und stellt die *sedentarist* Annahmen infrage, die die Sozialwissenschaften lange geprägt haben. Aufbauend auf der grundlegenden Arbeit von Wissenschaftler*innen wie Cresswell, Sheller und Urry, entwickelt die Dissertation zentrale Konzepte, wie Automobilität, Hypermobilität, Motilität und kinetischer Raum, die das konzeptionelle Fundament für ein neues Verständnis urbaner Mobilität bilden. Diese analytischen Werkzeuge ermöglichen es, über die Grenzen positivistischer, quantitativer Ansätze hinauszugehen und ein reichhaltigeres Verständnis dafür zu entwickeln, wie Mobilität erfahren, verhandelt und angefochten wird.

Im Zentrum der Untersuchung steht das Konzept der *entrenched mobility*, verstanden als routinisierte, systemische und häufig unsichtbare Bewegungseinschränkungen, die vor allem Menschen am Rand der Gesellschaft betreffen. Diese Einschränkungen sind nicht zufällig, sondern das kumulative Ergebnis sich überlagernder infrastruktureller, sozio-politischer und ökonomischer Faktoren. Mit der Zeit werden diese Begrenzungen in den Alltag eingebettet und verfestigen sich zu dauerhaften Mustern begrenzter Mobilität, die bestehende soziale Hierarchien und räumliche Ungleichheiten sowohl widerspiegeln als

auch verstärken. Diese Dissertation zeigt, dass *entrenched mobility* nicht bloß eine Frage von Unannehmlichkeiten oder Ineffizienz ist, sondern Ausdruck tiefer liegender sozialer und politischer Dynamiken, die den Zugang zur Stadt und zu ihren Ressourcen einschränken.

Die Untersuchung konzentriert sich auf zwei Fallstudien (die Städte Campeche und Mérida) und folgt einem Ansatz, der statistische Analyse, kritische Kartographie und die von Lijphart entwickelte vergleichende Methode kombiniert. Die Fallstudien zeigen, dass Mobilität auf der Halbinsel Yucatán maßgeblich durch das Zusammenspiel von ethnischer Zugehörigkeit, sozialer Klasse und infrastruktureller Versorgung geprägt ist. Die Mobilität der Maya-Gemeinschaft ist durch materielle Barrieren und die ständige Bedrohung durch Gewalt eingeschränkt. Diese Einschränkungen werden durch die räumliche Verteilung von Wohnraum und Arbeitsplätzen, die auf eine koloniale Stadtentwicklungstradition zurückgeht, weiter verstärkt.

Die vergleichende Analyse von Campeche und Merida unterstreicht die Heterogenität *entrenched mobility* und hebt sowohl kontextspezifische als auch allgemeinere Aspekte des Phänomens hervor. Auch wenn der empirische Fokus zwangsläufig, durch verfügbare Daten und praktische Bedingungen der Feldforschung begrenzt ist, bieten die Ergebnisse weiterreichende Einsichten in die Art und Weise, wie urbane Mobilitätsregime Ungleichheit strukturieren und zu deren Reproduktion beitragen. Die Arbeit argumentiert, dass Bemühungen zur Überwindung von Mobilitätsungerechtigkeit über technokratische, rein infrastrukturelle Lösungen hinausgehen müssen. Erforderlich ist vielmehr eine Auseinandersetzung mit den sich überschneidenden sozialen, ökonomischen und kulturellen Barrieren, die alltägliche Bewegung prägen.

Zusammenfassend positioniert die Dissertation Mobilität als Zugang zu einer Analyse der sozialen, politischen und erfahrungsbezogenen Dimensionen des urbanen Lebens. Die Einführung und Anwendung des Konzepts der *entrenched mobility* bietet sie einen Bezugsrahmen, um zu verstehen, wie systemische Kräfte nicht nur die Möglichkeiten, sondern auch die Begrenzungen von Bewegung im urbanen Raum formen. Die Arbeit betont, Mobilität als grundlegendes Recht zu begreifen, das für die volle gesellschaftliche Teilhabe essenziell ist, und plädiert für eine Neukonzeption urbaner Mobilität, die auf Gerechtigkeit und sozialer Inklusion basiert. Damit leistet sie einen Beitrag sowohl zur Weiterentwicklung der kritischen Mobilitätsforschung als auch zum anhaltenden Ringen um gerechtere und inklusivere urbane Zukünfte.

I dedicate this thesis to my parents, Linda and José, for their unwavering love and support throughout my entire life.

To Said and Yussef, know that I hold you in the highest regard, and that my admiration and love for you knows no bounds.

To Nahla, my one true love, I thank you for your patience.

To Ramón, José Antonio, and Jorge Salomón, know that I think of you as brothers.

To Fabio and Edgar, who I hold close despite the ocean that keeps us apart.

To Regina and Aemilia, whose friendships have shaped me in more ways than one.

To Alejandro and José Carlos, who effortlessly conjure joy.

To the people of Campeche, may we one day break free of the structures that oppress and divide us.

Acknowledgements

First and foremost, I would like to extend my deepest and most sincere gratitude to Professor Dr. Ulrike Gerhard. Her tireless efforts to improve my work went well beyond the academic obligations of a supervisor. Her unwavering support, her incisive questions, and her continuous encouragement shaped not only the direction of this dissertation but also the way I approach academic life. I have nothing but admiration for her work ethic and dedication to her students. I am, and will remain, profoundly grateful.

I am equally indebted to my second supervisor, Junior Professor Dr. Yaatsil Guevara. It was both a pleasure and an honour to teach alongside her and to receive her guidance. Her passion for pedagogy is matched only by her fierce commitment to the students she mentors. Her generosity, sharp intellect, and deep sense of responsibility are inspiring. May we all learn from her example.

This work would not have been possible without the academic support of my mother, Dr. Linda Russell. She was my first reader and my most patient editor. She spent countless hours helping me untangle thoughts, clarify arguments, and restore structure to ideas that sometimes collapsed under their own weight. Her hermeneutic insight was indispensable in bringing coherence to the theoretical framework. She is living proof that mothers know best –and that their love is indeed boundless.

I would also like to thank my brothers, Said and Yussef, and my friends Dr. Mauricio Rodríguez, Edgar Daniel Ocampo, and José Antonio Abreu. Whether it was through sharpening my maps, reorganizing my datasets, helping make sense of difficult materials, or sharing valuable information, their generosity and support kept me afloat. This thesis would have taken twice as long –and been half as clear– without their dedication and care.

The past four years have brought both intellectual rewards and considerable challenges. Balancing the demands of teaching with the solitude of dissertation writing has not been easy. In this context, the unwavering support of the North America Working Group in the Geography Department made a world of difference. My heartfelt thanks go to Caroline Walter, Dr. Judith Keller, Dr. Lauren Rever, Dr. Editha Marquardt, Anne Morlock, Carla Jung-König, Ira Borgstedt, Anthony Meluso, Julia Schinnenburg, Finn Maaß, Magnus Mangold, Marc Heptig, Janis Neumann, and Brigitte Heine. Their encouragement, feedback, and camaraderie were a constant source of strength.

I also wish to express my sincere thanks to Heidelberg University. Its institutional, legal, and material support made this work possible. I am especially grateful for the university's continued commitment to supporting early-career researchers who challenge prevailing paradigms and push the boundaries of disciplinary thinking. My thanks also go to the Kurt-Hiehle-Stiftung, whose generous funding enabled me to present my work at conferences across Europe and Mexico. These moments of exchange, critique, and reflection were vital to the maturation of my argument. In an era in which the value of academic research is increasingly called into question, their dedication to education and critical scholarship is both rare and deeply appreciated.

Finally, to everyone whose name does not appear here but who played a role –small or large– in this journey: thank you. Whether through a conversation, a shared coffee, an email, or a quiet gesture of kindness, your presence shaped this work in ways that words cannot capture. This dissertation is as much a reflection of your generosity as it is of my effort.

Table of content

Tables

Maps

Figures

Images

List of Abbreviations

AGEB – Área Geoestadística Básica

CONEVAL – Consejo Nacional de Evaluación

DENUE – Directorio Estadístico Nacional de Unidades Económicas

ENADIS – Encuesta Nacional sobre Discriminación

ENIGH – Encuesta Nacional de Ingresos y Gastos de los Hogares

INEGI – Instituto Nacional de Estadística y Geografía

SAGARPA – Secretaría de Agricultura y Desarrollo Rural

UN – United Nations

UNAM – Universidad Nacional Autónoma de México

Introduction

The study of human movement has undergone a profound transformation in recent decades.[1] Once relegated to the technical and logistical realm of transportation geography, the question 'how do we move?' has become central to understand the complexity that underlies the very fabric of contemporary society. This work is situated at the heart of that intellectual shift and seeks to both recentre movement as a core component of societal dynamics and interrogate the ways in which mobility both reflects and reproduces inequalities.

Mobility is not merely a matter of traversing space from one location to another; it is fundamentally about how we embody movement, what meanings we ascribe to it, and the structures that shape these experiences. These dimensions collectively determine the extent and nature of travel (and the inequalities therein). This approach to the study of movement thus recognizes that obstacles that impede or hinder a person's mobility are neither uniform nor incidental. As they are shaped by a confluence of intersecting factors, these limitations manifest –and are experienced– differently by the heterogeneous individuals and group that make up society. To grasp the complexities of movement, it is not sufficient to focus solely on the mechanical or technical aspects; one must delve into the lived realities and social contexts that give rise to differentiated mobility. Understanding who is affected, and in what ways, is essential, not just for those who seek a more adequate representation of society, but also for those who influence the course that it takes.

A crucial, yet often overlooked, aspect of this inquiry is the temporal dimension: how do patterns of movement become embedded in the fabric of daily life? Over time, unequal travel can become entrenched, woven into routines that not only limit how people move but also restrict their very access to the urban spaces those routines reproduce. An approach that neglects these realities risks overlooking both the root causes and the far-reaching consequences of mobility patterns.

At its core, the central question driving this research is, how do systemic forces produce and perpetuate patterns of unequal mobility? This inquiry requires us to move beyond surface-level explanations and to critically examine the underlying structures – material, social, political– that shape mobility as both experience and practice. Only by doing

[1] From Sheller and Urry to Cresswell and Kaufmann, these authors have reshaped our understanding of mobility over the past 20 years. See, *infra*, pp. 19 *et passim*.

so can we begin to unravel the mechanisms through which mobility becomes entrenched, and illuminate the ways in which it both reflects and reproduces broader patterns of social inequality. As this thesis will demonstrate, the study of mobility must encompass not only the routes and rhythms of movement but also the meanings, identities, and power relations that infuse them. By situating mobility at the centre of analysis, we can better understand its role in shaping, and being shaped by, the societies in which we live.

This thesis argues, as its central hypothesis, that entrenched patterns of mobility emerge from the complex interplay of infrastructural, socio-political, and economic forces which systematically constrain the movement of specific groups. These limitations are neither incidental nor temporary; rather, they become woven into the fabric of daily routines, gradually shaping the possibilities and rhythms of everyday life. Over time, such restrictions solidify into persistent patterns of limited movement that not only reflect but actively reinforce existing social hierarchies and spatial inequalities. By examining how these forces intersect and become normalized, this thesis aims to uncover the ways in which mobility is both a product and a driver of broader structures of exclusion and privilege. In doing so, it highlights the importance of understanding mobility not just as a technical or logistical issue, but as a critical lens through which to interrogate the reproduction of inequality in contemporary society.

The Yucatan Peninsula, a southeastern region of Mexico, provides a compelling case through which to examine these dynamics. Here, the realities of unequal travel are acutely felt. Mobility is not experienced uniformly; while some navigate the region with relative ease, the least wealthy or socially marginalized face significant barriers. This inequality cannot be fully understood through infrastructure alone, though it is a critical piece of the puzzle. Rather, it is embedded in a web of social, economic, and cultural factors that shape who can move, when, and under what conditions. To comprehend unequal travel in the Yucatan Peninsula, we must study the context-specific constraints –ethnic identity and class– that have forged this mobility regime and the arbitrary limitations it imposes on regional travel.

Why Study Entrenched Mobility?

Mobility is often taken for granted, rarely being interrogated as a site of power, privilege, and exclusion. While the COVID-19 pandemic was widely described as a period of global standstill, vast networks of transportation and logistics continued to operate beneath the

surface, upholding society in ways that were largely invisibilized.[2] This tendency to overlook the social and political underpinnings of motion has significant consequences, chief among which is the fact that it obscures the myriad ways in which mobility is unequally distributed. The result is that it hides the fact that, for many, movement is not a source of freedom, but of risk, exclusion, or even violence.

The study of entrenched mobility, therefore, is not simply a matter of technical efficiency or convenience; it is a profound social issue that reflects and reinforces broader patterns of inequality. Marginalized groups, such as women, LGBTQ+ people, racial minorities, indigenous communities, the elderly, the disabled, and the poor, often experience mobility as a source of vulnerability. Their ability to move freely is constrained by infrastructural neglect, economic barriers, and the constant threat of discrimination or violence. These do not arise randomly; they are the product of systemic forces that shape urban space and social life in ways that privilege some at the expense of others.

This problem goes beyond the confines of academic rumination. A lack of adequate mobility can restrict a person's access to work, education, healthcare, and deprive them of their ability to participate within their community. The capacity to traverse the city, to contribute to its economic and cultural life, is not equally distributed. Instead, it is shaped by the intersection of infrastructure, policy, social norms, income, and individual identity. The study of entrenched mobility thus offers a lens through which to understand the factors that contribute to urban inequality and exclusion.

Objectives, justification, limitations, and methodological approach

Objectives

The main objective of the thesis is to forge a new understanding of restricted motion, termed entrenched mobility, and prove its explanatory prowess through the study of urban travel in spaces of marked social disparity, such as the Yucatan Peninsula. In pursuing this aim, the thesis seeks to generate both theoretical and empirical insights that underscore the relevance of mobility studies within and beyond geography and the social sciences. Ultimately, this research aspires to contribute to the advancement of urban justice and to offer perspectives that inform the development of more equitable mobility futures.

[2] See, *infra*, pp. 12-14.

Supporting this central aim are four secondary objectives. The first is to critically analyze the evolution from transportation geography to mobility studies, emphasizing the epistemological and methodological innovations that have accompanied this disciplinary shift. The second objective is to articulate and refine the concept of entrenched mobility, using it to capture the routinized, systemic, and often invisible restrictions on movement that disproportionately affect marginalized groups. This involves a detailed examination of how infrastructural, socio-political, and economic forces converge to produce enduring limitations on peoples' ability to navigate urban environments. The third objective is to investigate how entrenched mobility manifests in the urban settings of Campeche and Merida, two major cities in the Yucatan Peninsula. By exploring how residents of these cities negotiate, adapt to, and resist conditions of restricted mobility –and how their adaptive strategies become normalized and transmitted as collective knowledge– this thesis aims to illuminate the lived realities and coping mechanisms that shape everyday urban life in contexts of inequality. Lastly, this research offers an account of how the concept of entrenched mobility can be applied beyond the Yucatan Peninsula to analyze other cases of unequal mobility, whether for academic inquiry or to inform practical efforts aimed at improving urban access.

Justification

This research is justified by four interconnected imperatives that span theoretical, social, methodological, and regional dimensions. First, at a theoretical level, while mobility studies have flourished in recent decades, there remains a critical gap in understanding how systemic inequalities become spatially codified through repetitive, routinized movement. Existing frameworks often prioritize macro-level analyses of infrastructure or individual-level experiences of travel, yet few bridge these scales to reveal how power operates through the temporal accumulation of constraints. By introducing the concept of entrenched mobility, this thesis offers an innovative framework from which to analyse how seemingly mundane restrictions congeal over time into durable spatial inequalities. This approach advances debates in critical geography and mobility studies by synthesizing structural analysis with phenomenological insights, addressing what Cresswell identifies as the ongoing tension between mobility as a material fact and a lived experience.[3]

[3] Tim Cresswell, *On the Move. Mobility in the Modern Western World*, New York, Routledge, 2006., pp. 16 *et passim*.

Second, the social relevance of this work lies in its potential to inform equitable urban policymaking. In the Yucatan Peninsula, where rapid urbanization intersects with deep-seated ethnic and class divisions, mobility injustices are not abstract concepts but tangible realities. For instance, Maya communities in peri-urban Merida often face long commutes to underpaid jobs, while middle-class residents navigate the same city in their private vehicles. By documenting how these disparities become normalized through daily practice, this research provides actionable insights for policymakers seeking to disrupt cycles of spatial exclusion. Crucially, it challenges technocratic solutions that focus solely on infrastructure expansion, arguing instead for interventions that address the intersecting social, economic, and cultural barriers to equitable mobility.

Methodologically, this thesis responds to a call for and interdisciplinary approach that captures the nature of movement. Traditional transportation studies –in the region and beyond– have relied heavily on quantitative metrics like commute times or modal shares, often overlooking the qualitative dimensions of mobility –like the psychological toll of navigating a city where travel is dictated by gender, ethnicity, and class. This approach not only enriches empirical understanding but also models how interdisciplinary methodologies can better capture the complexity of urban mobility.

Finally, the focus on the Yucatan Peninsula fills a significant gap in mobility scholarship, which (in Mexico) has historically prioritized large urban agglomerations. The unique socio-spatial dynamics of this region create a distinctive mobility landscape worthy of recognition and study. Together, these justifications position the research as both a theoretical advancement and a socially engaged intervention, one that insists mobility is never neutral but always implicated in the production-and potential transformation-of urban justice.

Limitations

The present work aspires to offer a comprehensive analysis of unequal travel, seeking to illuminate its dynamics wherever and however these may manifest. Nonetheless, it is important to acknowledge several inherent limitations, particularly regarding the empirical scope of the study. While the thesis is primarily situated within the urban context, and does address aspects of urban mobility, the realities of travel in rural areas –though referenced– are not explored with the same depth, either theoretically or empirically. This focus was

necessitated by both practical and methodological considerations, and it inevitably leaves certain dimensions of mobility underexamined.

Furthermore, the empirical cases selected to demonstrate the utility of entrenched mobility as a theoretical model are necessarily limited in scope. Not every possible form or manifestation of entrenched mobility could be addressed within the confines of this project. Although a wide range of cases were considered, the constraints of time and resources required a focus on those examples that were both particularly relevant and illustrative of the phenomenon in question. This selective approach, while deliberate, means that the analysis cannot claim to exhaustively represent the full diversity of entrenched mobility as it occurs across different contexts.

A related limitation arises from the decision to focus on the cities of Campeche and Merida as case studies, and to restrict the empirical investigation to the period between 2015 and 2021. While these choices enable a detailed and contextually rich exploration, they also limit the generalizability of the findings. The specific social, economic, and infrastructural conditions of these cities during this period may not be fully representative of other urban or temporal contexts within the Yucatan Peninsula or beyond.

It is essential to emphasize, however, that these limitations do not undermine the value of the research. Rather, they reflect the inherent complexity of the phenomenon under study and the need to balance depth with breadth in empirical research. By foregrounding these constraints, this thesis underscores the importance of contextual specificity and acknowledges the ongoing need for further research that can build on and extend the theoretical and empirical foundations laid here. These considerations will be revisited throughout the text, as part of a broader discussion on the scope and applicability of the entrenched mobility framework

Methodology

At its core, this thesis is an interdisciplinary exploration of unequal urban mobility. The methodological approach draws from human geography, sociology, and critical urban studies, as well as critical cartography and statistics to provide a comprehensive understanding of a complex dynamic. The first two chapters are structured around a hermeneutical analysis of both transportation geography and mobility studies. This required a critical review of the body of work that constitutes the cannon of both sub-disciplines.

The second half of the thesis draws more heavily from the statistics that provide an account of the material conditions of peoples in the states of Campeche and Yucatan and in their capital cities: Campeche and Merida. The data also helps to construct a cartographical representation of inequality in these urban environments, how these relate to mobility, and what this means for the right of people to travel freely in the spaces they inhabit.

Both the theoretical and empirical sections converge in the last chapter. Comparative analysis is employed to bring together two different urban settings,[4] and highlights the heterogeneity of both, while emphasizing the importance of the context-dependent conditions that contribute to the persistence of entrenched mobility (and its similarities) in these communities. This approach offers a rich, context-sensitive account of how unequal mobility in the Yucatan Peninsula is experienced in practice, and serves as proof of concept for future studies of entrenched mobility.

Structure of the text

To understand the significance of entrenched mobility, it is necessary to trace the intellectual journey from transportation geography to mobility studies. The first chapter addresses the core perspectives of early transportation geography, emphasizing its focus on the spatial and infrastructural aspects of movement. In this chapter, I analyse how this sub-discipline of geography was particularly concerned with the study of how people and goods overcame the friction of space through networks of roads, ports, and elements of the built environments. While groundbreaking in its attention to the mechanics of travel, transportation geography often treated movement as a neutral dynamic –a means to an end– subordinate to more relevant social phenomena. This approach, though useful, was limited by its reliance on quantitative data and its tendency to naturalize the existence of transportation systems, often neglecting the social and political dynamics that determined who could move, how, and at what cost.

Later in the chapter, I introduce the approach advanced by scholars of mobility studies, who rejected the notion that movement is merely a mechanical or functional process. They argued for movement to be examined through its meanings and practices, enabling researchers to identify the regime of mobility that conditions travel. Concepts such as automobilities, hypermobility, and motility are among those developed by this school of thought, which allow for greater nuance in the way we approach the topic.

[4] For more on the comparative method, see, *infra*, pp. 73-79.

Building on these foundations, the second chapter develops the concept of entrenched mobility to describe the patterns of limited travel that emerge over time as individuals or groups are pressured to adopt restrictive travel patterns to avoid or lessen the impact of systemic violence. The hurdles they face may be infrastructural, socio-political, or economic in nature, and these challenges produce situations in which certain routes, modes of transport, or behaviours become entrenched as barriers to urban travel. Entrenched mobility is not simply a matter of inconvenience or inefficiency; it is a manifestation of deeper social and political dynamics that restrict access to the city. The chapter explores how the impact of repeated interactions with systemic forces that limit mobility compels individuals to adopt restricted travel patterns that impair their ability to safeguard their well-being. Over time, these patterns become routinized, creating 'trench-like' paths that are difficult to escape.

The restrictions imposed on mobility under the conditions described above manifest as modal, temporal, or spatial entrenchment –or, frequently, as a combination of these forms. In other words, the systemic forces that constrain travel patterns may lead individuals to be a) confined to a single mode of transportation (modal entrenchment), b) unable to travel at certain times of day (temporal entrenchment), or c) restricted from accessing specific spaces (spatial entrenchment). As previously discussed, these limitations can arise from infrastructural, socio-political, or economic factors, or from their interplay. Although entrenched mobility may appear abstract in theory, it is in fact deeply context-specific, a reality that becomes evident in the following chapter

The third chapter addresses the methodology and methods employed for the case studies. It begins with an examination of the comparative method, a framework often associated with international relations due to its effectiveness in analysing different political, juridical, or economic regimes. I contend that geography, in keeping with its interdisciplinary character, should incorporate this methodology to enhance its capacity to study and interpret complex social phenomena. The chapter then turns to the specific methods used, particularly the statistical and cartographic tools essential for the study of mobility in Mexico. It outlines the agencies from which data was obtained, describes the processes involved in handling this information, and discusses the challenges encountered in adequately representing the data.

The fourth chapter examines the conditions of mobility in the Yucatan Peninsula within both a regional and national framework. It begins by situating mobility in Mexico as a whole, demonstrating that while the region displays distinctive characteristics, the challenges faced in the Yucatan Peninsula are reflective of broader patterns present

throughout the country. The chapter follows this by providing a historical overview that contextualizes the demographic and economic realities of the states of Campeche and Yucatan. A key feature in both contexts is the enduring presence of indigenous communities –particularly the Maya– whose experiences of economic deprivation are rooted in persistent structural inequalities.

Building on this foundation, the chapter explores the specific conditions of transportation in the region, analysing the relationship between transportation infrastructure, income distribution, and social mobility. By outlining the economic and infrastructural landscape of both states, it highlights how access to transportation is deeply intertwined with social class, shaping opportunities for participation in urban life.

After establishing this context, the chapter turns to detailed case studies of Campeche and Merida. In each case, the discussion focuses on the inefficiencies of public transportation as a mechanism for urban mobility, emphasizing how the spatial distribution of housing, employment, and essential services creates significant barriers to social and economic participation for many residents. These case studies do not serve as comprehensive analytical chapters; rather, they provide a nuanced preview of the mobility challenges specific to each city and set the stage for the more in-depth comparative analysis that follows.

The fifth chapter, aptly titled "Comparative Analysis," brings together the theoretical and empirical strands of the thesis. It addresses a frequently overlooked aspect of mobility studies: the lived experience of movement. By presenting detailed accounts of everyday travel in Campeche and Merida, the chapter underscores the importance of experiential knowledge in understanding entrenched mobility. This comparative analysis reveals how systemic forces manifest differently across urban contexts, shaping distinct patterns of modal, temporal, and spatial entrenchment.

Afterwards, the chapter considers potential solutions, advocating for a reconceptualization of urban travel that centres on equity and social justice. It explores how reconfiguring travel networks in Campeche and Mérida could mitigate entrenched barriers and foster more inclusive forms of mobility. Finally, the text reflects on the broader applicability of the entrenched mobility framework beyond the Yucatan Peninsula, and outlines directions for future research and policy development.

In sum, this thesis positions mobility as a central lens through which to interrogate the social, political, and experiential dimensions of urban life, moving beyond technical or logistical explanations to foreground questions of justice and inequality. By introducing and applying the concept of entrenched mobility, the research offers a framework to understand

how systemic forces shape not only the possibilities but also the constraints of movement within urban environments. This approach is rooted in the conviction that mobility is a fundamental right, essential to full participation in society, rather than a privilege reserved for a few. The chapters that follow build upon this foundation, combining theoretical innovation with empirical analysis to challenge conventional narratives about movement and to reveal the ways in which mobility is negotiated, contested, and transformed.

With this groundwork established, the first chapter turns to the intellectual origins of mobility studies, tracing the evolution from transportation geography to more critical and nuanced understandings of movement. This historical perspective provides the necessary context for appreciating the significance of entrenched mobility and sets the stage for the arguments developed throughout the thesis.

1 From transportation to mobility studies

The purpose of the following chapter is twofold. First, it recentres mobility as a core component of societal dynamics. It does so by providing an account of transportation geography and its efforts to highlight the complex and multidisciplinary nature of motion, and the subsequent reply of mobility studies, which has both built on and superseded it. Second, the chapter focuses on some of the concepts developed by mobility scholars, in particular those pertinent to the thesis advanced in this work. It provides both an explanation and analysis of terms such as automobility, motility, and kinetic space. This exercise both exemplifies the epistemological prowess of mobility studies, while subsequently constructing the conceptual bedrock upon which later chapters are built. This effort, however, is of little use if we fail to engage with our current relation to travel.

Transport, in all its dimensions, is the strategy humans turn to in their effort to overcome the friction of space.[1] It is inherently necessary, as it is the link that allows us to move between locations and enables us to realise all our activities. Yet the travel with which we engage to meet our needs only constitutes a fraction of the mobility that make up our daily routines. The products and information with which we interact on a regular basis must also travel to be at our disposal, whether we dissect their motion or not. This is not only true of the fruits and vegetables that make up our daily diet, but of the minerals that make up our cell phones, and of the very information that we access on our devices. All of these rely on infrastructure that facilitates the flow of goods and data without which current society would not be possible.[2]

The networks that allow said infrastructure to bridge the gaps that distance us, both long and short, create patterns that not only accommodate current mobility needs, but also

[1] The idea of transport as a tool to overcome the friction of space is held commonly by various authors, in particular transport geographers. See Brian Hoyle and Richards Knowles, "Transport Geography: an Introduction", in B. Hoyle and R. Knowles, *Modern Transport Geography*, London, Belhaven Press, 1992, pp. 1-10; Jean-Paul Rodrigue, *The Geography of Transport Systems*, New York, Routledge, 5th edition, 2020, pp. 1-20; Richard Knowles, Jon Shaw, and Iain Docherty, "Introducing Transport Geographies", in, R. Knowles, J. Shaw, and I. Docherty, *Transport Geographies. Mobilities, Flows and Spaces*, Oxford, Blackwell Publishing, 2007, pp. 3-9.

[2] When stating that "society would not be possible" I refer to our current iteration of a market-based western society. That is not to say that other groups and societies can do away with movement, but their relation to movement is imbued with different meaning. See Carlos W. Porto-Goncalves and Enrique Leff, "Political Ecology in Latin America. The Social Re-Appropriation of Nature, the Reinvention of Territories and the Construction of an Environmental Rationality", *Desenvolvimento e Medio Ambiente* 35, no. 1, 2015, pp. 65-88.

determine what mobility will be possible in future iterations. As goods and information shape infrastructure after their demands, they shape our understanding of motion and determine the mobility goals of those products and services that will follow –and the methods by which they will achieve them.

Transportation is thus a complex subject that delves into the actual movement of peoples, goods, and information, and the infrastructure that comprises the networks that enable those patterns of travel to occur. However, the role that transport plays in our daily life is often obfuscated by the narrative surrounding the sedentarism of our current society.[3] The COVID pandemic is one such example of a narrative that painted a picture of a world at a standstill.[4] The rhetoric behind the crisis disingenuously conveyed the notion that all movement stopped; something we know not to be true.[5] Supermarkets, despite momentary shortages caused by panicked buyers, were promptly restocked.[6] The production and distribution of equipment and substances necessary to combat the virus ramped up to meet the demand. And as more of us were confined to our homes, we collectively began to consume an even larger number of products, some of which were delivered, while others were accessed online.[7] In either case, our patterns of consumption required an extensive network of ports, roads, and telecommunication infrastructure to function. This merely reiterates the point that, as part of humanity hunkered down during the lockdowns, transportation functioned as one of the key components that enabled the wider system to continue to operate.

Rhetoric surrounding the notion of "standstill" is partly accepted (as was throughout the COVID-19 pandemic) because the movement that occurs in our surroundings is

[3] The words sedentism, sedentarism, and sedentariness are all used interchangeably; throughout my work, I will use sedentarism. Beyond authors such as Sheller and Urry describing the role the rhetoric of sedentarism plays in today's society, the idea can also be found in more mainstream publications. For an academic approach see Mimi Sheller and John Urry, "The new mobilities paradigm", *Environment and Planning A* 38, no. 2, 2006, pp. 207-209; J.H. Park, J.H. Moon, H.J. Kim, M.H. Kong, Y.H. Oh, "Sedentary Lifestyle: Overview of Updated Evidence of Potential Health Risks", *Korean J Fam Med.* 41, no. 6, 2020, pp. 365-373. For the perspective of international organizations see World Bank, "Sedentary lives, the other global epidemic", *World Bank*, 15 October 2014. For the view provided by mainstream outlets see Gretchen Reynolds, "Are We Wired To Sit?", *The New York Times*, 26 September 2018; Peter Walker, "Inactivity is an ongoing pandemic': the life-saving impact of moving your body", *The Guardian*, 6 February 2021.

[4] The COVID-19 pandemic was discussed as a dynamic which halted all movement. For an example see, Amelia Cheatham, Claire Klobucista, Lindsay Maizland, "The Year the Earth Stood Still", *Council on Foreign Relations*, 2020.

[5] School of Engineering, "Increase in Home Delivery Service Usage During COVID-19 Pandemic Unlikely to Last", *Rensselaer Polytechnic Institute*, 2 February 2022; BBC editorial board, "Amazon hopes pandemic habits stick after profits triple", *BBC*, 29 April 2021.

[6] BBC editorial board, "Covid: Supermarkets say shortages are not widespread", *BBC*, 22 July 2021.

[7] Secretary General OECD, "Keeping the Internet up and running in times of crisis", *OECD*, 4 May 2020.

something we seldom dwell on, or pay any attention to.[8] We only become aware of its role –and importance–in our society when these systems break down or suffer setbacks.[9] Despite its pivotal role, transportation only occupies our mind in the negative, when it fails us. Regardless of whether the delay affects our package or our flight, the scrutiny of our current transportation system is mostly tied to its functionality. This poses a set of issues, key among which is the lack of critical social engagement that peers beyond the veneer of personal gain. The problem stems from the fact that, even as a critique of the system appears, it is through the lens of individual experience, and mostly fails to understand what other factors (such as class, race, gender, or the environment) both uphold and disrupt the current system of transportation.

When we talk of disruptions to the supply chain, what we reference are the shortcomings that, in the moment, affect our link to the overall network. Seldom do we, as a society, pause to take stock of how these failures reflect the fault lines of a system that lacks resilience.[10] This latter critique would prod at the lack of alternative networks to channel the flows that have suffered a disruption, and address the inequalities upon which this vast transportation infrastructure has been built. In short, a more critical look at the shortcomings that vex us would question how subaltern groups and peoples at the margins are an essential component that allows the system to function, and how the current labour practices are prone to failure due to the unequal (and sometimes inhumane) treatment of workers that make transportation possible.[11]

The COVID-19 pandemic is but one example of the pivotal role that transportation plays in our lives. It is of great relevance, for it points to the two major problems that plague our society's relation to movement. The first, that it does not occupy our collective imaginary, which leads us in some instances to naturalise its existence to the point where its fault lines are ignored until these succumb to stress and manifest as problems or crises. Second, that those who enable this network to function, the workers that manifest this system into reality, are often made invisible twice over: once when transportation is taken for granted, and then when critiques fail to address the conditions under which they labour.

---

[8] Hoyle and Knowles, *op. cit*., pp. 1-8

[9] *Loc. cit.*

[10] Raven Cretney, "Resilience for Whom? Emerging Critical Geographies of Socio-ecological Resilience", *Geography Compass* 8, no. 9, pp. 627-635.

[11] Ken Klippenstein, "Documents show Amazon is aware drivers pee in bottle and even defecate enroute, despite company denial", *The Intercept*, 25 March 2021; Kate Taylor and Avery Hartmans, "Amazon drivers say peeing in bottles is and 'inhumane' yet common part of the job, despite the company denying it happens", *Business Insider*, 25 March 2021.

This problem of contemporary society is inevitably present in academia. Stretching back to the early days of social sciences, transportation and mobility were often neglected, naturalised, or dismissed. Although they occupied a prominent role (as they do today), they were mostly viewed as a subordinate process tied to more relevant phenomena.[12] This dynamic has been present ever since the studies of authors such as Robert E. Park and Ernest Burgess, who presented models of cities that implicitly recognised the importance of transit and the role it played within them, yet presented them as subservient activities to the more relevant phenomena of the urban. Movement was presented as a mechanical element that would allow the organism to function, while the actual implications and meaning of transportation were seldom explored outside of their supporting role.[13]

The late 20th century brought with it a change in how transportation was understood. No longer was it perceived as a conduit devoid of meaning, but a factor in the study of geography. Authors such as Alan Hay, Henry White, and Peter Rimmer, understood that transit, and the tools peoples turn to in their pursuit of movement, are themselves relevant to understand how these might shape the way people travel. They understood that transportation was not just a conduit between spaces, but a dynamic that moulded the places it connected. From their research, the sub-discipline that devoted itself to the study of travel grew.[14]

1.1 Transportation geography

From its inception, transportation geography placed motion at the forefront of its field of study. It understood that to travel from one place to another, people and goods were required to traverse the distances that separated them from their destination. In short, that they must overcome space.[15] The act of motion was, in itself, an analytical category, and not an irrelevant effort that existed in between relevant social activities. It represented an activity that required forethought, relied on purposely built infrastructure, and was the producer (and product) of surrounding social dynamics. Because it did not take any of the latter for granted,

[12] Tim Cresswell, "Towards a Politics of Mobility", *Environment and Planning D Society and Space* 28, no.1, 2010, pp. 17-19.

[13] It would be folly to suggest that the study of movement was completely absent. Nevertheless, travel is regarded as transactional, and of lesser relevance. See, Robert E. Park, Ernest W. Burgess, and Roderick D. McKenzie, *The City*, Chicago, University of Chicago Press, 1925.

[14] For a brief overview see, Peter Rimmer, "Transport Geography", *Progress in Human Geography* 9, no. 2, 1985, pp. 271–277. For a more comprehensive look at the evolution of the sub-discipline see, William R. Black, *Transportation: a geographical analysis*, New York, Guilford, 2003.

[15] Jean-Paul Rodrigue, *op. cit.*, pp. 1-20.

this sub-discipline of geography charged itself with the study of the means humans employ to achieve this goal. And in so doing, it sought to address the neglect of travel and mobility altogether. As Hoyle and Knowls note, this branch of geography is "concerned with the explanation, from a spatial perspective, of the socioeconomic, industrial and settlement framework within which transport networks develop and transport systems operate".[16] At its core, it seeks to understand the mechanisms through which humans can overcome the friction of space to connect two or more areas of interest. It pays particular attention to the hubs, networks, and flows that link various locations, and studies how their interactions make evident the patterns of demand that become apparent due to mobility within the structure.

From the previous paragraph one can discern that one of the core technical questions for the sub-discipline is how peoples overcome the distances that, modes of transportation and technologies being equal, take more time to cover the larger they are. With the understanding that not all space is flat, transport geographers are aware that they must incorporate an analysis of topography due to the impact it has on movement.[17] It is practically axiomatic that the presence of features such as mountains, rivers, and swamps makes travel challenging. The importance of transportation geography was the insight it offered into motivation. Where societies found it advantageous to develop the necessary infrastructure to face these trials, the field pondered the motives behind their endeavour, and the material means by which they sought to accomplish their goals.[18] As Hoyle and Knowls argue, "transport is a measure of the interactions between areas",[19] and how valuable these interactions are is often reflected in the efforts peoples have put into developing a system that allows for two spaces of interest to be connected. As the field sought to quantify the interactions, it turned to two disciplines with useful overlaps: engineering and economics.[20]

Engineering provided transportation geographers with a practical approach to the study of movement. Through the analysis of infrastructure, scientists could determine the frequency and volume of interactions between two spaces. The presence and size of roads, ports, and bridges served as data to better understand what characterised the relation and

[16] Hoyle and Knowles, *op. cit*., p. 2.
[17] R. Knowles, J. Shaw, and I. Docherty, *op. cit*., pp. 3-7
[18] For a study that exemplifies such a case see, Brian Hoyle, *The seaports of East Africa: a geographical study*, Nairobi, East African Publishing House, 1967.
[19] Hoyle and Knowles, *op. cit*., p. 2.
[20] For an article that highlights the robust relation between transport geography, and economics and engineering see Peter Rimmer, "Transport geography", *Progress in Human Geography* 12, no. 2, 1988, pp. 271–276.

how it impacted movement.[21] The incorporation of engineering was accompanied by the feeling that it brought with it efficiency and objectivity.[22] Because the science worked with measurements within Euclidean space, it was perceived as grounded and sound; not abstract and ephemeral. However useful, this approach had limited explanatory powers. For one, it was unable to describe how the peoples who used roads and bridges felt about their travel. Similarly, it could describe the characteristics of the infrastructure needed for transportation and how it operated, but it fell short of explaining why transportation between two spaces was needed.

Transportation geographers found the solution to the latter problem in the field of economics. Like engineering, it relied on 'hard' data to quantify human interactions.[23] It could study consumer patterns, gather relevant information, and extrapolate from this the conduct of a society. With regards to the field of transport, the input of economist was deemed helpful, as they could both quantify the movement of people (how many moved, and where they went), and provide a narrative that explained the motives behind their travel. This same dynamic also applied to goods, which meant researchers could both quantify the ways in which they moved and provide a reason for why they were transported in the first place. In this regard, economics helped geographers understand which goods flow from A to B, why they do so in that quantity, and the reason for the existence of said exchange. And much like engineering, it provided numbers that helped present rhetoric as fact.[24]

Transportation geography, aided by engineering and economics, centred the analysis around motion. No longer was it a peripheral and inert afterthought, but a complex and purposeful network of actors and infrastructure that (while it served to link spaces) was itself the product and producer of social dynamics. Despite these achievements, as transportation geography came to rely ever more on the input provided by those fields, its understanding

---

[21] For a debate regarding the role of engineering and economics in transport geography see, Susan Hanson, "Imagine", *Journal of Transport Geography* 14, no. 3, 2006, pp. 232-233; Andrew R. Goetz, "Transport Geography: Reflecting on a subdiscipline and identifying future research trajectories. The Insularity issue in Transport Geography", *Journal of Transport Geography* 14, no. 3, 2006, pp. 230-231; David J Keeling, "Transportation geography – new regional mobilities", *Progress in Human Geography* 32, no. 2, 2008, pp. 275-283.

[22] Andrew R. Goetz, Timothy M. Vowles, and Sean Tierney, "Bridging the Qualitative-Quantitative Divide in Transport Geography", *The Professional Geographer* 61, no. 3, 2009, pp. 324-330.

[23] The quantitative approach on which economics relies gave the perception that arguments constructed through their methods were unassailable. See, Tim Schwanen, "Geographies of transport II: Reconciling the general and the particular", *Progress in Human Geography* 41, no. 3, 2017, pp. 356-358.

[24] By "rhetoric as fact" I am here agreeing with David Harvey when he argues that positivist must turn the abstract into data that can be interpreted. In so doing, they provide a view of their experience, which is to a larger or lesser degree influenced by how they choose to transmit that information. See, David Harvey, *Consciousness and the Urban Experience*, Oxford, Johns Hopkins University Press, 1985, p. xiv.

of movement became narrowed. How and why space should be overcome became questions that only the methods of economists and engineers could answer.[25] However, their reliance on a select number of quantifiable phenomena limited the responses they could provide for questions such as how space should be overcome, what is the nature of the relation between two locations, and why people move. Economics, as a field, would fall short of explaining the myriad reasons people engage in specific patterns of movement, if they have any agency over these travel dynamics, and how they feel throughout the ordeal. This was due, in great part, to their effort to provide information that could be presented as 'objective'.[26] The data gathered was thus only a partial reflection of transportation as a larger phenomenon, and the fixation with a handful of numbers to explain its totality left gaps that transportation geography was unable to fill.

The first iteration of transportation geography understood that transport is a strategy we use to negotiate our way through space. We are constantly made to choose which option would best allow us to move from one location to another, an assessment that forces us to consider the costs of this journey. What engineering and economics could not provide is an understanding that the calculations which determine our routes do not happen in a vacuum; they are the product of political, social, and economic factors that shape how and why we make these decisions.[27] The idea furthered by early transportation geographers, that their data was 'objective', failed to consider that the information they collected, the way in which they collected it, and the solutions they proposed were born out of a particular ideology.[28] They were able to provide information that detailed the monetary costs and the technical complexity of any given route, were it to go over, under, around, or through any topographical feature. Yet, it could seldom determine the value of any given route based on its religious, cultural, or social value. The same holds true when questions arise surrounding the infrastructure required, and the mode of transportation chosen to traverse it, both of which hold different societal, cultural, and economic value, and might therefore be desired or rejected on grounds other than their economic cost or technical prowess.[29] It is as a product of the epistemological hierarchy on which it was erected, that early transportation geography

[25] Andrew Goetz, art. cit., pp. 230-231; Hanson, art. cit., pp. 232-233; Andrew Goetz *et al*., art cit., pp. 325-327.

[26] Harvey, *op. cit*., p. xvi.

[27] Mobility is not an objective or linear process, but one that is socially interpreted, and thus is the product of many political, economic, environmental, and personal realities. For an adequate discussion see Tim Cresswell, *On the Move. Mobility in the Modern Western World*, New York, Routledge, 2006.

[28] Harvey, *op. cit*., pp. xvi-xvii. Hoyle and Knowls, *op. cit*., pp. 6-9.

[29] For a deeper analysis of the meaning behind vehicles see, Steffen Böhm, *et al*. (eds.), *Against Automobility*, Massachusetts, Blackwell Publishing, 2006.

had a limited understanding of the phenomenon it studied.[30] Even though it expanded the horizon of social sciences, it failed to fully grasp the complexity of the dynamic it sought to comprehend.

As has been stated thus far, a purely technical analysis struggles to present movement in all its complexity. Transportation geographers, such as Susan Hanson, Andrew Goetz, Tim Schwanen, and David Keeling, identified the quantitative bend within the sub-discipline and argued that it narrowed how it understood and related to space.[31] Rather than a hinderance, they identified this as an opportunity for a change that would widen its scope by bringing in other fields of study. As was detailed in previous paragraphs, transportation geography was –from its inception– characterised by its multidisciplinary approach that relied on the input provided by other fields of study. To fully comprehend mobility, it would need to detach itself from its overreliance on quantitative epistemology,[32] and draw from a larger number of fields such as sociology, history, political science, and anthropology, to bring it closer to human geography, and the latter's interdisciplinary character.

In this way, transportation geography has grown from a field that focused on the relation between demand, infrastructure, and travel, to one that accounts for the relation between people and movement. Due to its proximity to other disciplines (within and outside of Geography) it paid attention to the unequal ways in which humans interact with transportation, and how this impacts the way individuals relate to motion. Despite these efforts, there are calls for the field to go further, and adapt to a study not of transport but of mobility. A comprehensive approach that would tie in movement with the forces of production, the infrastructure that facilitates motion, and how people both are producers of, and shaped by, this reality, both through their experiential and physical participation.

1.2 From Transportation to Mobility

Movement is present in all aspects of modern society, from the journey of people to the transport of goods. Transportation geography made a point of detailing these phenomena but

[30] A summary of the limits of the model offered by traditional transportation geography can be found in, Ersiliar Verlinghieri and Tim Schwanen, "Transport and mobility justice: Evolving discussions", *Journal of Transport Geography* 87, 2020, pp. 1-7.

[31] Hanson, art. cit., pp. 232-233; Andrew Goetz *et al*., art cit., pp. 325-327, Schwanen, art. cit., p. 357; David J. Keeling, "Transportation geography: new directions on well-worn trails", *Progress in Human Geography* 31, no. 2, 2007, pp. 218-223.

[32] The case for transportation geography is made by the authors mentioned in the previous footnote. For another example see, Jon Shaw and James D. Sidaway, "Making links: On (re)engaging with transport and transport geography", *Progress in Human Geography* 35, no. 4, 2010, pp. 502-520.

fell short of studying the human component that permeated this motion. Within the social sciences, disciplines began to pay attention to the importance of movement, and to recognize the impact it had not just on the economy, but on culture, politics, and society at large. This 'mobility turn'[33] has allowed for the study of travel beyond the simple motion of bodies. It tells of the interactions between people and travel, and how they are both shaped and in turn shape their surroundings due to their movement. This, then, is a study of mobility, of "movement made meaningful".[34]

This interdisciplinary approach understands that motion goes beyond tangible objects or fixed quantities (of goods and people), for it involves more than just travel infrastructure. There is purpose that underlies the whole process and determines the direction of travel, its speed, how it feels, and where it ends. Mobility studies thus recognizes that movement is not experienced equally by all, and that as bodies travel, people approach it through the lens of personal history, expectation, and desire, all of which influence their journey. The aim of mobility scholars was to get rid of the notion that travel was "a black box…, a neutral set of technologies",[35] for they understood it limited the breadth of social phenomena that happened in motion.

Transportation geography understood that transport is "informed by the goals, values and interests of social groups and individuals",[36] which is a recognition that journeys themselves are not meaningless. Mobility studies capitalized on this idea and understood that, while the positivism that constitutes the epistemological foundation of transportation geography limits it to imperfect accounts, it need not be discarded. The latter provides a first approach which one can expand on to provide a more accurate account of mobility.

Researchers such as Tim Cresswell, Mimi Sheller, John Urry, and Margaret Grieco understood that rather than an antithesis, their ideas built on, and subsequently expanded, the work of transportation geography. These authors, much like the sub-discipline did once before, pointed out the mistakes of social scientists who neglected to detail happenings in motion. They, however, did not limit themselves to emphasizing the importance of travel, and went on to detail the complex set of social interactions that occur on the journey. To achieve their goal, they sought to reconceptualize movement. One such example is the

[33] "Politics of Mobility", art cit., p. 17.

[34] Pauline Wolff, "From the urban planning discourse to a circulation *dispositif.* An epistemological approach to the mobility turn", in Marcel Endres, Katharina Manderscheid, Christophe Mincke (Eds.), *The Mobilities Paradigm. Discourses and ideologies*, New York, Routledge, 2016, p. 208.

[35] "The new mobilities paradigm", art. cit., p. 208.

[36] Colin Divall, and George Revill, "Cultures of Transport: Representation, Practice and Technology", *The Journal of Transport History* 26, no. 1, 2005, pp. 99–111.

collaborative work of Sheller and Urry, in which they studied mobility as a relational phenomenon.[37] They underscored the importance of analysing movement as a dynamic that is shaped by a confluence of factors. According to the authors, there is no way to understand a journey viewed solely from the lens of one variable, due to the faulty conclusions one would inevitably arrive at. This is because the importance of that journey lies not just in the spaces that expelled and welcome the traveler (if they welcome them at all) or with the mechanics that allow for travel to happen, but with the agency of the subject in motion and how this dynamic relates to the political, social, and economic structures that impact their motion. The events that take place during this transition build the stories and perceptions we hold of the place of origin and of the eventual destination, and change with the speed, rhythm, and friction people encounter. Factors such as race, class, gender, age, education, and physical condition determine every person's experience of mobility, and to try and separate them and study them in the abstract would warp our understanding of how people perceive their journey. The plight of Central American woman who migrate to the United States, to take one example, cannot be understood in the static (leaving their home country), nor can it be understood through isolated variables (gender, class, race, indigenous background). Their case must be viewed through the lens of their journey through different terrain, and how the myriad factors at play affect their mobility.[38] Why they would leave their home and embark on such a journey is a question that speaks to their agency, a question that cannot be answered in isolation, due to the fact that their gender, class, and ethnic background likely play a role in their decision. Additionally, the degree to which they can choose not just whether to move, but which route and mode of transportation they can access also responds to class, ethnic, and gender realities that impact their decision-making abilities. All of this without talking about how these socio-economic categories impact how they feel, and therefore affect how they relate (or will relate) to motion for the rest of their lives. These social dynamics, which clearly affect migrant communities across the globe, are present in our daily commutes, and determine social dynamics beyond travel. Therefore, it is paramount they be studied, which can only be done in an interdisciplinary fashion.

[37] The bibliography of collaborations between Sheller and Urry is vast. These are some examples, Mimi Sheller and John Urry, "Mobile Transformations of 'Public'and 'Private' Life", *Theory, Culture & Society* 20, no. 3, 2003, pp. 107–125; Mimi Sheller and John Urry, "The City and the Car", *International Journal of Urban and Regional Research* 24, no. 4, 2000, pp. 737-757; Mimi Sheller and John Urry, "Mobilizing the new mobilities paradigm", *Applied Mobilities*, 2016, pp. 1-16.

[38] Linda Alvarez, "No Safe Space: Neoliberalism and the Production of Violence in the Lives of Central American Migrants", *The Journal of Race, Ethnicity, and Politics* 5, no. 1, 2019, pp. 1-33.

The ‘new mobilities paradigm’, so coined by Sheller and Urry, placed these concerns at its centre. It highlighted the importance of the study of flows, networks, relations, and circulations as the core dynamic to understand the phenomena that shape our society. These ideas have been continuously developed by authors such as Urry, Grieco, Cresswell, Wolff, among many others.[39] In their writing, they emphasize that the study of mobility is not concerned with the individual experience of motion in a vacuum, but the ways in which travel is a constant negotiation with space, and with the institutions and social practices that hold power over it. This requires that we understand that our means of travel are not a neutral set of tools used to navigate inert places, but actions and objects imbued with meaning that we consciously or unconsciously turn to in our effort to overcome the friction of spaces that are symbolically charged. And these negotiations between peoples, their tools for travel, and spaces, are simultaneously orchestrated to account for the formal and informal conditions imposed by institutions on travelling bodies.

Tim Cresswell emphasizes the importance of the political dimension of mobility.[40] His focus on the agency of bodies in motion reframes the debate of travel and studies the degree of control people have over their journey, be it the start, end, or the moment in-between. His research aligns with the work pioneered by Sheller and Urry and exposes the complex layers that govern motion.[41] It highlights how humans experience different degrees of friction as they travel, how their control over the timing of their departure varies and affects whether they can decide when and where to end their journey. These factors, which impact a person’s radius of movement, are constantly shaped, warped, and restructured as people move or are moored in various places, change means of transportation, or encounter different institutions.

Travelling bodies will, at some point or another, reduce their speed or cease to move altogether. When understood through the lens of agency, this immobility is as important to the ‘new mobilities paradigm’ as mobility itself. Putting an end to a journey is not desirable or undesirable in the absolute, it hinges on the intention of the body in motion. The same principle applies to a body in rest. Whether it is ‘good’ for it to move or remain motionless is down to the decision of that person or group and how much agency they have over their own mobility. The distinction between ‘stillness’ and ‘stuckness’ thus relies not on a universal metric, but on the account of the person who experiences this lack of motion.

---

[39] For Cresswell see, *infra*, footnote 45; Wolff see, *supra*, footnote 38; Margaret Grieco and John Urry (eds.), *Mobilities: new perspectives on transport and society*, Surrey, Ashgate, 2011.

[40] *On the Move*, *op. cit*. pp. 15 *et passim*.

[41] For works by Sheller and Urry see, *supra*, footnote 37.

This emphasis on the notion of experience is central to mobility studies. It allows researchers to widen the scope of their investigation and provide an account of travel that paints a fuller picture of the social phenomena that occur while on the go. This is not to say that people should forgo the use of metrics like kilometres when talking about the length of a journey, rather the study of mobility suggests that length is not something so easily measured just in atomized and static units, and that the same distance, travelled in the same vehicle, is felt differently by different people. A member of the majority group might regard a short 2-kilometer bus ride as routine, while minorities might differ in their appreciation, regarding it as unbearably long due to the violence they experience during the trip. The metrics common in the study of transportation geography are of great use to give a universal account of movement, but the study of experience-based mobility allows researchers to better comprehend the social factors that affects not just whether individuals move or not, but why they do so, how they feel when they do so, and why they choose (or are forced to) limit their motion. This emphasis on the experience of the body in motion is best summed up by Tim Cresswell when he asks, "how does it feel".[42] His question peers behind the usual notions associated with travel, such as distance and time. It asks why different groups have diverging views of their movement and seeks to answer how and why this perception changes when they find themselves in a new place. Rather than just speak of physical movement, his is an invitation to think of the many aspects that accompany such action, he posits that we speak of mobility.

1.3 Mobility

Terms such as 'mobility', 'movement', and 'motion' are often employed interchangeably. For mobility studies scholars, however, these distinctions hold significant importance as they contribute to the comprehension of the intricate subtleties and complexities inherent in social phenomena. As Tim Cresswell states "mobility is movement made meaningful", it "involves a fragile entanglement of physical movement, representations, and practices".[43] The relevance of this observations stems from the distinction between the "raw material" that allows for the "production of mobility", how it is represented, and how we embody and reproduce this practice.[44]

[42] "Politics of Mobility", art. cit., p. 25.
[43] *Ibid*., pp. 17-18.
[44] *Ibid*., pp. 19-20.

Mobility, as understood by the definition provided by Cresswell, is relational at its core. It stands apart from movement and motion, which solely pertain to the physical act of transitioning an object or entity from one location to another. Mobility encompasses a broader scope by incorporating social, political, and economic dimensions. It includes the practices and representations associated with movement, while also acknowledging the influence of various regimes that can either facilitate, incentivize, or hinder such motion. Moreover, the concept of mobility equips scholars with the analytical tools to dissect and comprehend the intricate dynamics involved in these phenomena.[45]

An examination of the speeds, distances, and trajectories of a body in motion, is not the same as a study of women's journey for water.[46] A positivist approach will accurately detail the characteristics of her travels but will lack an understanding of the intersubjective experiences faced by those individuals, and how they feel that their interactions with the tangible and abstract forces shape their lives. Fundamentally, mobility studies prompt inquiries into the causes of movement itself, acknowledging that a comprehensive understanding cannot be attained solely through a positivist lens, or the conventional tools employed by social sciences thus far.[47] At its core, mobility studies endeavour to unveil the underlying rationale behind motion, necessitating an exploration of the regimes that govern and shape our everyday lives.

Mobility studies thus provides an innovative and interdisciplinary approach that questions existing narratives, improves our understanding of well-worn categories, and allows the focus to fall on the overlooked role that mobility plays in our daily lives. Despite this success, questions remain surrounding mobility studies and its ability to upend the existing status quo. While most authors agree that its contributions have changed our previous understanding of motion, and changed how we see its role, and value to society, other posit that this is not simply and innovative approach, but a paradigm shift that upends the current structure of social sciences.

[45] *On the* move, *op. cit*., pp. 25-50; Mimi Sheller, *Advanced introduction to mobilities*, Edward Elgar Publishing, 2021.

[46] Tara Rava Zolnikov, "My walk to water", *American journal of public health* 106, no. 4, 2016, p. 623. Val Curtis, *Women and the Transport of Water*, Practical Action Publishing, 1986.

[47] *On the move*, *op. cit*., pp. 5-30. *Advanced introduction*, *op. cit*., pp. 10-26.

1.4 The New Mobilities Paradigm?

What Mimi Sheller and John Urry termed the 'new mobilities paradigm' (NMP) emerged as a "set of questions, theories, and methodologies"[48] that problematized two core tenants that underpin most of our current understanding of society. The first is sedentarism, which they argue is often used as a normative standard for human existence that constantly obscures the complexity and diversity of movement practices across cultures and history. They challenge this by highlighting the significance of mobility as an integral aspect of social life, rather than a peripheral feature.[49]

Their second critique takes aim at totalizing narratives such as that of 'liquid modernity'. They posit that even as we acknowledge the fluid dynamics that undergird our society, we need "not embrace them as a supposed form of freedom or liberation from space and place".[50] They suggest a nuanced approach that takes stock of the inequalities that make for different mobilities, and accounts for the various forms of attachment, concentration, or sense of belonging that provides a more elaborate view of the different racial, cultural, historical, and gendered realities that make up motion and immobility.[51]

At its core, the arguments made by Sheller and Urry identify a trend within social science. They highlight the work of authors who have adopted a more holistic and interdisciplinary approach that recognizes the significance of mobility in shaping identities, social relations, and cultural practices.[52] Their research recognizes that mobility is not a neutral or value-free activity, but rather a deeply political and contested phenomenon that reflects and reinforces existing power relations. Therefore, it is crucial to consider the social and political implications of mobility, to comprehend how it affects social status, and question how we are access to resources and our lived environment.[53]

Some authors contest the use of the term 'paradigm' to refer to the phenomena identified by Sheller and Urry. Cresswell is cautious, stating that "the word […] suggests the Kuhnian notion of normal science being transformed by sudden revolutions where what went previously is unceremoniously tipped into the junkheap of academic history".[54] While

[48] Sheller and Urry, "The new mobilities paradigm", art. cit., p. 210.
[49] *Ibid*., pp. 208-209.
[50] *Ibid*., p. 2010.
[51] *Ibid*., pp. 210-212.
[52] While there are too many to mention here, I shall refer to some of the most prominent. Peter Adey, David Bissell, Kevin Hannam, Peter Merriman, Tim Cresswell, Vincent Kaufmann, Jason Henderson, Doreen Massey.
[53] "The new mobilities paradigm", art. cit., pp. 207-226.
[54] "Politics of Mobility", art. cit., p. 18.

Margaret Grieco and Kenneth MacDonald argue they "are sceptical of the force of paradigm-talk as applied in social sciences".[55] Richard Randell goes one step further and argues that there is "no paradigm", stating that "the new mobilities paradigms is not a paradigm".[56] In his paper he suggests that it lacks the coherence and clarity of traditional scientific paradigms (such as the positivist or the constructivist). According to the author, the new mobilities paradigm is more of a "research agenda" than a paradigm, as it encompasses a wide range of topics and methodologies that are not necessarily unified by a common perspective. Randell concludes that the new mobilities paradigm should not be considered a paradigm in the traditional sense, but rather as a loose collection of theories and approaches that reflect the diversity and complexity of contemporary movement practices. He argues that, rather than help, the moniker 'paradigm' "is at best unhelpful, at worst a hindrance" to the development of mobility studies.[57]

While the NMP may lack the coherence and clarity of traditional paradigms, it provides a valuable framework for understanding the social, cultural, and political dimensions of motion; this much is understood by all those who take issue with the last word of the abbreviation. Cresswell recognizes the benefits of the interdisciplinary approach that characterizes mobilities research, arguing against the previous approach that "took movement as a given".[58] Grieco and MacDonald find that they "concur" with Sheller and Urry in their efforts to transcend "the dichotomy between transport research and social research".[59] Even Randell concedes that the "mobility turn" brings with it a "theoretical, critical and empirical richness" and that rather than characterize it as a NMP, they should embrace the "multidisciplinary and multi-paradigm" nature of their work.[60]. While it may not be a new paradigm, the approach of Sheller and Urry provides a novel and holistic way to incorporate the study of movement and highlight the need to analyse these overlooked phenomena.[61]

[55] Kenneth MacDonald and Margaret Grieco, "Accessibility, Mobility and Connectivity: The Changing Frontiers of Everyday Routine", *Mobilities* 2, no. 1, p. 3.

[56] Richard Randell, "No paradigm to mobilize: the new mobilities paradigm is not a paradigm", *Applied Mobilities* 5, no. 2, 2020, pp. 206-223.

[57] *Ibid*., p. 219.

[58] "Politics of Mobility", art. cit., p. 18.

[59] MacDonald and Grieco, art. cit., p. 3.

[60] Randell, art. cit., pp. 219-220

[61] Based on the elaborations of this and previous paragraphs, I will stick to the terms 'new mobilities' and 'mobility studies' to refer to the field.

1.5 Core concepts of mobility studies

Beyond the discussion of its status as a new paradigm, the burgeoning field of mobility studies has experienced significant growth of late,[62] leading to the development of a diverse range of concepts aimed at exploring the intricate nuances and complexities inherent to motion and travel. The seminal contributions of scholars such as Mimi Sheller, John Urry, Margaret Grieco, and Tim Cresswell have laid the foundation for this discipline, providing a solid framework upon which subsequent authors have built, and enriched our understanding of happenings in motion.[63]

The rapid expansion of mobility studies literature, and the creation of new concepts developed by an ever-growing cohort of authors, has not had enough time to permeate the academic lexicon outside of the field, let alone the language used by society at large. As a result, some of these ideas remain relatively obscure or vague, while others suffer from misappropriation, and in the worst-case scenario, complete misinterpretation. The absence of a comprehensive glossary specific to the field of mobility studies further exacerbates the problem, ensuring that this issue is likely to persist.[64]

Due to this situation, this chapter will assume the responsibility of presenting the reader with precise definitions essential for the creation of a common framework. Drawing upon the foundational works of previously mentioned authors, whose contributions are quickly being recognized as canon, I will analyse key concepts that are pertinent to the development of my own research. It is important to emphasize that this endeavour does not aim to create an exhaustive glossary encompassing the entire spectrum of terminology that has been thus far established in the field, as that task lies in the hands of more adept scholars. Instead, this approach seeks to establish a shared starting point, eliminating any vagueness and offering all readers an equal footing from which to engage with the subject matter.

It is important to acknowledge that, although the concepts presented here possess intrinsic relevance, they should not be perceived as isolated analytical tools, but rather as a

---

[62] "Mobilizing the new mobilities paradigm", *op. cit.*, pp. 10-25. Mimi Sheller, "The new mobilities paradigm for a live sociology", *Current sociology* 62, no. 6, 2014, pp. 789-811.

[63] The body of literature of these authors is too voluminous to fit it one footnote. It is present throughout the thesis and is prominently featured throughout this chapter.

[64] To say that there is not a glossary is not to suggest that no reference book on essential mobility topics exists. The Routledge Handbook of Mobilities is an excellent source for mobility scholars. Despite its undeniable brilliance, it is not a dictionary or compendium of terms. I find it necessary in my work to adequately define the terms that will later be in use throughout the case studies. See Peter Adey, David Bissell, Kevin Hannam, Peter Merriman, and Mimi Sheller (eds.), *The Routledge Handbook of Mobilities*, London-New York, Routledge, 2017.

collective and interconnected body of knowledge. A central tenant of mobility studies is the relational approach with which they examine social phenomena, which is something readers should keep in mind as they engage with the following concepts.

1.5.1 Automobility

The ubiquitous presence of cars in western society, and how they dictate our movement, cannot be overstated.[65] They physically occupy our urban spaces, be it in motion or at rest, taking up part of our homes, streets, and sidewalks.[66] They function as artifacts that allows us to transport ourself to work, spaces of leisure, family or social activities, and perform the job of ferrying people and goods between places, an effort which is itself deemed desirable. Beyond their tangible function and existence, they hold a prominent place in our collective imaginary. They are consistently portrayed and reinforced as essential to our everyday life through toys, television, videogames, movies, and sports, all of which normalize their presence. From an early age, children are taught to simultaneously revere and fear the automobile –an object they should aspire to possess, yet also view with apprehension due to its potentially lethal capabilities.[67]

This reverence and fear persist into adulthood, albeit with caveats and complexities that escape the grasp of our younger selves. As we age, the car assumes multifaceted roles and symbolisms. It becomes a signifier of wealth, an object with romantic potential, a marker of social status, a tool for labour, a primary means of transportation, and –in some cases– a dwelling of last resort.[68] Despite this ubiquity, cars received little attention as a subject of scholarly study.[69] As previously mentioned, this oversight can be attributed to epistemologies that neglected the investigation of phenomena in motion, thereby overlooking a dynamic that is at the heart of modern society: automobility.

The term ‘automobility’ evokes many images, ranging from the idea of self-propelled movement to the act of traveling in private vehicles. However, for mobility scholars, this concept encompasses a more intricate understanding of the profound impact that cars have

---

[65] Gregg Culver, “Automobilities”, in Audrey Kobayashi (ed.), *International Encyclopedia of Human Geography*, 2nd edition, Elsevier Science, 2020, pp. 161.

[66] It is not uncommon in cities in Germany or parts of Mexico to see cars occupy half of the sidewalk when they park. In some cases, this is allowed, in others, they would rather take space away from pedestrians rather than impede the transit of other motor vehicles.

[67] Amy L. Best, *Fast Cars, Cool rides. The accelerating world of youth and their cars*, New York University Press, 2006.

[68] Helen Fitt, “The status of being or the achievement of becoming? Towards better understandings of cars as status symbols”, *Social & Cultural Geography* 24, no. 6, 2023, pp. 968-986.

[69] “The new mobilities paradigm”, *op. cit.*, p. 209.

exerted on our society. It extends beyond the mere physical presence of cars on the roads to include the broader social, political, economic, and cultural systems that influences the lived environment, spanning from urban design to individual behaviours.[70] One notable aspect of automobility is its influence on our perception of space and time. Private vehicles, owing to their speed and long-distance capabilities, have facilitated the reconfiguration of our lived environment. Unincumbered by the friction of space, cars have enabled society to increase the distances between places of production, consumption, and social reproduction. The emergence of suburbia and the phenomenon of urban sprawl, owes much of its existence to the centrality of the car in shaping these spatial configurations.[71]

The impact of the car on our consumption patterns is evident in the transformation of our supermarket experiences. Warehouse clubs such as Costco and Sam's Club exemplify large-scale wholesale stores only made possible for the public at large due to the widespread use of the automobile.[72] A similar assumption underlies the logic of fast food and their iconic drive-thru, strategically placed to serve its core demographic: drivers.[73] When thinking of the industries associated with automobility, the manufacturers of steel, oil, and rubber are foremost on our minds. However, it is crucial to move beyond elementary associations and delve into the businesses that have emerged due to the car's transformative impact on spatial configuration. Wholesale stores and drive-thru establishments represent just two examples of the mutualistic relationship that have developed between private vehicles and these industries.[74]

The relationships that emerge within the regime of automobility foster the conditions for industries to thrive on the back of society's overreliance on private vehicles. These companies operate under the premise that people's mobility is intricately linked to the car,

---

[70] "The city and the car", *op. cit.*, pp. 737-757. Steffen Böhm, Campbell Jones, Chris Land, and Mat Paterson. "Introduction: Impossibilities of automobility", in Steffen Böhms *et al*. (eds), *Against automobility*, Blackwell Publishing, 2006. "Automobilities", *op. cit*., pp. 3-14.

[71] Kenneth T. Jackson, *Crabgrass Frontier. The Suburbanization of the United States*, Oxford University Press, 1985, pp. 157 *et passim*.

[72] Stanley Frederick W.T. Lim, Elliot Rabinovich, Sungho Park, and Minha Hwang, "Shopping activity at warehouse club stores and its competitive and network density implications", *Production and Operations Management* 30, no. 1, 2021, pp. 28-46. The study makes evident that most users require a private vehicle to access these spaces.

[73] John A. Jakle and Keith A. Sculle, *Fast Food. Roadside Restaurants in the Automobile Age*, Johns Hopkins University Press, 2002.

[74] Many other industries, from large corporations involved in the development of suburbia, to niche companies that sell gadgets for cars, benefit from the mutualistic relation that stems from the regime of automobility. John Urry, "Inhabiting the Car", in Steffen Böhms *et al.* (eds.), *Against automobility*, Blackwell Publishing, 2006. The car insurance industry is one among many that benefits from the regime of automobility that fabricates the need for cars to move, see Jahangir Mohammed, "5 industries benefiting from the connected car", *World Economic Forum*, 9 September 2015.

thus tailoring their products and access to them accordingly. By recognizing the central role of the car in an individuals' mobility practices, these industries strategically design their offerings to align with this prevailing mode of transportation. They understand that a customer's ability to access their products or services is closely tied to the availability and convenience of car usage. As a result, they adapt their business models, product designs, and distribution networks to cater to the specific needs and preferences to the driver's car-dependency.

Automobility thus reconfigures the behaviour of those wishing to partake within its dynamics. Nevertheless, the more insidious aspect of this regime is its ability to shape urban space and structure the societal interactions themselves. While the success of companies hinges on their ability to adapt to automobility, these needs reflect the systemic changes that the car has imposed on the relation peoples have to space. The configuration of movement as accessible mainly through the car is a consequence of policies that prioritise infrastructure such as highways, streets, and avenues, as opposed to walkways, bicycle paths, or public transportation. Once put in place, this built environment reproduces itself both materially and ideologically.[75] As concerns the former, the expansion of roadways compresses space-time, increasing the viability and acceptance of suburban expansion and longer work commutes. The expansion of suburbia makes the car a necessity rather than an option, which in turn increases the use of cars, requiring more roads and highways to accommodate the growing demand. As for the latter, the ubiquitous presence of cars and the imposing infrastructure that accompanies their existence naturalises them as quintessential engines of urbanity and modernity, a logical step in societal progress. The ideological framework which stems from the regime of automobility thus puts forth suggestions that function as palliative solutions; ones which perpetuate the existence of the car. Building a new lane or a second floor on a highway to alleviate traffic –as happens in Texas and Mexico City–,[76] providing tax incentives for people who purchase electric vehicles –such as countries like Norway–,[77] or transitioning to an app-based rental automotive service –such as "free2move"–;[78] whatever it takes, as long as the car dictates mobility. These actions, born out of path

[75] "Introduction: Impossibilities of Automobility", *op. cit.*, pp. 3-14.

[76] For more on elevated highways in Texas and Mexico City, see Javier Delgado, Luis Chias, Mauricio Ricardez, Anuar Martínez, and Tonatiuh Suárez, "Vialidad y Vialidades En La Ciudad de México. Un Contexto Para El Segundo Piso.", *Ciencias UNAM*, no. 070, 2003, pp. 50-64; Megan Kimble, *City Limits: Infrastructure, Inequality, and the Future of America's Highway*, New York, Crown, 2024.

[77] Adrienne Murray, "Norway on Track to Be First to Go All-electric", *BBC*, 13 January 2025.

[78] News/Media Release, "Free2move Acquires Share Now", *Auto Rental News*, 9 May 2022.

dependency, condition the response of our institutions –both formal and informal– and help perpetuate the existence of the regime.

This sentiment is echoed by what Gregg Culver describes as the "predict-and-provide" ideology, which he identifies as "the prevailing attitude that the growth of car use is both an inevitable and positive development". This normative characterization means that "future car use is to be predicted and accommodated for, […] which ultimately leads to more driving". The dynamic thus becomes "a self-fulfilling prophecy".[79]

Culver's identification of the inevitability and positive perception of the car underscores the normative nature surrounding this mode of transportation.[80] In the west, the automobile is not merely viewed as a utilitarian tool that reshapes spatial dynamics but is imbued with emotional significance and seen as a force that benefits society. One example that underscores the car's normative character is the struggle for women's liberation in Saudi Arabia. Their right to drive became emblematic of their broader fight for gender equality. In this case, the car transcended its role as a mere means of transportation and became both a symbol of resistance and a tool to challenge patriarchal structures.[81]

In western culture, the importance of the car can be exemplified by the role it has played within Hollywood. In movies and TV series, the car often symbolizes youth emancipation and freedom.[82] It goes beyond being a mere prop and becomes an extension of the protagonist's character, carrying deep symbolic meaning. In this context, cars are as significant as the dialogue and costumes in constructing and defining the character's persona.[83] Cars occupy a distinct position within society, becoming associated with political ideologies, gender stereotypes, and economic status. They serve as visual representations of various cultural and social aspects. The choice of a specific car model, brand, or style can convey messages about the character's personality, social standing, or values. A sleek sports car may be linked to notions of wealth, power, and masculinity, while a compact hybrid vehicle could be associated with eco-consciousness and progressive values.[84] Through their

[79] "Automobilities", *op. cit*., p. 258.

[80] *Loc. cit.*

[81] Manal Al-Sharif, *Daring to Drive. A Saudi Woman's Awakening*, Simon & Schuster, 2017; Sama Kubba, "The Saudi Form of Democracy: How Women Got to Drive", *Gender Policy Journal*, 2023.

[82] Virgil L. Fabian (director), "My dinner with Bobo", Drake and Josh, season 4, episode 9, 14 january 2007. Nima Nourizadeh (director), *Project X*, Warner Brothers, March 2012.

[83] Ron Eyerman and Orvar Löfgren, "Romancing the road: Road movies and images of mobility", *Theory, Culture & Society* 12, no. 1, 1995, pp. 53-79.

[84] Movies such as John Tucker Must Die, and Mean Girls use the car to convey certain characteristics associated to the characters and their role. The protagonist of the former drives an off-road vehicle, which is in line with his burley persona. The main antagonist of the latter film drives a bright pink car, in line with her traditional feminine role. Mark Waters (director), *Mean Girls*, Paramount Pictures, 19 April 2004. Betty

portrayal in Hollywood and other media, cars have become iconic symbols; they embody broader cultural meanings and serve as vehicles for storytelling and character development. This feedback loop where the automobile is prominently presented in films and TV series contributes to its normalization as ubiquitous, desirable, and (most of all) necessary, further shaping the perception of cars and owners, and their place within society.

While some are inspired and aspire to emulate the images seen on screen (often presented as politically neutral), automobility operates on a tangible plane were the forces that shape society impact car use (and users) unequally. Automobility is "the product of countless political, economic, historical, sociocultural, and geographical influences upon the motorization process".[85] Therefore, the wide-ranging effects of automobile usage transcend the relation between car and driver and exert a significant impact on the lives of those who are forced to co-habit with man-machine hybrids. While for some the car signifies that which Hollywood portrays, others who participate within the regime of automobility are not equally rewarded. In the United States, the car served as a tool that aided in the marginalization of African Americans, for only with its help –and the suburban landscape it enabled– was white-flight possible.[86] The regime of automobility thus mirrored the racial dynamics of oppression that permeated American culture, and the car served as the tool to help with its implementation. To this day, racial dynamics surround the use of automobiles in the United States, with African Americans being subjected to more traffic stops and searches than whites.[87]

Even those who do not make use of cars, be it by choice or due to exclusion, are negatively impacted by the dictates of automobility. Those who rely on buses as their mode of transportation must negotiate space with private vehicles who, due to their large numbers, are more likely to contribute to disruptions, congestions, and traffic jams.[88] Cyclists and drivers are –at times– made to share the same road. This dynamic, into which is baked a

---

Thomas (director), *John Tucker Must Die*, 20th century Fox, July 28, 2006. Burr Steers (director), *17 Again*, Warner Brothers Pictures, April 17, 2009.

[85] "Automobilities", *op. cit*., p. 259.

[86] Robert R. Gioielli, "Pruitt-lgoe in the Suburbs": Connecting White Flight, Sprawl, and Climate Change in Metropolitan America", *Amerikastudien/American Studies* 65, no. 2, 2020, pp. 213-233. Karl E. Taeuber and Alma F. Taeuber, "*Residential segregation and neighborhood change*", Transaction Publishers, 2008.

[87] Sharad Goel and Cheryl Phillips, "Police Data Suggests Black and Hispanic Drivers Are Searched More Often Than Whites", *Slate Magazine*, June 19, 2017, https://slate.com/technology/2017/06/statistical-analysis-of-data-from-20-states-suggests-evidence-of-racially-biased-policing.html, based on data from The Stanford open Policing Project, https://openpolicing.stanford.edu/findings/

[88] Gilles Duranton, and Matthew A. Turner, "The Fundamental Law of Road Congestion: Evidence from US Cities", *American Economic Review* 101, no. 6, 2011, pp. 2616-2652.

clear power imbalance, sees the former at a significantly higher degree of danger, where a commute is constantly overshadowed by the possibility of vehicular violence.[89] Much like cyclists, pedestrians must navigate urban spaces mostly ruled by quickly moving machines that represent a constant threat to their lives.[90] In addition to their capacity for unspeakable violence, automobility forces us to accept social inequality and mobility injustice as inherent and unavoidable consequences of the unparalleled benefits that arise from the accelerated pace of auto-society. What is seldom questioned is whether 'living life on the fast lane' is ever truly desired by those whose lives are most at risk.

1.5.2 Hypermobility

Much like the body is disciplined to accommodate the presence of cars within society, we have been socialized to identify movement as an inherently positive aspect of our daily lives.[91] Phrases such as 'get going', or the Mexican idea of '*una persona movida'* (a person on the move),[92] evoke the image of industrious and active individuals. The well-worn phrase 'they have somewhere to be' is commonplace for commuters in 'big cities' worldwide, predominantly conveying the favourable depiction of a diligent person. Conversely, the notion of remaining at home or simply 'sitting on the couch' elicits the image of a slovenly individual lacking productivity or discipline.[93] Moving is not a purely mechanical act, but a complex idea, which is evidenced by the normative values our society has ascribed to motion. While the COVID-19 pandemic prompted a reassessment of the essentiality of all forms of movement, that narrative has slowly faded, with increasing calls for people to return to their traditional commute.[94] This rhetoric endeavours to rewind the clock, urging us to disregard the past few years and adopt anew the *status quo ante*.

---

[89] Gregg Culver, "Death and the Car: On (Auto)Mobility, Violence, and Injustice", *Acme: An International Journal for Critical Geographies* 17, no. 1, 2018, pp. 147-151.

[90] *Ibid*., 144-160.

[91] Marianne Guenot, "Hate your commute? It might actually be good for your mental health, scientists say", *Insider*, 7 February 2023.

[92] The Mexican characterization of someone as '*una persona movida'* (a person on the move), is a way of describing an individual who is constantly 'hustling' or working hard. It normally refers to people who work more than one job, although it can also allude to those who have many contacts in political circles, or (to a lesser degree) a person who leads an active and healthy lifestyle.

[93] Rizwan Choudhury, "Elon Musk thinks remote work is a parasite that needs to be eradicated", *Mashable Middle East*, 17 May 2023. Gerrit De Vynck, "Workers say its workers will have to be in the office April 4", *The Washington Post*, 2 March 2022.

[94] Emily Canal, Marguerite Ward, Rebecca Knight, and Shana Lebowitz, "Here's a list of major companies requiring employees to return to the office", *Insider*, 29 May 2023. Alex Sherman, "Making sense of why executives are eager to get employees back in the office", *CNBC*, 8 March 2022.

Like automobility, hypermobility ascribes a particular set of norms and values to motion. It not only advocates for the continuous circulation of individuals and commodities, but also upholds the belief that such mobility is essential for society's current configuration.[95] Within this framework, individuals who engage in extensive travel are often idealized as either virtuous or hard-working. However, the sustained movement of people and goods relies on an extensive infrastructure that necessitates that it be built, maintained, and staffed. In essence, the regime of hypermobility, which promotes the perpetual motion of goods and individuals, is contingent upon the immobility of a few who are responsible for upholding the necessary conditions for its existence, while simultaneously requiring the perpetual motion of others who operate the vehicle as it travels.[96]

Not all who partake in the dynamics of hypermobility do so equally. The kinetic elite, characterized by their high degree of motility, reap the benefits.[97] They are constantly in motion, jetting off to various parts of the world, and enjoying the consumption of globally sourced goods and services, such as Japanese fresh-fish, Ghanaian chocolate, French wine, and Colombian coffee. They often experience the simultaneous advantages from constant motion, while benefiting from the circulation of the products they consume.

On the flipside we find those individuals who are rendered immobile or hypermobile as they work to maintain hypermobility, that is to say, the lives of the kinetic elite. They play a direct role in upholding the infrastructure that perpetuates the regime. Unlike those who participate in hypermobility willingly, they have limited or no motility themselves, as their employment is directly tied to the lives of those who benefit from the arrangement. The most egregious examples are the staff who tend to the whims of those hypermobile subjects, by performing tasks such as flying their private planes, driving their cars, or sailing their yachts. In this group we also find those who see that they are comfortable, such as cooks, cleaners, and other personal workers. While the latter paragraph seems to be an indictment of the wealthiest people on earth, this category can and should be broadened to include all the people who work at restaurants, hotels, and airports, or the crews that man planes or cargo ships, each and every one of whom is essential for the regime to function.

---

[95] Scott A. Cohen, and Stefan Gössling, "A darker side of hypermobility", *Environment and Planning A: Economy and Space* 47, no. 8, 2015, pp. 1661.

[96] One such example is the airplane. It requires a ground crew that enables it to taxi, take off, and land. This crew is grounded and cannot move so planes can safely land, taxi, and take-off. Simultaneously, the same aircraft requires at the very least a pilot to fly the aircraft, keeping that person in motion as long as the machine travels.

[97] Mimi Sheller, "Theorising mobility justice", *Tempo Social* 30, no. 2, 2018, pp. 17–34.

One industry that captures the multifaceted composition of hypermobility is tourism. It profits off the regime by promoting effortless, unincumbered travel, in a bid to colour 'vacations' as the epitome of leisure.[98] The allure of crossing vast distances with minimal effort has been consistently glamorized and marketed as an appealing lifestyle choice. Through compelling advertisements, airlines, hotels, and other travel-related entities employ captivating visuals of exotic destinations, opulent accommodations, and carefree globetrotters to cultivate a yearning within individuals that propels them to pursue these experiences.[99] However, in these positive portrayals of hypermobile individuals, there is a deliberate disregard for the people without motility that provide these services.[100] The focus on the glamour renders invisible the communities that are forced to sustain the infrastructure that caters to the kinetic elite. These individuals, often marginalized, play a crucial role in supporting the mobility of others, while being denied the same privileges themselves.

To those rendered immobile by hypermobility –airport staff, hotel workers, and restaurant employees– mobility is less glamorous and constitutes a burdening responsibility to materialize expectations. Tourism, as an industry, employs millions of workers across the world and accounted for over 10% of the world's GDP prior to the outbreak of the pandemic.[101] Yet, despite its contribution to the global economy, most of the salaries it offers are low, working conditions are precarious, and the work is physically taxing. They often work in informal or semi-formal employment arrangements, without the benefits of formal contracts or collective bargaining., making them vulnerable to exploitation and abuse.[102] Their contribution is not one that is socially desirable in that it is democratically determined to improve the conditions of the many. Instead, it is a job designed to cater to the privileged few, ensuring their ability to fulfil their desire for effortless travel, followed by extended periods in secluded leisure destinations.

---

[98] Cohen and Gössling, art. cit., pp. 1661-1664.

[99] For more studies on how travel is glamourized see, Janice Yui Ling Ip, "Analyzing tourism discourse: A case study of a Hong Kong travel brochure", LCOM papers 1, 2008, pp. 1-19; Hanita Hassan, "The representation of Malaysian cultures in tourism brochures", *Procedia-Social and Behavioral Sciences* 118, 2014, pp. 140-151. Sabrina Francesconi, "Images and writing in tourist brochures", *Journal of Tourism and cultural Change* 9, no. 4, 2011, pp. 341-356.

[100] Philip Bohle, Michael Quinlan, David Kennedy, and Ann Williamson, "Working hours, work-life conflict and health in precarious and "permanent" employment", *Revista de saúde pública* 38, 2004, pp. 19-25.

[101] Statista Research Department, "Share of the total gross domestic product (GDP) generated by travel and tourism worldwide from 2000 to 2021", *Statista*, January 20th, 2023. Statista Research Department, "Number of travel and tourism jobs worldwidefrom 2019 to 2022, with a forecast for 2023", *Statista*, May 10th, 2023.

[102] Philip Bohle *et al*., art. cit., pp. 19-25.

While the habits of the kinetic elite, and the work of the people who make it possible, are obvious manifestation of hypermobility, this analytical category need not be reserved for the study of the jet-set life of the rich and famous. Urban space is home to many hypermobile people, who have little motility of their own. The person who commutes between cities for job purposes, the infirm who travel long distances for medical attention, families who find themselves driving to gain access to healthy food, all of these people are forced into hypermobility as the result of their struggle to guarantee a living. Margaret Grieco's concept of "time poverty" sheds light on the challenges they face.[103] Due to their precarious economic positions, they must allocate considerable time and effort to fulfil basic needs, which mainly consists of time-consuming commutes to work, school, grocery stores, banks, hospitals, and other essential services (some of which require that they wait in line).[104]

Within cities the presence of the wealthy hypermobile are also seen and felt. The kinetic elites, utilizing private highways or even helicopters, navigate urban space and bypass the congestion that poses a challenge to the underprivileged.[105] This ability to effortlessly traverse the urban landscape is not only seen as desirable, but also considered essential for the packed schedules of successful individuals engaged in business pursuit. This starkly contrasts with those who experience hypermobility out of necessity, who lack the resources for efficient movement or the luxury of remaining at home. For the time-poor, hypermobility becomes a consequence of their limited motility, subjecting them to time-consuming commutes.[106] The realms of the kinetic elite and the time-poor intersect, as the former relies on the services provided by the latter, who must ensure that the smooth functioning of their mobility infrastructure is maintained. Chauffeurs, restaurant staff, and food delivery workers are examples of those who enable the kinetic elite to exploit and derive benefits from the regime of hypermobility. These dynamics, whether in the context of tourism or within urban spaces, stem from a system of unequal exploitation that places the

[103] Jeff Turner, and Margaret Grieco, "Gender and time poverty: the neglected social policy implications of gendered time, transport and travel", *Time & Society* 9, no. 1, 2000, pp. 130 *et passim*.

[104] *Ibid*., p. 132.

[105] Juana Martínez Reséndiz, "Conflicto urbano en la Ciudad de México: el caso de la Supervía Poniente", en Fernando Carrion y Jaime Erazo (coord.), *El derecho a la ciudad en América Latina. Visiones desde la política,* UNAM, 2016, pp. 201-216. Miriam Alfie, "Supervía Poniente: conflicto social y visión urbano-ambiental", *Estudios demográficos y urbanos* 28, no. 3, 2013, pp. 735-768. Saulo B. Cwerner, "Vertical flight and urban mobilities: The promise and reality of helicopter travel", *Mobilities* 1, no. 2, 2006, pp. 191-215.

[106] Rafael Henrique Moraes Pereira, and Tim Schwanen, "Commute time in Brazil (1992-2009): differences between metropolitan areas, by income levels and gender", *Discussion paper* no. 192, 2015, pp. 1-29.

bulk of the burden on those who ensure that the regime functions, but seldom profit from the benefits it offers.

While the pursuit of effortless transnational or inter-city travel benefits the kinetic elite, it is crucial to acknowledge the experiences of those who engage with hypermobility in a different context. People residing in low-income areas, where access to reliable public transportation is limited, bear the brunt of extensive travel times during their daily commute.[107] This prolonged journey to reach essential services, such as healthcare, poses a difficult choice between sacrificing a day's wage or neglecting their health needs. Within this context, certain groups, such as single mothers, face the additional challenge of balancing their limited time to ensure they can fulfil multiple responsibilities. They must coordinate taking their children to school, commuting to work punctually, purchasing groceries, and planning for the journey home.[108]

It is crucial to underscore the uneven burden of hypermobility on its participants. The regime itself, which champions and relies on the constant movement of people and goods, is sustained by the low motility of those who are essential for it to function. While it is necessary to critically analyse the dynamics that enable the mobility of the kinetic elite, equal attention should be given to understanding the lived experiences of those with limited mobility and the immobile or hypermobile individuals who play a crucial role in upholding the entire hypermobility regime. By examining the stories and perspectives of the latter, we can gain a more comprehensive understanding of its internal dynamics and underlying logic.

1.5.3 Motility

The ability of people to exercise agency over their own movement lies at the core of Cresswell's politics of mobility.[109] Moving through a city is inherently political, as people travel not as shapeless entities devoid of purpose, but as individuals who embody their gender, race, or ethnic identities when they undertake specific tasks. The act of engaging with society affects the conditions and perceptions individuals hold of motion, thus bringing into question the neutrality of urban space. These interactions expose the underlying structures that either impede or facilitate the movement and stillness of different actors. It is essential to recognize that the politics of mobility do not commence while in motion; rather, they are ever-present, for they accompany every moment an individual decides over their

[107] Moraes Pereira and Tim Schwanen, art. cit., 2015.
[108] Turner and Grieco, art. cit., pp. 132 *et passim.*
[109] "Towards a politics of mobility", art. cit., pp. 21 *et passim*.

movement or immobility. This perspective acknowledges that mobility is not passive or arbitrary, but an embodied practice imbued with meaning.

Vincent Kaufmann and Bertrand Montulet recognized that the significance lies not solely in the act of individual movement, but rather the option of mobility. They term this concept *motility* and define it as "the manner in which an individual or a group appropriates the field of possibilities relative to movement and uses them".[110] To illustrate the latter, consider the case of low-income people with lengthy commutes who exhibit a heightened degree of physical mobility due to their regular travels. Despite their constant movement, their *motility*, in terms of actively engaging with –and capitalizing on– the array of potential movement options, remains constrained.

The movement patterns within the working class provide a compelling illustration of the fundamental differentiation between the concepts of mobility and motility. Karl Marx observed that the life-activity of the working class is primarily oriented towards the pursuit of self-preservation, where work serves to secure their own existence.[111] This notion, although oversimplified, encapsulate the reality that many individuals labour to ensure they can afford essential goods and services necessary for their survival, trapping them in a cycle. While Marx's analysis originated because of his study of the conditions of the working class in the 19th century, its relevance persists in the contemporary context, particularly within the realm of the gig economy.[112] Workers of platforms such as Uber, Lyft, Wolt, or Liferando (to name but a few) exemplify a heightened degree of mobility, with little or no agency over their movement.

The lack of motility experienced by individuals employed in the gig economy manifests in two distinct yet interconnected ways. Firstly, they are compelled to be in constant motion to meet their daily income targets, while the precarious nature of their work leaves them with no safety net or support system to rely on, making it a necessity for them to leave their homes and labour each day to secure their basic needs.[113] Secondly, while on the job, they face the relentless demand to be in perpetual motion, navigating vast and

[110] Vincent Kaufmann and Bertrand Montulet, "Between social and spatial mobilities: The issue of social fluidity", in Weert Canzler, Vincent Kaufmann, and Sven Kesserling, *Tracing Mobilities*, Routledge, 2016, p. 45

[111] Karl Marx, *Wage Labour and Capital. Wages, Price and Profit*, Foreign Language Press, 2020, p. 18

[112] Juliet Webster, "Microworkers of the gig economy: Separate and precarious", New labor forum, vol. 25, no. 3, pp. 56-64. Alex N. Press, "Gig Labor is impoverishing workers", *Jacobin Magazine*, 15 June 2022.

[113] Alissa Quart, "Teachers are working for Uber just to keep a foothold in the Middle Class", *The Nation*, September 7th, 2016.

unpredictable distances with minimal notice, leaving little time for adequate preparation.[114] This phenomenon of high mobility but low motility is not confined to a specific geographical scale but rather spans across international and local contexts. Within the global economy, people from the Philippines often turn to work in the maritime industry.[115] Due to the lack of suitable work in their home nations, or due to displacement wrought by the climate crisis, these workers opt for work in container ships, which see them journey through the world enabling the continuation of the global economy as we know it. Their high mobility does not entail a high degree of motility, for they are not in control of how much or how far they move, nor when they do so. They are subjected to external forces and have little to no agency over their motion. Economic migrants, refugees, individuals experiencing homelessness, victims of sex trafficking, and those coerced into transporting drugs, among many others, find themselves constantly on the move, often devoid of agency over their own mobility.

Indeed, it is crucial to acknowledge that low motility does not always equate to constant movement. There are individuals and groups whose lack of motility is characterized by severe restrictions or the complete absence of mobility. For instance, Mexican and Central American migrants detained at the United States border experience a state of low to non-existent motility, as they are confined to detention centres that curtail their freedom of movement.[116] Similarly, in certain societies, women face significant barriers to their own mobility, as their ability to leave their homes or travel is entirely dependent on the decisions and control of their male guardians, depriving them of their agency.[117] Furthermore, political prisoners worldwide are stripped of their freedom of movement as a consequence of exercising their freedom of speech. Once incarcerated, they are subject to the limitations imposed upon them by their captors, effectively depriving them of the ability to control their own mobility.[118] These cases highlight the various ways in which individuals can be

[114] Cosmin Popan, "Embodied precariat and digital control in the "Gig Economy": The mobile labor of food delivery workers", *Journal of Urban Technology*, 2021, pp. 1-20.

[115] Johanna Markkula, "'We move the world': the mobile labor of Filipino seafarers", *Mobilities* 16, no. 2 2021, pp. 164-177. Environmental Justice Foundation, *Deceived, Abused, Forgotten: The Untold Story of Filipino Migrant Workers Exploited at Sea*, 10 December 2024. https://www.youtube.com/watch?v=Af9RJDIwYBM.

[116] Committee on Oversight and Reform, "Kids in Cages: Inhumane Treatment at the Border", House of Representatives, 10 July 2019.

[117] Agence France-Presse in Kabul, "Taliban ban women from parks and funfairs in Afghan capital", *The Guardian*, 10 November 2022.

[118] Agence France-Presse in Paris, "Iranian couple filmed dancing in Tehran are jailed for 10 years", *The Guardian*, 31 January 2023. K.K. Oketesen, "He served nearly 44 years in solitary confinement. He was innocent of the crime", *The Washington Post*, 31 March 2020.

rendered immobile, either through physical confinement or social constraints, underscoring the complex dynamics of motility and its relationship to mobility.

The examples presented above stand in stark contrast to the higher degree of motility experienced by the kinetic elites. As noted by the Kaufmann and Montulet, "motility does not necessarily aim to be transformed into moves. Many players acquire access and competencies not to be mobile".[119] Affluent individuals, comfortably seated in business lounges or luxury restaurants, enjoy the privilege of remaining still if they so desire. However, should they change their mind, they have the financial resources, logistical support, and flexibility of time to satisfy their urge to travel, whether it be exploring their local surroundings or journeying across the globe.[120] Higher motility is not the exclusive purview of the extremely wealthy. In certain contexts, such as in countries like the United States, men may enjoy a higher degree of motility when venturing out for an evening. Unlike women or LGBTQ+ people, they are not constrained by the fear of violence that might stem from a prolonged night out.[121] This distinction highlights the influence of social, economic, and cultural factors on individuals' that dictate the overall motility of different peoples.

The study of motility offers a valuable lens through which we can examine the agency of bodies in various states, whether they are at rest or in motion. This perspective allows us to distinguish between situations where bodies are willingly at rest and those where they are involuntarily confined. Tim Cresswell introduces the distinction between 'stillness' and 'stuckness' to capture these contrasting experiences.[122] 'Stillness' refers to a state of rest that is chosen out of personal desire, with the understanding that one's immobility will not be challenged. In this context, individuals exercise agency and exert full control over the movement (or immobility) of their bodies. On the other hand, 'stuckness' conveys a sense of helplessness, akin to being trapped in quicksand, where escape seems impossible. It evokes images of mundane scenarios like slowly moving queues or more distressing situations where individuals, particularly children, are held captive. In such circumstances, individuals lack agency, unable to influence the events unfolding around them, while the duration of their immobility remains uncertain.

---

[119] Kaufmann and Montulet, *op. cit*., p. 46

[120] Emily Kirkpatrick, "Drake Explains Why His Private Jet Took a 14-Minute Flight Three Times Last Month", *Vanity Fair*, 27 July 2022. Marie Patino, Leonardo Nicoletti, and Sophie Alexander, "Elon Musk is so busy his private jet is taking 13-minute flights", *Bloomberg*, 2 March 2023. Daisy Maldonado, "A map of the amount of private jets leaving the Super Bowl has people fuming", *Indy 100*, 15 February 2022.

[121] RAINN, "Campus sexual violence: Statistics", *Rape, Abuse & Incest National Network*, 2023.

[122] Tim Cresswell, "Mobilities I: catching up", *Progress in human geography 35*, no. 4, 2011, pp. 552-556.

The examples highlighted above not only emphasize the significance of agency in relation to mobility but also underscore the importance of perceiving cities, and the world at large, not as static containers but as dynamic and kinetic spaces. This perspective calls for a deeper understanding of the complex interplay between individuals, their agency, and the urban environment, recognizing that mobility and immobility are not fixed states, but rather dynamic experiences influenced by various social, cultural, and structural factors.

1.5.4 Kinetic spaces

From a very young age, the spaces we inhabit are categorized according to the degree of movement we are afforded within them. As children, classrooms are presented as spaces where one remains seated (unless told otherwise), parks as spaces for us to run around, and streets as infrastructure on which adults drive, all of which is symptomatic of a worldview which is imposed, then slowly internalized and naturalized. These demarcations are not simply verbally conveyed, but constantly reinforced throughout our lived experience in schools, parks, when crossing roads, or when driving on them.

What constitutes a space of motion is thus as much learned and communicated verbally, as it is experienced through our bodies. Skies as spaces of motion are relatively new within the collective imaginary of society, as is the wide-spread use of automobiles as tools for daily commute, yet for many the car is now an integral part of life; a tool without which they would not be able to conduct their daily routine. On a similar vein, while flying is still inaccessible to large swaths of the population, the use of planes is widespread enough that the idea of flying is viewed as routine. The possibilities and imaginaries surrounding these spaces of motion do not stem solely from the existence of technology that allows for humans to travel through them but are a product of the social norms that dictate who is allowed to participate.

Within the areas we collectively designate as spaces of motion, restrictions are quickly imposed on travel, and from these hierarchies arise. The mobility planning pyramid emphasizes the need to place pedestrians at the top,[123] with bicycles, public transportation, and private vehicles in descending order of importance. Imagery such as this, which is meant to highlight the need to promote and protect pedestrians, often ignores how interconnected

[123]The purpose of including this paper is to draw attention ones of its images (image no. 7) which displays an idealised mobility pyramid. Riham Mohamed, “Exploring the Urban Spatial Structuring of New Fourth-generation City Sites for Delta Region Development: New Mansoura City, the Delta Tourism Capital”, *International Design* 12, no. 4, 2022, pp. 65–79.

these spaces of movement are. Sidewalks are presented as distinct from roads, the former being for pedestrians, while the latter is occupied by vehicles. This distinction, however, is constantly pierced. Drivers, aware that their vehicle is too large to park on a narrow street, will take up part of the sidewalk, preventing pedestrians from comfortably walking by. Cyclists, fearful that the lack of adequate lighting and that the absence of a dedicated bicycle lane might lead to a violent interaction with a car, will make use of pedestrian paths or other walkways, in a bid to stay safe. Pedestrians, seeing that there are no cars on the street late at night, might choose to walk or cross empty roads, making use of infrastructure that is otherwise inaccessible throughout the day.

The automobility regime imposes itself on urban space by fabricating narratives that clearly demarcate streets, bicycle lanes, and pavements. Travel authorities further give credence to this when they argue that these measures are carried out in a bid to promote 'safety' and 'efficiency', yet these actions fail to acknowledge the multiple points of transgression in spaces of motion, and how in these encounters it is the status of the car that is mostly upheld.[124] Kinetic space thus reflects the social, economic, and political dynamics which determine who gets to move, and when and how this resource is distributed. These determinations depend on the morphological and technological dynamics that allow physical and digital movement to occur, while their distribution responds to the socio-political constructions on which society is predicated.

The value of kinetic space as an analytical category is that it allows us to question the people, tools, and norms that facilitate travel through spaces designated for motion. Roads were not always the exclusive playground of automobiles. Grocers, street vendors, pedestrians, street cars, carriages and horses all occupied the busy streets of metropolitan cities across the globe.[125] Until the advent of the car changed the ability of multitudes to share the same arena, streets and avenues were spaces of slower motion and higher social convergence. A space shared by different peoples, from different backgrounds, was taken over by a new technology that, wilfully or not, imposed an agenda with a moral code that accompanied the machine that replaced the practices of old. Speed and separation, viewed as safety and efficiency, replaced the seemingly chaotic and less productive character of bustling streets.

[124] Automobilities, art. cit.., pp. 57-73. Bonham, *op. cit.,* pp. 57-65.
[125] Bonham, *op. cit.,* pp. 57-63

Up in the sky, humanity –once barred from the domain that only bats, birds, insects, and pterosaurs had managed to inhabit– opened a new space through which to travel. With the advent of hot air balloons, and later airships and airplanes, humans took to –and then took over– the skies above. The dream of countless authors and thinkers came to life, as skies became the new frontier to which humanity now had access. Yet it was not universal. As happened when the automobile took over the city, who could now occupy these spaces became a political not a mechanical question. As air travel has become cheaper, it has also become more accessible, but therein lies the prerogative. The massification of the sky answers evermore to disposable income, and not the needs of the climate or of communities across the globe. Entry into this kinetic space is predicated on one's ability to afford it, interlinking capital and participation. This trend is manifest in the newest kinetic space: outer space. Once an arena accessible only to the scientists that rigorously trained as astronauts, it is now available to a handful of billionaires who are seeking to commodify and open it to those able to meet the asking price.[126] This determination, lacking in any element of participatory democracy, cordons off this space and reserves the benefits for a small group, while it distributes the environmental costs of travel among the citizens of the world.

Humans are not restricted to the former examples of streets, the sky, and outer space; mobility is multi-modal, multi-spatial, and multifaceted. Nevertheless, these examples allude to the issues of accessibility and to the hurdles one must clear to be able to transit within these areas. In terms of ideal types, there exist three kinetic spaces, those where motion is prohibited, where it is restricted, and where it is open. The first case refers to those spaces that do not allow for any motion at all. Unclimbed summits, such as that of Mount Kailash,[127] located in Tibet, remain so due to their religious value. It is not due to the complexity of the terrain or the lack of adequate tools, but due to the norms that govern the relation between people and a space they consider sacred. There is an intersubjective understanding, held by a group and imposed on those who do not share this belief, that movement (whatever its benefits) would cause irreparable harm; that this must remain a closed kinetic space.

Restricted kinetic spaces, unlike the prior case, allow for movement, but establish written or unwritten norms that limit or condition mobility in general or for specific groups.

[126] Peter Hoskins, "Richard Branson: Virgin Galactic Commercial Space Flights to Start This Month," *BBC*, 16 June 2023.

[127] Mountains such as Gangkhar Puensum are off-limits due to their cultural and religious significance. See Rachel Nuwer, "The Mountains We Have Never Climbed," 24 February 2022.

These respond to cultural, social, economic or political factors understood by those who are in constant contact with it. The Korean Demilitarized Zone (DMZ) is a buffer between the two countries that make up the Korean Peninsula. Due to its strategic significance, all roads in this area are off-limits to all civilians and non-military personal. Mobility restrictions, in this case, respond to security concerns, with similar examples being present in or around military bases across the world.

Gender is notorious for its role on restricting kinetic space. Since the Taliban took over Afghanistan, it has reimposed several constraints of the ability of women to move freely,[128] with the number of limitations increasing as they strengthen their grip. These restrictions, stemming from religious interpretations and perceived gender roles, effectively delimit the character of motion, and the spaces in which motion can occur for certain groups. Afghan women have been barred from travelling alone, be it walking or flying, barring them from freely participating in kinetic spaces open to men.

Mobility restrictions within kinetic spaces need not just arise from politically motivated laws (such as for military bases) or socially prescribed norms (such as gender constructs). The daily commute is beset by many restrictions, limiting how people relate to urban kinetic spaces. The price of public transportation may (for some) constitute an insurmountable hurdle that restricts not only their ability to procure a livelihood,[129] but also their ability to consume the city. For many young Londoners, the price of public transportation restricts their motion through a vast metropolis that –while it offers plenty of jobs– is difficult and expensive to traverse. Those who are able to afford a car –and the upfront costs that accompany it– face seemingly hidden expenses as they seek to navigate the landscape of automobility, and the pitfalls of traffic, in a large metropolis. In Mexico, roads are mostly viewed as a public good to which all drivers have access. Even if there are private highways that connect large cities to each other (for which a toll is expected), most city streets are fully public. This is not the case for the capital, and largest city, of the country. Mexico City has a network of inner-city highways which connect the vast metropolis.[130] These highspeed connections tower above urban space, as if to emphasize the stature of the people who can afford to drive on them. The price of entry is a fare many willingly pay to avoid the traffic that plagues most urbanites who are beholden to a regime of automobility.

[128] Mondira Dutta, "Disappearing Afghan Women From Public Spaces — Collapse of Women's Rights in Afghanistan", *Bulletin of the Karaganda University History Philosophy Series* 111, no. 3, 2023, pp. 79–89.
[129] The Prince's Trust, *The Prince's Trust Youth Index 2024*, London, 2024.
[130] Javier Delgado *et al*., *op. cit*., pp. 54 *et passim*.

Class restrictions on urban mobility are not limited to the kinetic spaces of commute. The commodification of life, including leisure, has reached the inevitable end point where a walk or a leisurely stroll also succumbs to a moneyed exchange. Promenades, known as the space through one which strolls, are viewed by many as a public good; this is not always the case. In cities like Cairo, kinetic spaces of leisure, such as parks and walkways, charge an entry fee (for foreigners and locals) which restricts the ability of many to take a leisurely meander.[131] Although kinetic urban spaces more readily evoke the image of streets, subways, bicycle lanes or footpaths, access to kinetic spaces where movement is linked with leisure are just as crucial. The restrictions imposed on such areas are an effective limit to people's ability to consume urbanity, and by extension, their right to the city.

Restrictions on kinetic spaces need not be proactive. The inability to transit freely might arise from decaying infrastructure that effectively functions as a hurdle. A lack of investment in pathways vital for mobility such as streets, bicycle lanes, or sidewalks will curb the ability of most to make use of such options, effectively walling them off. Cracked, uneven, or non-existent pavement makes mobility for people who require wheelchairs, canes, or any tool that assists with their movement a cumbersome if not impossible task. While the lack of lifts and mechanical escalators might be considered burdensome for certain groups, people of small stature, old people, children, or people with mobility issues might be precluded from travelling at will.

It is also pertinent to note infrastructure that is taking for granted, but which in absentia results in the immobility of certain groups. People who are visually impaired are in some cases force to navigate without adequately placed and maintained signage and are forced to contend with failing infrastructure (such as walkable pavement) impeding them from safely traversing urban space. The consequences of these conditions push many into the arms of automobility, which promises a solution to the neglect that they face when they opt for their own locomotion. Nevertheless, this poison apple traps them in a cycle of dependence, in which the car is the only option should they choose to be mobile. Beyond any one person, this solution also perpetuates apathy, and by extension the lack of investment from local authorities, which in turn further marginalizes people with mobility problems who do not have the financial means to participate in the automobility regime.

[131] The purpose of this source is not its rhetorical value, rather it corroborates that the most alluring green spaces in Cairo have a monetary barrier that restricts access. Lamia Hassan, "Exploring Cairo: Eight Great Parks for an Autumn Picnic." *Ahram Online*, 24 October 2016.

The restrictions presented above all rely on a tangible component. A physical space that is made inaccessible due to constructs that humanity imposes collectively on itself, or selectively on groups considered 'other'. Nevertheless, restrictions are not only imposed on kinetic physical space. Digital kinetic spaces, those that we collectively turn to in our effort to 'surf' the web are all causeways we transit as we look for the page upon which we eventually rest. Countless governments across the globe have used one excuse or another to curtail access to these digital avenues, which limit how people can interact with others, rendering them digitally immobile. There will always exist those who, due to their technological acumen, find ways to circumvent these blockades, which in turn serve as a reminder of the contested nature of kinetic spaces.

The panacea of perfectly open kinetic spaces is merely a utopia. This analytical category serves more as an ideal type rather than any existing example one can present as a case for others to emulate. The idea of a public parks, public lakes, public beaches could all be conjured up as examples as open kinetic spaces, but this would be misleading, as many – if not all– have restrictions on vehicle use. International waters could also be alluded to, yet there is a very heavy entry fee: being in possession of a boat. The internet serves as the closest example we currently have for open kinetic spaces. It is far from the perfect example, since one must first be in possession of a device that can connect to it, and must negotiate with both governments and corporations and the power they hold over the flow of within this digital kinetic space.[132] Nevertheless, it does offer a small window into the logic of unrestricted travel, where mobility is experienced equally and unincumbered by the social constructs of friction that slow, seclude, channel, or simply impede how people practice and experience motion.

As an analytical category, kinetic space places motion at the centre and forces us to ask whether a given place allows for movement, and if so, for who. This prompts us to question why any given group is excluded, and how this reflects the economic, cultural and political make-up of society. The concept of kinetic space challenges our understanding of the built environment and encourages us to view spaces as dynamic and evolving entities. By recognizing the inherent mobility and fluidity within them, we can gain a deeper appreciation for the social, cultural, and economic dynamics that shape our lived experiences. Understanding and analysing kinetic spaces allows us to explore the complex

[132] This last point does not even mention other tools that people require (such as computers or smart phones), which not everyone can access.

interplay between movement, place, and social interactions, ultimately enriching our understanding of the world we inhabit.

To rethink urbanity by taking stock of all its kinetic spaces demands that we reexamine the city as a site of mobility, one where travel is shaped by intersecting political, economic, and social forces deeply rooted in racial, gendered, and ethnic dynamics. This reconceptualization of urbanity enhances our study and comprehension of systems such as automobility, as well as the dynamics of hypermobility and fixity. By placing motion at the forefront of our analysis, the concept of motility becomes crucial, as it not only captures individuals' aspirations to move but also compels us to address the underlying reasons for their (im)mobility.

1.6 Final Remarks

The complex relation between motion, space, the surrounding structures, and its participants emphasizes the unequal nature of mobility. Transportation geography recognized and studied their existence and sought to quantify the effect they have on our society,[133] but eventually fell short when it sought to understand the social components present in travel. Mobility studies have brought about a change in the way we engage with the interrelated nature of movement, and how we think about who it includes or excludes, hinders or helps, pushes or stops. A study of travel would be woefully incomplete without an account of the social dimensions that comprise it. Although incomplete, mobility studies provide an account that rejects the notion of space as neutral or inert, reposition motion as a key variable of analysis, and introduces the question of how travel both impacts and is shaped by the society in which it takes place.

Disagreements over its status as a new paradigm or an interdisciplinary approach are not irrelevant. Despite this dispute, actions such as placing mobility at the centre of the field of study has meant that scholars have contributed to a new approach which has changed our understanding of the place and impact of movement on the world. Tangible contributions, such as defining mobility as a distinct analytical category, allows other scholars to better represent the realities of people, be they migrants or commuters, and truly comprehend the differences they experience based on well understood but often atomized categories, such as gender, class, race, age, or ethnic identity. Despite its relative youth, the field has helped

[133] David M. Levinson, "Accessibility and the journey to work", *Journal of Transport Geography* 6, no. 1, 1996, pp. 11-21.

identify and categorize overlooked phenomena. The effort should be to continue this push to understand the role of mobility in the society we participate.

The concepts presented in the second half of this chapter serve as powerful analytical tools that illuminate the intricacies of dynamic movements and actions. The emergence of mobility studies as a field of inquiry, driven by the pioneering work of scholars such as Cresswell, Sheller and Urry, has challenged the rigidity and static nature of previous approaches, unveiling the formerly unseen nuances and complexities within the realm of mobility.

The relational approach that characterizes mobility studies has proven invaluable in contextualizing the societal challenges we face. Motility, for instance, cannot be understood as a phenomenon divorced from the hierarchical structures embedded in our society. Similarly, the significance of hypermobility becomes clearer when we shift our focus from individual actors to the economic forces that shape and influence their travel. It is within the realm of mobility studies that these concepts find their true value, as they transcend static and isolated phenomena, and instead reveal the interconnectedness and continuous motion inherent in the subject matter.

With these concepts in hand, the next step is not merely their application, but a deeper exploration of their explanatory potential when viewed in relation to one another. While these concepts on their own (such as motility) provide valuable analytical insights, when coupled with an examination of hypermobility and their intersection within the framework of automobility, their contributions exceed the sum of their parts. By holding all these concepts in constant tension, the intricate complexities and nuances of unequal mobility cease to appear as disparate and unrelated occurrences, but rather as manifestations of a broader phenomenon I term “entrenched mobility”. By embracing their relational nature and exploring their interconnections, we unlock deeper insights into the complex dynamics that shape unequal mobility. This expanded perspective enables us to unravel the entanglement of social, economic, and political factors, ultimately contributing to a more nuanced and informed approach to the study of mobility and its far-reaching implications in our society.

2 Entrenched Mobility

The ability to name things serves as a tool that allows us to distinguish between phenomena. The more differences we find between the phenomena we study, the more need we find in evidencing these distinctions by providing different names to them. This serves to simplify how we express ourselves. It provides a way of being economic with language, by reducing the number of words we require to describe or allude to what we wish to convey. It also allows for nuance, which in turn provide us with an opportunity to highlight the impact these have on our life. The previous chapter is a collection of terminology that is essential to analyse motion in its myriad forms, and to showcase the nuance of travel. Rather than academic jargon that clutters the field, I believe them to be fundamental categories that open our eyes to phenomena we could not yet describe for lack of a vocabulary, and that we would thus ignore as a consequence of our shortcomings. The following chapter adds to the concepts presented prior. I propose that unequal mobility, particularly as detailed below, be termed entrenched mobility.

2.1 Systemic forces that condition travel

Nestled in the writing of prominent mobility scholars is the understanding that our current mobility regime is unequal.[1] Theirs is not merely a descriptive observation that different modes of transportation offer travel at varying speeds, but an understanding of the power dynamics and their manifestation as uneven movement and immobility.[2] Agency over motion and rest, over its condition, timing, and feeling, are unequally distributed, laying bare the existence of a group –a kinetic elite– who can –directly and indirectly– make use of the totality of urban space, while the rest consume urbanity with the constraints that infrastructural, economic, or socio-cultural factors impose.

Within urban space, freedom of travel is often curtailed by a great number of obstacles,[3] yet their existence is not homogenously perceived by all, for only those with little

[1] See, *supra*, pp. 14 *et passim*.

[2] See, *supra*, pp. 26 *et passim*.

[3] One could be facetious and argue that the existence of houses, parks, schools, and other buildings is the first barrier to unimpeded urban travel, but even there one could reply that people with helicopters need not bother with those issues. By barriers we here understand limitations (in the form of infrastructure, socio-cultural norms, and economic means) that slow, make difficult, or outright impede the motion of people within kinetic spaces.

or no motility experience the hurdles that restrict motion. The kinetic elite, being able to capitalise on the totality of the means available to them can –literally– soar above barriers,[4] rendering them imperceptible. The rest must choose to travel down the paths afforded to them by their motility, creating *de facto* forbidden spaces and resulting in limited mobility.

Ranging from skin colour to the absence of bike lanes, the factors that limit a person's travel manifest in both material and intangible forms. For people with disabilities, the lack of adequate infrastructure might lengthen their journey, increase their physical and economic expenditure, or even prevent them from leaving their home altogether.[5] African Americans might find that their mobility is curtailed or questioned as they travel, manifesting as arbitrary traffic stops involving the police, in phenomena ranging from 'stop and frisk' to 'driving while black'.[6] For some, economic vulnerability might see them limit their mobility, due to high fares that make it unfeasible to make use of certain means of public transportation.[7] The infrastructural, socio-political, and economic restrictions to mobility presented above illustrate some of the limitations people face on their day-to-day commute.

Although battered by systemic challenges to their mobility, peoples are not devoid of agency; simple leaves in the wind subjected to hierarchies that dictate their motion. In their efforts to carve out paths that ensure their right to motion, they develop strategies that allow them to consume their lived environment by ingeniously circumventing the barriers that impede their motion.[8] These strategies, which emerge from day-to-day interactions with their environment, formalise into forms of knowledge that help them navigate the city, and keep them safe from systemic violence. Notwithstanding, their ingenuity does not erase the systemic violence that restricts their motion; ever-present forces that, as much as they evade, exert a pressure that conditions their journey.

---

[4] Saulo B. Cwerner, "Vertical Flight and Urban Mobilities: the Promise and Reality of Helicopter Travel", *Mobilities* 1, no. 2, 2006, pp. 191-215. Stephen Graham, "Luxified skies: How vertical urban housing became an elite preserve", *City* 19, no. 5, 2015, pp. 618-645.

[5] Laura Paniagua Arguedas, "Moverse en ciudades que arrinconan: las personas con discapacidad frente al urbanismo capacitista de la Ciudad de México", *Yeiyá, Revista de Estudios Críticos* 3, no. 2, 2022, pp. 273-290. Ann Frye, "Disabled and older persons and sustainable urban mobility", *Thematic study prepared for Global Report on Human Settements*, *Nairobi*, 2013.

[6] Tim Cresswell, "Black moves: Moments in the history of African-American masculine mobilities", *Transfers*, vol. 6, no. 1, 2016, pp. 12-25. Richard J. Lundman and Robert L. Kaufman, "Driving while black: Effects of race, ethnicity, and gender on citizen self-reports of traffic stops and police actions", *Criminology* 41, no. 1, 2003, pp. 195-220.

[7] Helena Titheridge, Roger L. Mackett, Nicola Christie, D. Oviedo Hernández, and Runing Ye. "Transport and poverty: a review of the evidence", *University College London*, 2014.

[8] Fabricio Espinosa Ortiz, "Movilidades cotidianas y nuevos modos de habitar: Un análisis en y desde la periferia metropolitana", *Entorno Geográfico* 18, 2019, pp. 1-21. Fernando Calonge Reillo, "Viajando por la periferia del Área Metropolitana de Guadalajara, México. Entre la pasividad y la agencia", *Cuadernos de antropología social*, no. 50, 2019, pp. 67-84.

Urban space brings together diverse groups of people and can serve to highlight the presence of mobility strategies, and the degree to which these are essential for certain minorities to guarantee their own protection against different forms of violence, be they verbal, non-verbal, or physical. Spaces of public transit offer one such example, because the tactics deployed by travellers on route to their destination help us understand their perception of threat. Members of the gay and lesbian community are at greater risk of physical and verbal abuse in public transportation than are straight men. The discrepancy is much worse when one includes trans people, who suffer a greater degree of abuse than their peers within the LGBTQ+ community. Strategies such as travelling in groups provide strength in numbers, while tactics such as "passing", allow for them to blend into a heteronormative world, at the cost of denying or temporarily erasing their identity.[9]

Like the LGBTQ+ community, disabled people, women, ethnic, racial, and religious minorities, among many other groups suffer from episodes of abuse that sour their experience of public transportation and limit their ability to freely move throughout the city.[10] Strategies to avoid these encounters lead people to delay taking overcrowded buses, divert or change their route, and switch between different –sometimes expensive– forms of transportation that might guarantee their safety.[11] These strategies morph, over time, into more established patterns of behaviour, which correspond with attempts to avoid threatening encounters that put their mental and physical health at risk. The new paths, then, are chosen not for their inherent desirability, but because journeys along other routes threaten their well-being.

It is relevant to highlight the systemic nature of the threats that minorities encounter. Unlike randomised acts of violence, such as credit card or electronic theft, the nature of the forces that limit the travel of minorities stem from the systemic discrimination they face on their journey, and how the strategies implemented to bypass acts of aggression manifest as restricted mobility when compared to that of the kinetic elite.

Driven by fear of vehicular violence, racism, misogynistic experiences, or homophobic encounters, those in danger will opt for routes that afford them a relative level of safety.

---

[9] Amos Weintrob, Luke Hansell, Martin Zebracki, Yvonne Barnard, and Karen Lucas, "Queer mobilities: critical LGBTQ perspectives of public transport spaces", *Mobilities* 16, no. 5, 2021, pp. 775-791. Loren March, "Queer and trans* geographies of liminality: A literature review", *Progress in Human Geography* 45, no. 3, 2021, pp. 456-466.

[10] Vania Ceccato and Anastasia Loukaitou-Sideris (eds.), *Transit crime and sexual violence in cities: International evidence and prevention*, New York, Routledge, 2020.

[11] Sarah M. Kaufman, Christopher Polack, and Gloria Campbell, "The pink tax on transportation", *Rudin Center for Transportation,* 2018.

Born out of strategies to minimize costs that may come in the form of exhaustion, violence, harassment or economic expenditure, the constant use of these routes will create a network of pathways from which they might not deviate out of habit, fear, or both. This fixity, the product of the negotiation between systemic violent forces and the strategies to outsmart or avoid them are repeated over time, becoming the proverbial 'trodden path'. The physical manifestation of the constant clashes that take place in social space manifest physically as the every-day routes taken by people in their journey through urban space. When repeated over long periods of time, the path that emerges from this behaviour begins to resemble a trench in which the person finds themselves due to the violence of the outside, and from which one seldom deviates to protect their own integrity.

2.2 Entrenched mobility

Entrenched mobility is the pattern of limited mobility that emerges over time as the subject is pressured to adopt restrictive travel to avoid the systemic violence that would be exerted on them otherwise. It is, first and foremost, the consequence of systemic violence –or the threat thereof– which produce the conditions for a person's mobility to become limited to a trench-like pattern. The route into which the person is forced allows them to more easily navigate urban space under the guise of apparent safety.

One such example would be the use of taxicabs at night by minority groups who wish to avoid the dangers of walking or public transportation. Despite the adoption of other modes of transit, this does not exempt them from potential violence within this mode of transit, which can come in the form of unwanted looks, verbal abuse, or even physical violence.[12] Entrenched mobility is thus caused by systemic discrimination, which forces groups or individuals to adopt new strategies, means of transport, and routes not for their inherent desirability, but due to the apparent safety they offer when compared to the alternatives. Certain minorities may choose a longer route, faster or costlier means of transport, or different behavioural travel patterns (such as travelling in groups), as a measure to safeguard their integrity.

[12] Gabriela Almaraz Castañeda and Itzel Castillo Vázquez, *El entorno social de las mujeres en el transporte público en la Ciudad de México*, Bachelor's tesis, UAM, 2020; G. S. Bajpai and Garima Pal, "Transport and Crime: An Account of Crimes against Women in Cabs in the Delhi/NCR Region", *Indian Journal of Criminology* 49, no. 1, 2021, pp. 1-33. Rocio Melgoza Delgado, "VIDEO: Taxista cambió de ruta y no dejaba bajar a mujeres en calles de la CDMX", *El Universal*, 7 November 2022.

The current regime of automobility thus wields systemic violence as the menacing sword which threatens travellers into patterns of motion that reduces the costs, be they to their personal health, mental health, or financial means, and offers its shield in the form of cars as protection to those who can afford them. In its dual role as threat and protector, the regime of automobility offers a reprieve –and apparent escape– from vehicular danger, misogyny, racism, ableism, homo- bi- trans-phobia, and other forms of discrimination. Yet it never fully protects the user, it merely dampens the effect, while violence continues in the form of over policing ('driving while black')[13] or in moments of vulnerability, such as walking to and from the car. Thus, the machine that both threatens and takes the lives of urbanites, is now touted as a safe space for those in danger, with its offer of airbags and crumple zones. Cars, which upheld racist, classist, ableist, sexist, and heteronormative hierarchies, are now presented to those minorities as the solution to their limited mobility. This creates the notion that entrenched mobility can be overcome by the same forces that limited their mobility in the first place.

Escape from the path that is traversed on a regular basis is possible. Much like the trenches of battlegrounds, the trails that people have negotiated as avenues to circumvent the violence they are subjected to can be exited; a person need not remain in the trench, for there is always the option of the outside. Nevertheless, their effort to step outside the path might come at great cost, be it to their financial, mental, or physical wellbeing. The routes chosen by undocumented families in the United States reflect their need to protect themselves against the state institutions that seek to expel them from the country.[14] Deviating from these, although clearly possible, might place them in situations where they are at risk of being identified and subsequently deported. Sticking to tried and true lanes, those negotiated after various interactions with the barriers that limited their mobility, offer a guarantee that they will be safer remaining in those patterns rather than challenging them (even if they restrict their ability to traverse the entirety of urban space).

Restrictions to the means of transportation one can use might also function as effective barriers that entrench a person's mobility over time. The lack of adequate infrastructure, the lack of economic means to afford certain modes of transport, or socio-political restrictions such gendered or religious barriers to people's mobility can all have repercussions on the

[13] Gretchen Sorin, *Driving while black: African American travel and the road to civil rights*, New York, Liveright Publishing, 2020.

[14] Ryan Allen and Jueyu Wang, "Immigrant legal status and commute mode choice for Hispanics in the United States", *Journal of the American Planning Association* 86, no. 3, 2020, pp. 284-296.

travel of minority groups. The lack of safe bicycle infrastructure acts as an obstacle that restricts the use of this mode of locomotion to low-income groups.[15] Despite the abundance of safe bicycle lanes in higher-income or more central parts of town,[16] commuters might be forced (as a strategy to protect themselves against the harm of motorised vehicles) into public transit or their car rather than their bicycle. Thus, their mobility, limited to one mode of transport, becomes entrenched to a path due to the prevalence of automobility as the dominant regime within urban space.

Much like restrictions to the routes one can take or the means of transport one can use entrench a person's mobility, identity, and the ability to safely express it through clothing, language, practices, or other tangible and intangible forms, can limit how people traverse the city. When members of the LGBTQ+ community resort to "passing" as a strategy to navigate the violence of their environment by adhering to heteronormative practices, [17] their mobility becomes entrenched to one form of practicing motion. The same applies to religious minorities who adapt their clothing and behaviour to blend into crowds and avoid negative encounters,[18] or ethnic minorities, who change their language, accent, or cultural practices to blend in with the background of people on the move.[19] Entrenched mobility is thus present when limitations to motion that stem from systemic violence are applied to restrict the ability of minorities to move over time, be it due to economic, infrastructural, or socio-political factors.

Isolated episodes that limit people's ability to travel cannot be said to have entrenched their mobility. As stated, entrenched mobility is the pattern of limited mobility that emerges over time as the subject is pressured to adopt restrictive travel to avoid or lessen the impact of systemic violence. To these circumstances, peoples respond by negotiating pathways with their environment that allow them to find relative safety and avoid violent encounters. Heavy rains that make it hard to walk or ride a bike cannot be said to entrench a person's mobility. They are not systemic forces that limit the ability of people to move over time. They might

[15] Bronwen Tucker and Kevin Manaugh, "Bicycle equity in Brazil: Access to safe cycling routes across neighborhoods in Rio de Janeiro and Curitiba", *International journal of sustainable transportation* 12, no. 1, 2018, pp. 29-38; Julian Agyeman and A. Doran, "You want protected bike lanes, I want protected Black children. Let's link": equity, justice, and the barriers to active transportation in North America", *Local Environment* 26, no. 12, 2021, pp. 1480-1497.

[16] Gobierno de la Ciudad de México, "Mapa Ciclistas CDMX", Secretaría de Movilidad, 2023.

[17] Amos Weintrob *et al.,* art cit., pp. 781-783.

[18] Adrianne Francis, "Canberra woman stopped wearing hijab for fear of being attacked", *ABC News*, 3 October 2014.

[19] Rusty Barrett, Jennifer Cramer, and Kevin B. McGowan, *English with an accent: Language, ideology, and discrimination in the United States*, Taylor & Francis, 2022.

create instances of unequal mobility, moments in which drivers and riders of public transit can more easily travel. Yet these are not economic, infrastructural,[20] or socio-political forces that reconfigure day-to-day travel patterns for commuters.

Only when repeated encounters with violent systems force people to adjust their patterns of travel can we say that we are in the presence of entrenched mobility. The habits that arise, as travellers change how they speak, dress, move, or behave not only serve as evidence of the forces that assail them, but as physical and cartographical representations of the social dynamics that are present in urban space. As violent phenomena become normalised to the point of naturalization, and strategies emerge to face these threats, these abstractions materialise into routes and behaviours that allow travellers to protect themselves. These self-imposed limitations to mobility create routes from which they seldom escape; routes that once mapped, portray trench-like patterns across the city. Women, all too familiar with the threats posed by misogyny, tailor their outfit to their means of transport and not their desires. They change their rhythm and speed when traversing lonely streets, if not their entire route. And after dark, a good number will find themselves in need of overhauling their entire mobility to guarantee their safety.[21]

It is important to note that these patterns of motion need not necessarily be embodied before they are adopted. Many of these practices can be passed down as a strategy to protect members of the group. A mother advising her daughter which routes to avoid, a person informing their friends about transport that is safe for them, or a cyclist sharing with fellow riders which streets to bypass –these are all examples of entrenched mobility practices that are not necessarily based on embodied experience. Instead, such patterns are perpetuated through knowledge that is transmitted within circles of trust. This form of shared wisdom, passed down through conversations, warnings, and recommendations, shapes how individuals navigate their environments. As the product of repeated interactions (or due to knowledge shared by trusted sources), entrenched mobility has physical manifestations that not only help us track the limits to a person's motion, but function as evidence of the social dynamics at play in urban space.

---

[20] In this example I am talking about rains that make it inconvenient to walk. Showers that subside after a short period of time and allow for one to continue their day as if nothing had happened. I recognise that if weather is combined with poor infrastructure, which creates patterns of exclusion for marginalized groups, then these weather events could be considered to entrench a person or group's mobility.

[21] Marion Roberts, "Gender, Fear and the Night-time City", in Inés Sánchez de Madariaga and Marion Roberts, Fair Shared Cities. The impact of Gender Planning in Europe, Routledge, 2013, pp. 49-56. Barbara Schmucki, "If I Walked on my Own at Night I Stuck to Well Lit Areas", Gendered spaces and urban transport in 20th century Britain", *Research in Transportation Economics*, vol. 34, no. 1, 2012, pp. 74-85.

The work of Paola Jirón and Pablo Mansilla is crucial to our understanding of the perceived challenges of everyday mobility.[22] As stated by the authors, their aim is to find "the relation between accessibility experience, and accessibility infrastructure" to be able to "analyse the barriers to accessibility that affect the experience of everyday life, as well as the tactics and strategies developed to subvert the conditionings of these barriers".[23] The experience of travel can be an uneventful dynamic, a perpetual hardship, or something in between, a fact that will be influenced not simply by the infrastructure, but by elements such as gender, race, sex, class, ethnic origin, disability, among many others. These play a crucial role when trying to determine not simply the physical ability of a person to travel from one point to another, but how that experience might impact both their physical and mental wellbeing. A person who must plan their day to avoid violent encounters, and who must mentally prepare for any and all likely negative interactions, does not consume kinetic space as does a person who takes the same journey for granted. The former likely expends large amounts of energy to both plan the safest journey and to mentally shield themselves from abuse, while the latter spends little to no time worrying about happenings that to them, are practically invisible or harmless.

Entrenched mobility stems from the concerns voiced by the authors, yet focuses on the economic, socio-political, and infrastructural factors that placed people in a position where the barrier-ridden route –for which most of them must plan and adjust– seemed the better option. It is an attempt to answer the question, why people would choose a path full of barriers that will make the journey terribly uncomfortable and potentially dangerous. The importance here is not to focus on the challenging experience on the route people are forced to follow, given that the research of Jirón, Mansilla, Lange, Bertrand (among others) answers that question, and does so both eloquently and abundantly.[24] The aim, as stated prior, is to question the regime of mobility that positions people in such a way that they opt for the perilous journey. Entrenched mobility examines all other alternative routes, why these are not taken, and how the option that is chosen (despite its relative benefits) creates a pattern of limited travel that restricts a person's access to the totality of urban space.

---

[22] Paola Jirón and Pablo Mansilla, "Atravesando la espesura de la ciudad: vida cotidiana y barreras de accesibilidad de los habitantes de la periferia urbana de Santiago de Chile", *Revista de Geografía Norte Grande* 56, 2013, pp. 53-74.

[23] *Ibid*., p. 55

[24] Paola Jirón, Carlos Lange, and María Bertrand, "Exclusión y desigualdad espacial: Retrato desde la movilidad cotidiana", *Revista invi*, vol. 25, no. 68, 2010, pp. 15-57. Paola Jirón and Susana Cortés, "Mobile relations, mobile shadows. Understanding contemporary urban daily living through shadowing techniques", *International Workshop: The Everyday Life of Multi-Local Families. Concepts, Methods and the Example of Post-Separation Families*, 2011.

The degree to which an urbanite's mobility is entrenched determines their access to the city they inhabit. People whose mobility is highly entrenched will find it difficult to access all but the most necessary services, while the kinetic elite's high motility sees them effortlessly move through the spaces they desire. Although true in the most abstract sense, this paints a picture of space, where movement through it is practically homogenous. It suggests that those who can always move flawlessly will permanently do so, and those whose movement is limited will always traverse the same pathways. This, although theoretically useful for an early approach, does not adequately reflect the complexity of urban mobility.

2.3 The heterogeneity of entrenched mobility

Entrenched mobility is not a dichotomic phenomenon where the mobility of a person or group is permanently entrenched or wholly unrestricted. Nor is it merely a sliding scale from one to ten (or any arbitrary numbers), where a person can be assigned a value that determines their ability to traverse the totality of the city. Much like the fabric of urban space itself, entrenched mobility changes throughout the city, and for the people who find themselves in it. It is a phenomenon that morphs based on the spaces the subject traverses, going from areas in which their mobility can be severely restricted, to others where it is effortless.

A person might start their journey with very few limitations, feeling comfortable using all the available routes that allow them to move within a particular area. Later they might find that they must restrict their movement halfway through, due to the threats they identify in a different part of town, such as verbal, now verbal, or even physical violence against them due to matters of race, gender, class, or ethnicity. In their last leg of their travels, they might regain some of their motility in an area where, despite the non-verbal classist discrimination they might encounter, they feel safer than in the previous section of their journey.

The degree to which a person will encounter limits to the number of routes they can take will depend on the available infrastructure, on their economic condition, and on the socio-cultural context in which they find themselves. Such an example would be that of an indigenous woman in Mexico City who cleans houses for a living. She will leave her home early in the morning, where (bar the gender discrimination she might face in the form of catcalling) she will not face restrictions due to her class or the infrastructure available to all other citizens in that area. In the middle part of her journey, her tenuous command of the Spanish language, her gender, her ethnic identity, and her apparent economic status might

mean that she is faced with a larger number of dynamics she perceives as barriers. Upon arrival in the gated community where she works, although she encounters a certain degree of classist non-verbal violence (in the form of stares), her social identity as a housemaid means that she is relatively free to move within this space –so long as she adheres to the norms attached to her perceived class status. Examples like this, where a person's motion is slightly reduced, then severely restricted, and lastly mildly limited, show that entrenched mobility cannot be homogenously understood throughout the entirety of urban space. Changes in space, which also entail changes in the infrastructural, economic, and socio-political characteristics of place, will affect the routes available to a person. Although they might decide to take a path that entails a degree of barriers and perils, the routes left untaken –which are available to those with a higher degree of motility– speak to the inequalities of the city, and the entrench mobilities into which some of its inhabitants are forced.

Much like a person's journey through urban space cannot be said to be uniform due to the shifting characteristics of the city, travel throughout the day cannot be said to be a homogenous experience. One clear example is the association urbanites have between a particular time of day and the congestion that is ubiquitous in many metropolises. Traffic jams and overwhelmed public transit systems are commonplace in most large urban agglomerations, such as New York City, Tokyo, London, or Mexico City[25], yet this congestion is not present throughout the whole day (although it sometimes feels like it). Most locals, when asked, will be able to pinpoint the times of the day when traffic is at its highest, and when congestion begins to ease. This ability to derive information from the time of day suggests an implicit understanding that a change in time will affect overall mobility. Although the previous example might impact a person's health due to the stress levels associated with commuting at rush-hour, time contingent mobility is a much more complex phenomenon, and can have a broader impact on a person's travel.

Women's nocturnal mobility, and the risks associated with it, have been well documented.[26] Although the violence of the patriarchy does not limit itself to a particular time of day, night time lends itself to more atrocious crimes committed against women. The time after sunset thus becomes a restriction on the mobility of roughly half the population, who out of fear of the violence that might befall them, restrict their patterns of mobility to

[25] Fox Van Allen, "Cities with the worst traffic in the world, ranked", *CBS News*, 22 August, 2022.

[26] Camille Vanier and Hugo d'Arbois de Jubainville, "Feeling unsafe in public transportation: A profile analysis of female users in the Parisian region", *Crime prevention and community safety* 19, no. 3-4, 2017, pp. 251-263. Stéphanie Condon, Marylène Lieber, and Florence Maillochon, "Feeling unsafe in public places: Understanding women's fears", *Revue française de sociologie* 48, no. 5, 2007, pp. 101-128.

paths that afford a greater degree of safety. LGBTQ+ people might also find themselves in a similar situation. In the knowledge that nighttime entails less witnesses, some might avoid travelling alone, using public transportation, or walking down empty streets for fear of the violent repercussions they might face should they do so.

In these two cases presented above, the night becomes a restriction that alters the pathways and patterns of behaviour people adopt in their effort the guarantee their own survival. Nevertheless, obscure settings need not be this homogenous symbol of violence. Sex workers in countries where the practice is illegal (such as the United States), use the cover of darkness as a shield against the social stigma and police violence to which they are subjected.[27] This does not mean they are immune to sexism, homophobia, transphobia, and many other forms of heteronormative patriarchal violence that is rife in this line of work, but darkness –as opposed to daylight– allows them to better conduct their work. Although the former examples show that the night might act as a deterrent to some who view it as a threat to their well-being, the hours after sunset can offer others a degree of freedom.

As concerns entrenched mobility, the time of day is just as important as the geographical location to determine the degree to which a person's motion is limited or unbound. Just like certain parts of town can restrict or encourage how much a person can move, a particular moment in the day can limit or facilitate the paths that a person can take when traversing the city. Space cannot be treated as a homogenous construct that categorically reduces the mobility of some, while endlessly increasing that of others. The social topography that is part of physical space is as much a factor in the degree of movement awarded to anyone person, as is the physical infrastructure they can access. In this same vein, time, and its constant march forward, is not a neutral nor uniform feature that dictates the behaviour of all members of society, but an aspect of travel that is paramount to our understanding of (im)mobilities within it.

Only by studying urban mobility through the heterogeneity of space and time, and the unequal ways in which people relate to them, can we dissect the various limitations to movement exemplified in the urban milieu. Entrenched mobility can therefore not be understood beyond time, for a) mobility can only be entrenched after repeated interactions with systemic forces that limit a person's motion, thus forcing them to adopt restricted travel patterns that improve their ability to safeguard their well-being. And b) the limits to the number of pathways cannot be said to exist throughout the whole day, but manifest at

[27] Lizzie Seal, *Gender, Crime and Justice*, Palgrave MacMillan, 2022, pp. 93-123.

different intervals throughout it, meaning a person's mobility can be more or less entrenched according to how their socio-political, infrastructural, and economic context relates to the time of day.

2.4 Leaving the path

Inhabitants of the city thus experience these restrictions to mobility unequally, as differences in space and time will have varying effects on their ability to freely traverse urbanity. As has been mentioned prior, the constant interactions with these forces that seek to coerce their movement sees people negotiate their way through the city, cobbling up pathways that create the safest possible route for their journey. As Jirón and Mansilla note, the pathway is full of barriers that make travel through it "thick",[28] nevertheless, that barrier-ridden path is the best option that their knowledge, experience, finances, education, sexuality, ability, age (etcetera) affords them. Yet, despite the relative safety that this path provides, it is not one set in stone. Emergencies, curiosity, ageing, a change in income, new infrastructure, all are examples that might either force or encourage people to abandon the trench-like path that they often travel, and journey through perilous and possibly unknown spaces that might be alien; be they dangerous or benign. A kid whose entire commute to school was always dictated by their parents, who through their presence or authority made their child stick to a particular path, might abandon it once they believe themselves old enough. In another case, and undocumented migrant in the United States (or their entire family) might fastidiously stick to a path they know, because it spares them threatening encounters with authorities that might present a threat. Nevertheless, they might abandon their safer route, due to an emergency that forces them to traverse spaces that endanger their status. In both cases, the person breaks free from their entrenched mobility, which sees them interact with forces that might either further their resolve to return to their restrictive patterns or encourage them to reconsider and reimagine their range of motion.

The frequency with which a person abandons their entrenched patterns will greatly depend on the perceived repercussion of such an incursion. A person who believes that they might be the subject of non-verbal violence (such as stares) but knows that they are unlikely to face any physical harm might –on occasion– venture beyond the safety of their path. If, on the contrary, they are certain (or fairly certain) that a venture outside of their entrenched pattern of travel would most likely result in irreparable harm, be it physical, financial, or

[28] Jirón and Mansilla, art. cit., pp. 54 *et passim*.

mental, then they might reserve the right to do so only in an emergency. That is to say, entrenched mobility is not necessarily fixed, and people (given their particular circumstance) might choose to venture beyond its limits based on their specific circumstance.

While some people might choose (or be forced) to abandon their paths, others might choose to remain entrenched regardless of whether the outside still poses a threat. Although created by outside systemic violence that limits a person's motion to particular path that defend them against it, entrenched mobility can persist even when those forces no longer require the patterns of motion that the person utilises. An urbanite might choose to continue to limit their mobility, despite evidence that proves that they are no longer in danger, a response that might stem from their inability to abandon the feeling of safety offered by their routine. Once entrenched, mobility patterns might be hard to eliminate, because the disappearance of a threat does not necessarily translate to the dissipation of the sense of safety that the trodden path bestows upon its traveller. Thus, a woman who uses taxis out of fear of being sexually harassed in public transportation, might avoid the subway and the bus system in her city even when presented with information that shows that she is at no greater risk. A similar behaviour might apply to a person with a bike, who might continue to use public transportation even if bike lanes are made available, due to their prior experience with vehicular violence. That is not to discard that the attitude of this hypothetical woman or cyclist might come down to prejudices such as racism, classism, or other form of discrimination, but many sincere cases of fear will keep people in entrenched patterns of motion, despite evidence to the contrary. How these patterns could be broken, is the subject of another study.

2.5 Whose mobility is entrenched?

As is clear by now, the mobility of a person can be said to be entrenched when opportunities awarded to other groups or individuals are denied to them due to systemic efforts of exclusion, be they infrastructural, socio-political, or economic. In other words, the mobility of the kinetic elite cannot be said to be entrenched. Not only is their motility unrivalled, and their access to kinetic space second to none, their mobility patterns and practices are partly responsible for the immobility of various groups. Their ability to effortlessly traverse the entirety of urban space is a consequence of the privileges they enjoy, upheld by hierarchies such as racism, sexism, classism, ableism, ageism, among many others. Rich, white, neurotypical, straight, able-bodied men cannot be said to suffer entrenched mobility, for

there exist no systemic barriers that restrict their motion. They are free to traverse the entirety of space in the knowledge that they will face no barriers based on their race, sex, income, language, migratory status, among many other factors than constrain how other actors negotiate their travel through urbanity.

This is not to say that only rich, white, straight, able-bodied men have unrestricted mobility. In the western world, this characterization will certainly lend itself to much higher degrees of motility than the one enjoyed by any other minority, yet in societies where whiteness is not ubiquitous, other hierarchies exist to create minorities and restrict their mobility. Recent events in Afghanistan show that women's movement is constantly scrutinized, which often leads to restrictions on their ability to travel freely, rendering most of them motionless.[29] Another such example can be found in Mexico. While the government does not pass laws making it illegal for women to move, the constant threat of violence reduces their motility, curtailing their overall mobility.[30] While it is impossible to deny the legacy of colonial whiteness that plays a role in these cases, restrictions on travel for those particular examples stem from other hierarchies of domination, such as misogyny and heteronormativity. Throughout the totality of all urban areas, the kinetic elite will not always look like a rich, straight, able-bodied white man. The members of groups that face no barriers when travelling through their environment will change, depending on the particular context of the urban setting we discuss. One cannot categorically state that the mobility of any particular group will always be entrenched, without an understanding of their context. Entrenched mobility requires that we apprehend the limitations to travel imposed on a particular group or groups, which are born from an arbitrary hierarchy that systemically restricts their motion. It is these systemic limitations, rather than any particular characteristic, which determine whether a person or a group's mobility is entrenched or not.

2.6 Factors that limit mobility

Systemic limitations to the ability of a person to travel freely –physically and temporally– are the core concern of the study of entrenched mobility. As argued prior, this is not a

[29] Mondira Dutta, "Disappearing Afghan Women From Public Spaces — Collapse of Women's Rights in Afghanistan", *Bulletin of the Karaganda University History Philosophy Series* 111, no. 3, September, 2023, pp. 79–89.

[30] Mercedes Zúñiga Elizalde, "Las mujeres en los espacios públicos: entre la violencia y la búsqueda de libertad", *Región y sociedad* 26, no. 4, 2014, pp. 78-100. Nelson Arteaga, Evelyn Mejía, Octavio Spindola, Fabián Acuña, and Daniel Mollericona, *La violencia en México. Feminicidios, desapariciones, ejecuciones*, FLACSO, México, 2024.

problem faced by all, but by those minorities who are coerced into patterns of motion by systemic forces that restrict how they can travel. This being thoroughly understood, it is relevant now to focus on the three overarching factors that entrench a person's mobility, what each one entails, and how their interplay creates a patchwork of uneven kinetic space that either reduces or increases the mobility of the subject.

The first of these is easy to apprehend: infrastructure. This is composed of the built environment that ensure our mobility. The lack of adequate bike lanes, pavement, public transit, or other mobility infrastructure required for people to have a right to the entirety of urban space is foremost in our mind when discussing travel inequities. The non-existence of infrastructure is not the main concern since its total absence would lead to immobility rather than limited motion. The aim is to study the placement of infrastructure that, when present, is distributed unequally, since this phenomenon allows certain groups to traverse urbanity with greater ease, limiting the available pathways other people can take if they live on the fringes of infrastructural development.

Within the study of entrenched mobility, infrastructure is crucial, for it understands uneven distribution as the product of political forces that uphold systemic hierarchies which dictates pathways available to urbanites. The presence of bike lanes along a city's waterfront, or within its affluent residential areas may be of some use for the wealthy who make turn to them as spaces to exercise or for recreational purposes, but these do little to facilitate the travel of those who commute from the periphery to the centre of their cities. This principle can be extended to the uneven distribution of inclusive infrastructure. Ramps, accessible transportation, architecture for the visually impaired, and other forms of urban design whose aim is to improve travel for all cannot be said to promote and inclusive city when they are concentrated in the centre of town.[31] What is a person in a wheelchair to do with a ramp in the centre of town, if they have none in the periphery where they live. This is a question that can extend to the visually impaired, people who are hard of hearing, are neurologically divergent, or have any other disability that requires urban design thought beyond the paradigm of able-bodied men. Infrastructure that does not understand mobility as a right, is bound to create barriers that will limit a person's ability to travel, entrenching their patterns of motion, and restricting their ability to consume urban space.

The second factor that influences mobility patterns are socio-political structures. This refers to the systemic societal, political, and cultural manifestations of violence that restrict

[31] Paniagua Arguedas, art. cit., pp. 274-287.

people's movement due to fear of non-verbal, verbal, or physical aggression. When a group of people modify their travel pattern due to fears of being singled out by their identity, their mobility is curtailed by systemic forces. The shapes that socio-political forms take as they limit people's ability to travel are diverse, and include practices such as racial, gendered, religious, sexual, ageist, legal, ableist, and ethnic discrimination. Although these might differ in how the violence it carried out, what they all share is that they stem from arbitrary systemic hierarchies that employ violence as a tool to restrict the patters of travel other people can engage in.

Women in Mexico are all too familiar with this phenomenon. Overall violence against them, from the seemingly innocuous act of catcalling to the heinous crimes of rape and feminicide (which often accompany each other), creates a hostile environment where their integrity is constantly at threat. These aggressions, which do not discriminate between public and private space, shape their lives in a country where ten women were killed (on average) every day in 2021.[32] As concerns mobility, these acts of violence serve to restrict the routes they can take, the times at which they can travel, the means of transport they can rely on, and whether a companion throughout their journey. Women will be forced to make decisions based not on their need to travel home, visit a friend or relative, or simply consume the city, but on their need to safeguard their integrity. This constant threat will often corner them into taking the same means of transportation and the same streets, at the same time, with a speed they have identified as safe, so they can ensure their own wellbeing. Conversely, when venturing off the beaten path, they might resort to more expensive alternatives, such as taxis or ride-hauling apps, which offer a degree of safety when compared to the prospect of walking the streets at night.

Members of the LGBTQ+ community also face a hostile environment, where the degree of violence, and therefore of their ability to move and be, is time restricted. Yet this does not suggest that daytime and night-time are immediately synonymous with safety and danger (respectively). As argued before, during the day some might be forced to hide their identity to better fit in with the imaginary of the working man/working woman duality, one which offers little to no space for those who deviate from it. Conversely, although night-time does offer the cover of darkness to those who wish to attack this particular community, some members might perceive the absence of a judging rabble as a welcome space to express their

[32] Amnesty International, "Justice on Trial: Failures in Criminal Investigations of Feminicides Preceded by Disappearance in the State of Mexico", 2021.

identity in an otherwise hostile environment. Thus, their ability to move will not be predicated on their desire to express themselves, but on whether or not the sun is out, and what that means for the routes and clothes they can choose.

Indigenous groups in countries like Mexico –and across Latin America– are also subjected to a hostile environment that imposes on them expectations surrounding their language, clothing, and behaviour, product of the centuries of colonialism under which they toiled. Indigenous people, across the continent of Abya Yala, are still subjected to a racist regime that conditions their ability to both occupy space and consume the city as do other peoples of the region. They are not as able to avail themselves of public transport, as the maps, signs, and recordings appear only in European languages. Their dress code, a sign of their belonging, becomes a marker for which they are both derided and ignored. In this dynamic, they are visible to the aggressor, and invisible to those who should assist them. In addition, their skin tone only further the marginalization. In a continent where 'whiteness' is still valued, the colour of their skin places them as the threat, when they themselves are the victim of a threatening environment.

People of colour in the United States are no strangers to the latter dynamic. The systemic racism and violence to which African Americans have been subjected since their arrival in 1619 has created an environment that is hostile towards them. From the everyday micro aggressions to which they are exposed, such as touching their hair, clutching their bags or locking their cars as they walk by, or comments on the nature of their style, to the vile and virulent physical and verbal violence that assails them, such as insults, attacks on their property, or their outright murder. These forms of aggression inevitably bleed into their travel through urban space. One example of the limitations that racism imposes on mobility is the murder of Trayvon Martin by a vigilante who assessed that a young black man was not allowed to transit through that space.

The fact that concepts such as 'driving while black' or 'walking while black' have entered the lexicon to describe violent encounters,[33] shows that mobility and racism are intertwined, and that the African American community suffer a disproportionate degree of violence within the United States. They are not alone. Latin migrants, who flee to the United States as a measure of last resort to avoid the drug-fuelled cartel violence bankrolled by American consumers, find themselves unable to freely transit. Those who have no papers to

[33] Richard J. Lundman and Robert L. Kaufman, art. cit., pp. 196-200. Sylvia Sellers-García, "Walking while Indian, walking while Black: Policing in a colonial city", *The American Historical Review* 126, no. 2, 2021, pp. 455-480.

justify their stay must navigate a dangerous network that shields them from encounters with law enforcement. Like the African American community, they face a great degree of restrictions to their mobility based on their racial features. Unlike the African American community though, immigrants are additionally subjected to xenophobic calls for them to "speak English" or threats that they will "call ICE (Immigration and Customs Enforcement)".[34] Faced with this prospect, the mobility of those who fear they might be deported or harassed if they appear in public will inevitably lead to them curbing their movement, and by consequence restricting how much of the city they can consume.

These limitations to a person's ability to traverse the city and partake in the events that make up urbanity is not restricted merely by race. Physical barriers, the product of deep-seated ableist imaginaries, are some of the most common restrictions to the mobility of people with disabilities. Although –to a large degree– the lack of infrastructure is the main concern for those who struggle to move freely in cities constructed for the stereotypical male body, the ableist worldview escapes the confines of the built environment and manifests as forms of discrimination that limit the ability of peoples to move. In some cases, harmful conduct can manifest as passive actions, such as inadvertently taking up the space reserved for people who use wheelchairs or failing to acknowledge the presence of shorter people as commuters board, disembark, or move within the spaces of public transport. In other cases, the discrimination is intended to cause harm, with physical and verbal abuse in the form of taunting and shaming for people with mental disabilities or speech impediments.

Violence, as manifested in the examples above, is not always perceived as legitimate by the State in which these dynamics occur. While those who enforce the law might engage in racism, ableism, or sexism while carrying out their duties, it does not mean that the law itself mandates this behaviour. The distinction is important, for it details the degree to which the State is used as a tool to restrict mobility.

The weaponization of the law to arrest movement is common, and sadly still present. During the apartheid regime in South Africa, the 'Pass Laws' served to limit the mobility of black South Africans by mandating that they carry with them a 'reference book' which determined their right to travel.[35] These actions are undeniably an extension of the racism of

[34] Elizabeth Chuck, "Viral Video Shows Woman's Vitriolic Tirade Against Shoppers," CNBC News, 22 December 2016; Dalia Faheid and Hanna Park, "School District Confirms Bullying Occurred after Investigation Following Texas Girl's Death by Suicide," *CNN*, 27 February 2025.

[35] Michael Savage, "The Imposition of Pass Laws on the African Population in South Africa 1916-1984", *African Affairs* 85, no. 339, 1986, pp. 181–205; Philip Frankel, "The Politics of Passes: Control and Change in South Africa", *The Journal of Modern African Studies* 17, no. 2, 1979, pp. 199–217.

white elites in the country. Nevertheless, their codification ensures the participation of the State, and the legitimacy of monopolistic violence that accompanies it. The racism of civilians was elevated from personal hatred to civil duty, which socially and legally validated their heinous behaviour. While the apartheid regime in South Africa was toppled, modern equivalents persist across the globe. In the occupied territories of Palestine, the freedom of movement is daily curtailed, restrictions which are based on laws that condition travel on permits and coded IDs which determine the degree of access.[36] Like in South Africa, the racism displayed against peoples of the land is enshrined in law, which legitimizes acts of violence used to curtail travel.

Legal restrictions on movement need not be limited by racial or ethnic makeup. In Saudi Arabia, women were not allowed to drive until 2018.[37] This legal restriction created conditions that rendered half of the population immobile. As argued prior, this was not enforced merely through individual acts of violence, but relied on the legitimacy of State violence, effectively normalising discrimination against a group within society. While Saudi Arabia has eliminated said practice, the restriction on women's mobility continues to be a problem in Afghanistan. Since the withdrawal of the United States, the Taliban has tightened its grip on power throughout the entire country, imposing its view of morality on the totality of the territory they control. They have rolled back the rights of women, including their right to move freely. They are required to be accompanied by a male guardian when they decide to travel. The law varies throughout the country, which means that while some women need a male guardian to leave the house, other need only turn to one on longer journeys.[38] Regardless of the distance, the State's involvement legitimizes the violence women face, by codifying these restrictions.

Violence against other individuals or groups –be it non-verbal, verbal, or physical– that stem from race, class, gender, ethnicity, sex, age, disability need not be explicitly mandated by the government for them to form a part of social dynamics. Nevertheless, when these societal attitudes are enshrined into law, oppression of the 'other' is no longer an extension of discriminatory beliefs, but the duty of citizens who wish to uphold the norms.

[36] Amnesty International. "Cruel System of Domination and Crime Against Humanity: Israel's Apartheid Against Palestinians", 2022.

[37] Deborah L. Wheeler, "Saudi women driving change? Rebranding, resistance, and the kingdom of change", *The Journal of the Middle East and Africa* 11, no. 1, 2020, pp. 87-109.

[38] UN Women, "FAQs: Afghan Women Three Years After the Taliban Takeover | UN Women – Headquarters", 12 August 2024.

Once on paper, the State is free to deputize and extends to others its monopoly of violence, effectively legitimizing these practices.

The examples given above are but a few cases of how the socio-cultural constructions of everyday society work as impediments for mobility. That is to say, the relational complexities that erect barriers to mobility cannot be simply understood across one axis. An indigenous woman will surely face problems that other woman and indigenous people would experience separately. Although we can derive approximations from her experience, the totality of limitations imposed on travelling bodies, and the myriad social constructs that create arbitrary hierarchies that derive from them relations of exploitation and asymmetrical violence cannot be captured fully beyond the broad claim: systemic inequality will engender unequal mobility.

The third factor encompasses the economic limitations to travel. In a world where most needs are commodified, access to essential components for social reproduction are too often conditioned on a person's ability to purchase goods or services. Mobility is no different. In societies governed by the automobility regime, the inability to purchase a car becomes and immediate barrier that restricts how people can access and consume urbanity. That is to say, the mobility of someone who cannot afford a car, within said regime, is immediately entrenched. This unavoidable barrier comes as a consequence of the design of our urban environment. The written and unwritten rules that govern the behaviour of bodies in public space hold the car as the machine around which we revolve. The physical layout of space awards special privileges to automobiles, such as the multilane highways that dissect the city and leave little to no space for pedestrians, bikers, and above-ground public transportation. The shape of sidewalks also reflects this pattern, with pavements that twist, bend, and contort themselves to appease the private garages, public parking buildings, and drive-throughs that litter the urban landscape. Thus, any form of urban travel that does not rely solely on the car is sure to entrench a person's mobility, for they will not enjoy the ability to move as freely as will those who own and drive one.

Despite the ubiquitous nature of the private vehicle in our society, entrenched mobility, as an analytical tool, is not constrained to the duality car owner/non-car owner. The barriers that the lack of liquidity impose on a person's ability to move throughout the city go beyond private ownership of automobiles. These extend from the extreme case of people who cannot afford any form of transport other than their own locomotion, to nuanced examples of those who choose to put themselves in possible dangerous situations, due to the steep costs of the alternative.

The most extreme case is that of people who cannot afford anything else, so they walk. A person who cannot afford a bike or cannot afford the price of public transportation (let alone a car), will have to resort to walking as their only source of mobility. This case is, of course, extreme, but by no means uncommon. People who live in places where public transportation is unreliable might find it convenient to hail a taxi so they can arrive home earlier and spend time with their family. However, this option is not available to all, as the price of a private ride will certainly eat into their day's wage, which will harm their household's economy. Similarly, women who live in places where public transportation is unsafe might find it necessary to rely on taxis or ride sharing applications (such as Uber) to arrive home safely. Nevertheless, some might choose to put their bodies at risk as a short-term cost saving strategy due to the financial hardships with which they are burdened.

The examples shown above point to the role that a lack capital liquidity to meet adequate travel demands can have on the ability of people to move safely and efficiently. Yet the examples above also show that these issues cannot be disentangled from the broader socio-cultural and infrastructural limitations imposed on mobility, all of which together contribute to patterns of entrenchment that place restrictions on how different peoples can interact with the city. The case of a woman who owns a bicycle but not a car and is forced to turn to taxis or public transportation due to the lack of bicycle lanes that would safeguard her journey, speaks to the entanglement between both infrastructural and financial limitations. If we then add that this person prefers taxis to public transport because it reduces the likelihood that she will experience sexual harassment throughout the journey, we understand how this all fits within the framework of socio-cultural limitations. Thus, this hypothetical woman is entrenched in a pattern of mobility that dictates her route through the city. It imposes on her paths which, should she deviate from, would incur high costs, be they monetary, or to her physical or mental well-being.

2.7 Types of entrenchment

Entrenched mobility is only understood through its relational nature. The three factors described above cannot be viewed as hermetically separate from each other. It is their interplay which builds the barriers that create patterns of uneven mobility, and only a study of their entangled relation can truly shed light on the complexities that surround the arbitrary retractions placed on travel. Although some might consider that it is mainly one of the three factors which undermines their ability to move, it is imperative that we comprehend that they

are all at play. If a person does not perceive them as being present, these factors might benefit them on their journey. These are not neutral forces, ones which one can choose to distance themselves from, they are ever-present factors, it is simply a matter of determining to which degree a person benefits or is affected by them.

Entrenched patterns of mobility are not ubiquitous and uniform dynamics. They are spatially, temporally, and modally determined, and shift as a person travels through different places, at different times, and with different means. The city is not flat, the clock is not static, and the vehicles to traverse are not always the same. The morphology of urban landscapes shifts as the traveller moves from north to south or east to west, not because the terrain is perennially uneven, but because the traveller's field changes, and his economic and socio-cultural position will determine the number of routes and ease with which they can traverse them.

Just as the landscape shifts, so does the passage of time modify one's relation to the city. (In)famous for its indifferent march towards the future, time reconstructs the landscapes in accordance with every person's relation towards the economic, socio-political, and infrastructural factors presented above. Thus, the city does not look the same to all people, nor does it look the same to the same person at different points throughout the day. A person's mobility will thus not be universally entrenched but vary in its degree according to the time and place in which they find themselves.

In addition to temporal and spatial restrictions, we must account for their ability to appropriate the means of transportation present in the spaces in which they live. Pavement, public transportation, bike-lanes, taxis, and private vehicles are present throughout urbanity, but are not accessible to all. The mode of transport which people can access will be determined by infrastructural, socio-political, and economic factors, which will in turn inform how they navigate urbanity.

The importance of highlighting the spatial, temporal, and modal nature of limitations, is to provide accuracy about the nature of the restrictions people face when they move. Thus, we can say that a person is either modally, temporally, or spatially entrenched, in an effort to more accurately describe the constraints that they face. This is not to say that by naming one, the other is excluded; they can claim to be thrice entrenched. However, what this allows is for a clear depiction of the hurdles that arrest their mobility.

The relation between the forms of entrenchment and the factors that limit motion does not obey a one-to-one rule. Which is to say that temporal entrenchment is not necessarily a product of infrastructure. Nor can we say that people who feel that they are modally

entrenched are also only affected by economic factors. The interplay is between all six, and the influence one has on the restrictions that affect any one form of motion is not predetermined, it is the product of the conditions that make up urbanity, and they must be addressed on a case-by-case basis.

Table 1. Entrenched Mobility

	Infrastructural	Sociopolitical	Economic
Modally	No infrastructure to accommodate all forms of transport equally.	Discrimination that limits choice of transport.	Inability to afford mode of transportation.
Spatially	Lack of access due to lack of infrastructure.	Discrimination that limits use of transit spaces.	Inability to transit due to lack of funds.
Temporally	Lack of infrastructure that allows for 24h access.	Discrimination that limits transit at different hours.	Inability to travel due to time sensitive price hikes.

Table one presents a simplified view of the relation between individual factors and the resulting entrenchment. While it is limited due to the one-dimensional nature of ink on paper, it serves as a reminder that all three factors can contribute to all three entrenchment categories. In other words, while it can be the case that a person is modally entrenched due to economic conditions, their temporal and spatial mobility might be limited due to infrastructural factors. Rather than a grid wherein one pinpoints a single form of entrenchment caused by one single factor, the table should be regarded as more of a bingo board, where the possible permutations are recorded, to better comprehend limits to mobility.

The example given in the previous paragraph was not mere speculation on possible restrictions to travel but the reality of many Mexicans, particularly those of the Yucatan Peninsula. People in the region whose finances are not as stable or secure are forced to rely more often on public transportation. This modal entrenchment is a direct product of their economic conditions. Subsequently, the lack of infrastructure (in the form of available bus routes and bicycle lanes) conditions their ability to access urbanity and the times at which they can participate within it. I avail myself of said example, for the case studies presented in chapter four will expand on the limits that people in the Yucatan Peninsula face when

seeking to participate within society, particularly the Maya minority, whose entrenchment is particularly egregious.

2.8 Final remarks

The dynamics discussed in this chapters might sound abstract, but they have real world implications. The reason for employing the imagery of the trench both highlights how this pattern is carved out for fear of external violence, while also helping to emphasize that the space would not exist were it not for the external forces that drove these people to find refuge in a trench-like formation. Thus, we can speak of limits to mobility appearing as modal, spatial, or temporal entrenchment, the most likely outcome resulting from an interplay of all three.

When taken together, a study that incorporates these three representations provides a better tool to visualise the limitations imposed on a person's mobility. This thus functions as a platform to further understand the systemic forces (infrastructural, socio-political, and economic) that place restrictions on travel and a person's ability to consume the city. It is pertinent to point out that this simplification cannot hope to capture the complex interplay between the arbitrary hierarchies that, through their othering, limit the ability of people or groups to travel. Nevertheless, it serves as a tool to visualise them by indirectly showing their effects, for the limits to a person's ability to consume the city are inherently tied to their capacity to travel to different points within it. Furthermore, entrenched mobility provides a means by which barriers to motion can be represented cartographically. Not as a simple tool of scalar representation, but as a means of conveying the relation of people to the space they inhabit through perception and experience.

Entrenched mobility is, at its core, a study of unequal mobility. It is a measure of how much better the mobility of the kinetic elite is when compared to that of those around them. And how the forces that facilitate the flow of those at the top of social, infrastructural, and economic hierarchies, hinder the mobility of those at the bottom. It cannot be understood as homogenous, either in space or time, for it is only when understood as differentiated can we begin to study the different effects on the groups that make up society. Although useful as an analytical category, when visualised it present a better picture of the relational forces that constitute the dynamics and serves to present the relation between peoples and the urban environment they inhabit.

3 Methodology

The previous chapter on entrenched mobility highlights the need to move beyond the idea of motion as a transition between spaces. In the same vein as mobility studies, it underscores the need to analyse movement as a dynamic that encompasses that which is immediately tangible (such as the infrastructure and vehicles that traverse it), as well as the invisible forces which influence or condition travel. The following chapter provides an explanation of the methodological lens through which this work studied mobility in the cities of Campeche and Merida, and the methods employed to provide the data found in the subsequent chapters.

As a field of study, geography has always found itself torn between the 'exact' sciences, with its focus on studying our earths morphology, and the 'social' sciences, with their predilection for seemingly less predictable and hard-to-measure dynamics. This unique position has meant that geography has been able to borrow methodological approaches from various disciplines, either directly at its borders or from unexpected neighbours, some twice or three times removed. In the case of my work, the field of political science provides the answer for the study of mobility in the Yucatan Peninsula in the form of comparative studies. In other words, this approach benefits from collaborating with other methodologies, while holding its own methodological rigor.

The chapter begins with an analysis of comparative studies. The goal is to provide an account of its methodological value for mobility studies, and geography more broadly. Secondly, the chapter focuses on the methos used to gather data. Beyond an account of where it was obtained, I take this as an opportunity to discuss the challenges faced when gathering information that is not well kept or updated. Thirdly, the text turns to the analysis of such data, its relevance for the theory at hand, and the broader relevance for the study of mobility. Lastly, the conclusion serves as a summary, which prepares the reader for the coming chapters.

3.1 Methodology

In the beginning of his most often cited article, Lijphart advocates for "conscious thinking", arguing that comparison should be viewed as a "method of political enquiry".[1] He goes on to define this methodology as "one of the basic methods… of establishing general empirical propositions" and places particular emphasis on the idea that this is a *method*, not a vague term used for the researcher's convenience.[2]

For Lipjhart, the comparative method occupies a central place in the arsenal of methodological approaches, "the others being the experimental, statistical, and case study methods".[3] When evaluated vis-à-vis these "others", it is clear that it allows for both detailed contextual understanding and broader theoretical implications. While statistical methods prioritize large datasets and probabilistic reasoning, they may sacrifice contextual depth, whereas ethnographic approaches, with their emphasis on immersive, qualitative inquiry, often lack generalizability.[4] The comparative method mitigates these trade-offs by combining the contextual richness of case studies with the analytical rigor of systematic comparison, and as Lijphart notes "the case study method can and should be closely connected with the comparative method (and sometimes also with the statistical method)".[5] This approach provides a dynamic framework that facilitates iterative theory refinement, as comparative research builds upon empirical evidence to refine hypotheses and models. Furthermore, comparative analysis encourages a critical evaluation of causal mechanisms by identifying patterns and exceptions across different contexts.

The comparative study is particularly relevant for its ability to bridge the divide between micro- and macro-level analyses. This approach offers an insight into the causal relationship and broader patterns without sacrificing contextual specificity. As noted by Mattei Dogan and Dominique Pelassy, this method provides a middle ground between single-case studies and broad statistical analyses, allowing it to integrate context-specific detail with broader generalizations.[6] In other words, with its focus on cross-case comparisons, it facilitates the identification of generalizable findings while maintaining a

---

[1] Arend Lijphart, "Comparative Politics and the Comparative Method", *American Political Science Review* 65, no. 3, 1971, pp. 682.

[2] *Loc. cit.*

[3] *Loc. cit.*

[4] Dieter Nohler, "El Método Comparativo", in Herminion Sánchez de la Barquera y Arroyo, *Antologías Para El Estudio y La Enseñanza de La Ciencia Política. Volumen III: La Metodología de La Ciencia Política*. Mexico City, Instituto de Investigaciones Jurídicas, UNAM, 2020, pp. 42-47.

[5] Lijphart, art. cit., p. 691.

[6] Mattei Dogan and Dominique Pélassy, *How to Compare Nations: Strategies in Comparative Politics*. New Jersey, Chatham House Publishing, 1984, pp. 8 *et passim*.

nuanced understanding of individual contexts, making it an invaluable tool for theory building.

Comparative studies, as advocated by Gabriel Almond, Giovanni Sartori, Sidney Verba, (among other authors –including those already mentioned), are an invaluable tool in the arsenal of sociologists, political scientists, and international relations researchers. Geography, with its close ties to these social sciences, is often ready to adopt methodologies from its neighbours, and has done so to great success. I argue that the burgeoning field of mobility studies, with its roots in sociology, can greatly profit from an approach that would benefit theory formation venturing forward.

3.2 Methods

Data collection in Mexico is a complex affair. Institutions of international repute, such as the National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía, INEGI) offer copious amounts of data on the geographic and demographic composition of the country, and the socio-economic dynamics therein. The same cannot be said for state and municipal authorities. Either due to their reliance on the information gathered by INEGI, an understandable lack of funds, mismanagement, or due to a complete lack of interest in the phenomena that take place within their jurisdiction, (maybe all of the above), information is harder to come by, if it is at all present. The difficulty for researchers in Mexico is thus not the complete absence of information, but the huge discrepancy between how different entities within the country gather and store data, and how it is eventually made accessible to the public.

Information gathered for this study consisted mainly of statistical and cartographical data. Some sources were prioritized for the former, others for the latter, while some provided material for both. The following is a list of the sources, their purpose for my work, and how these were incorporated. The bulk of statistical data came from INEGI, including some of their topic specific surveys. From INEGI itself, the information gathered pertained to the overall economic performance and size of the states of Yucatan and Campeche. This same source provided information on the size of the total population, in addition to the size of indigenous communities. Discrepancies arose as concerns the latter point, because INEGI's data was not always consistent, yet these were not so large that the information was deemed

utterly unreliable.[7] The most relevant data extracted from this source was the Basic Geo-statistical Area (Area Geo-estadística Básica, AGEB). While AGEBs can be either rural or urban, this work focuses on cities, which means this text drew from the urban variety, in particular those which corresponded to the cities of Campeche and Merida. The relevance of urban AGEBs is that these compile data on spaces smaller than the municipal level and focus mainly on a territory that is used for housing, commercial, industrial, or services. This last point is of relevance, since it means that these are not empty or irrelevant areas, but land that participates within the broader urban dynamic.[8]

The urban AGEBs for the city of Campeche were easy to determine. The municipality's capital constitutes a clearly demarcated urban area, and all the contiguous AGEBs within that space were taken to represent the totality of Campeche. The case of Merida represented a little more a challenge. The city of Merida and the municipality by the same name do not correspond to the same geographical area. This is a result of years of urban sprawl which has pushed the city beyond the limits of the municipality, meaning it has spilled over into neighbouring municipalities, in some cases forming an uninterrupted urban area. The criteria to determine the degree to which a municipality was to be included within the concept of metropolitan Merida (the city of Merida) was the proximity of the urban area of the municipality's capital to the urban area of the municipality of Merida. To be precise, the urban area of the municipality's capital had to be 50km or less from that of Merida's municipality. Under this definition, the municipalities included are Kanasín, Umán, Ucú, and Conkal.

Beyond this particular data point, my work relied on two topic specific surveys conducted by INEGI for information pertaining to this study. The National Survey on Discrimination (Encuesta Nacional sobre Discriminación, ENADIS) provided data on the number of indigenous people in the states of Campeche and Yucatan, as well as their socio-economic status. The information of ENADIS was complemented by information collected by El Colegio de Mexico's Project on Ethno-Racial Discrimination in Mexico (Proyecto sobre Discrimininación Étnico-Racial, PRODER), both of which provided a more comprehensive understanding of the multifaceted reality on this phenomenon. As concerns mobility, the National Survey on Household Income and Expenditure (Encuesta Nacional

[7] Information on indigenous populations in Mexico is complicated to assess. The centuries of colonialism, coupled with the racism and classism of Mexican society means that some communities themselves underreport or hide their true numbers or perceived indigenous belonging.

[8] Censo de Población y Vivienda 2020, *Manual de cartografía Censo de Población y Vivienda 2020* Instituto Nacional de Estadística y Geografía, México, INEGI, 2022, pp. 6-8.

de Ingresos y Gasto de los Hogares, ENIGH) served to gauge the percentage of current expenditure spent on transportation, and the mode which was most relied upon based on income percentile. Both the ENADIS and ENIGH surveys were used strictly for statistical data.

The National Statistical Directory of Economic Units (Directorio Estadístico Nacional de Unidades Económicas, DENUE) is a tool of INEGI which offers information on active places of business within the Mexican territory. This work relied on upon it to provide both statistical and geographical data on businesses in the cities of Campeche and Merida. In concrete terms, their numbers helped to identify the type of business and the number of workers they employed. Additionally, it helped to situate them within each city, which provided valuable insight into the mobility needs of the population who participate within said dynamics, be it as workers, clients, or in any other fashion.

Another source that was used for both statistical and cartographical data was that provided by the National Council for the Evaluation of Social Development Policy (Consejo Nacional de Evaluación, CONEVAL). This autonomous institution measures poverty and evaluates the performance of social policies within the country. Their data allowed for the comparison of the states of Campeche and Yucatan, and the degree of social deprivation present in both. Additionally, their information facilitated the cartographical representation of the distribution of deprivation in the cities of Campeche and Merida, facilitating further comparisons between the two.

Information that contributed exclusively to the cartography of this work was that concerning bus routes in the cities of Campeche and Merida. For the latter, information was gathered from four sources, which were compared to one another to create a picture of the state of public transportation in that city. The mobile app Moovit served as the frame of reference against which the cites rutadirecta.com, merida.transpublico.com, and openstreetmap.fr could be compared. The government of the city was contacted in 2022, emails to which they did not reply. For the case of the city of Campeche, information was obtained through longstanding existing networks, which (through unofficial channels) provided the material needed. There was no information with which to compare it, since as of the writing of this thesis, no maps exist of public transportation in that city

3.3 Data processing

All statistics gathered from INEGI, ENADIS, DENUE, ENIGH, and CONEVAL were processed through a combination of R+ and Excel. The former allowed for the management of the large data sets that these institutions make widely available to the public. Once the relevant variables had been extracted, the latter served the purpose of representing the material in visual formats such as graphs, tables, and charts.

As concerns the cartographical representation present in the following chapter, three approaches were necessary. Concerning information extracted from INEGI, DENUE, and CONEVAL, one needed only to download their layers, which were processed with the help of QGIS. For the case of Merida, the representation of transport routes required a few extra steps. The Moovit app was considered as the benchmark, since their data accounted for all routes, timetables, and alleged stops. This information, however, is not available in a format which can be easily extracted and transferred to QGIS. To solve this, I relied on the webpages featured above, in particular merida.transpublico.com, which compiled GPS data of users of their use of public transportation. All three webpages were contrasted with Moovit to account for all routes pertaining to buses, which in their final form yielded the maps of public transit in the city of Merida seen in the following chapter. The case of Campeche is significantly more complicated. The data for the map started as written instructions on a word document. These detailed the route by alternating between the names of the streets, followed by the instruction to turn left or right, followed by the name of the street into which the bus turned, as seen in the following example: "Leaving from the front of the market […], you drive on Bastions circuit until you reach 12th street, on which one turns right until you reach 49th-A street in which you turn left…". With the use of Google Earth, I mapped this data one route at a time, which was later transferred to QGIS and onto the layer of the city of Campeche.

As described above, the amount of time required to process the information varied markedly between federal data and that which was held (although not always publicly disclosed) by state and municipal authorities. On the one hand, these hurdles speak to a divide between the interest of the federal government, and that of state and local authorities as concerns data and the importance of collecting information. However, beyond this quite striking contrast, I believe that the lack of concrete interest, even by federal authorities, with regards to information on public transportation in the capital cities of two of the three states of the Yucatan Peninsula speaks volumes as to the place mobility occupies in Mexico.

3.4 Final Remarks

As noted above, the comparative methodology can rely on case study and statistical methods to provide a more comprehensive account of the subject at hand.[9] An analysis of unequal mobility in the Yucatan Peninsula would have been woefully incomplete had the research not heeded the words of Lijphart. This work takes that advice to heart. The comparison would not be possible without the context afforded by the statistics which provide an overview of the material conditions and demographic makeup of the states of Campeche and Yucatan. Furthermore, without the depth afforded by case studies, it would have not been possible to understand the reality of mobility in the cities of Campeche and Merida. These conditions were only met through the flexibility afforded by the comparative method.

While conducting research in Mexico is a challenging affair, the biggest hurdle came in the way of the discrepancy between access to information through federal sources, as opposed to opacity of data coming from state and local authorities. The treasure trove of material offered by institutions such as INEGI and CONEVAL are readily available and can be easily processed with the use of R+ and QGIS. The same cannot be said for that held by those who nominally have jurisdiction over local mobility. While this speaks to diverging interest as concerns data, it also speaks to their view of urban travel, reflected also in the conditions of public transportation.

[9] See, *supra*, pp. 73-75.

4 Mobility in Campeche and Yucatan: Of the socioeconomic conditions that create entrenched mobility

Entrenched mobility is present wherever travel is unequal. To adequately assess the viability of the former as an analytical category, it is indispensable that it be applied to a case: the Yucatan Peninsula offers plenty of examples. The following chapter will focus on two of the region's largest cities: Campeche and Merida. The aim is to give a detailed account of urban travel, which can then be later analysed through the lens of entrenched mobility.

The first section provides a brief context of mobility in Mexico. While the systemic forces that shape motion in the Yucatan Peninsula are the product of particular historical, ethnic, and class developments, the region is and has been subject to broader national trends. These have impacted the general configuration of society, and by extension the way it moves. While not arguing that these determine all travel, it is important to note overarching similarities between the states the make up the country, to evidence the degree to which the dynamics observed in Mexico's South-Eastern peninsula find parallels across the nation.

The second section offers some necessary context about the Peninsula, in particular the states of Campeche and Yucatan. After a brief history of the two cities this chapter provides an account of the demographic and socioeconomic makeup of both states. The information serves to illustrate the degree of inequity found within society, and how the negative consequences of uneven economic distribution mostly affect one group, mainly, the native Maya population. With this in hand, the chapter goes on to detail the travel habits of people in each state, emphasizing how much they spend on transportation, and how these number reflect the modal split among different income groups.

The chapter then turns to the first of the two cities: Campeche. Data from CONEVAL provides a view of the distribution of citizens according to the social deprivation index. This is followed up by the use of information from DENUE, which serves to locate the density of services, and their location within the city. With it, an image appears of who lives where, and the overall distribution of essentials such as education and healthcare. This effort to map the city is contrasted with the distribution of public transportation services. With both in hand, one can more readily observe the limitations imposed on those who mostly rely on the local bus system to traverse urbanity.

Afterwards, the chapter focuses on the city of Merida. As in the previous case, it uses data from CONEVAL to represent the distribution of people according to the social deprivation index. The previous information is coupled with maps drawn from DENUE's figures, which help represent the distribution of businesses throughout the city. Put together this present a picture of where people and services are located. The previous information is accompanied by the bus routes that navigate urbanity, and the core-periphery design they adopt. When taken together, all of these references provide an account of the inequitable travel characteristics of Merida.

The two cases presented in this chapter serve as two examples of entrenched mobility. They are evidence that a theory of unequal travel requires a multifaceted approach that weighs the structural conditions that limit movement, and how these evolve over time. This chapter's focus is to introduce both cases by providing an in-depth view of conditions in both cities, allowing for the comprehensive analysis of the chapter that is to follow.

4.1 Mobility in Mexico

Mobility is too often neglected within the study of social phenomena. The flow of weapons, migrants, goods, tourists, drugs, investment, are all crucial to our understanding of Mexico. Yet, despite the essential role that motion plays in configuring the reality of the country, mobility –as an analytical category– is seldom present. This lack is severely felt in studies of the daily commute, where questions surrounding the practice of routine mobility are constantly overlooked. As authors Manuel Suárez Lastra and Genaro Javier Delgado Campos note throughout their work, in Mexico, these studies are practically non-existent.[1] The state of literature on mobility ignores a pivotal activity that allows for all to guarantee their social reproduction. Despite its undeniable importance, little attention is paid to the motives behind modes of transportation, and how commuters experience the space they occupy. The questions posed by Cresswell are not considered, which is not a demand to adopt them as a guiding principle, but a call to develop categories that explore the lived reality of the nearly 130 million Mexicans who all experience mobility,[2] either as uninhibited, restricted, or completely limited.

[1] Manuel Suárez Lastra and Javier Delgado, *Entre Mi Casa y Mi Destino: Movilidad y Transporte En México: Encuesta Nacional de Movilidad y Transporte*. Primera edición. Los Mexicanos Vistos Por Sí Mismos. Mexico City, UNAM, 2012, pp. 29 *et passim*.

[2] INEGI, "Población total (Número de habitantes)", *INEGI. Cuéntame de México*, 2020.

To say that there are no examples of studies of mobility in Mexico would be both an exaggeration and lie.[3] The texts cited in this chapter reflect the efforts of many Mexican authors, be they academics, NGOs, or people working in government institutions. These sources serve as evidence that there is a conscious effort to collect information on the travel patterns of people in the country, and there are researchers who endeavour to analyse the data that is made available to them. Yet studies of mobility in Mexico (including the works referenced here) often reproduce existing hierarchies. Government, NGO policy briefs, and academic papers often focus on the cases of larger urban areas when studying everything from car use to public transportation, cycling, and walking. Mobility is viewed from the centre, where the periphery is either neglected, oversimplified, or merely an afterthought.

This is not to say that there is malicious intent behind these outcomes. Most renowned academic institutions are situated in large metropolitan areas,[4] funding often favours large-scale studies, and due to their organization, the information available in large cities is more orderly than that of urban areas on the country's fringe. One such example is the "Origin-Destiny survey" which collects information on the travel behaviour of people who live in Mexico City's metropolitan region (Zona Metropolitana del Valle de México, ZMVM), which comprises the states of Puebla, Tlaxcala, Morelos, Queretaro, Mexico City, Mexico State, and the state of Hidalgo.[5] Due to the size and importance of the region, the governments at all levels (federal, state, and local) have a vested interest on the economic impact of mobility. The presence of multiple universities, a bigger population (attending said universities), and larger government budgets fosters the conditions that lead to more interest in the topic, and thus concerted efforts to understand travel in metropolitan regions. The studies that exist thus perpetuate a condition whereby mobility, when it is studied in Mexico, mostly focuses on the modes of transportation and travel experience of the inhabitant of the

[3] For examples of studies of mobility throughout Mexico see, Clara Salazar, and Valentín Ibarra. "Acceso desigual a la ciudad y movilidad", *Democracia y exclusión. Caminos encontrados en la ciudad de México*, 2006, pp. 293-324; Paula Soto Villagrán, "Diferencias de género en la movilidad urbana. Las experiencias de viaje de mujeres en el Metro de la Ciudad de México", *Revista Transporte y Territorio* 16, 2017, pp. 127-146; Alethia Vargas-Silva, Tamara Martínez, and Pedro S. Urquijo Torres, "Movilidad infantil, rango espacial y experiencia de lugar (Morelia, México)", *PatryTer* 5, no. 9, 2022, pp. 73-87; Sheila Ferniza-Quiroz, and Karina Soto-Canales, "Imaginarios urbanos y violencia de género en la movilidad cotidiana en transporte público urbano", *Quivera. Revista de Estudios Territoriales* 23, no. 2, 2021, pp. 89-109.

[4] Mexico City, Monterrey, Guadalajara and Puebla are all home to some of the largest universities in Mexico, examples of these being UNAM, UAM, Universidad Anahuac, Universidad Iberoamericana, Tecnológico de Monterrey (the last three having campuses in all or most metropolitan areas).

[5] While the ZMVM, according to the Ministry of Internal Affairs (Secretaría de Gobernación), comprises the states previously mentioned, in their Origin-Destination survey, INEGI limited itself to Mexico City, the state of Mexico, and one municipality in the state of Hidalgo. See, INEGI, *Encuesta Origen Destino en Hogares de la Zona Metropolitana del Valle de México*, Presentación de Resultados, Mexico City, 2017.

larger metropolitan regions. These studies, which marginalize smaller urban areas, reproduce uneven mobilities, for in never raising awareness, they perpetuate the inequality that exists between the core and the periphery.

When studies on mobility in Mexico do discuss the conditions of smaller urban areas, they tend to present general statements based on data mostly compiled by government agencies. These figures, normally the product of a census, provides a veritable treasure trove of information that would allow for a better understanding of conditions in smaller cities. Nevertheless, two problems emerge. The first one refers to the lack within the data sets, such as a more comprehensive understanding of walking, bicycle use, and other forms of mobility. The second is the unequal scale at which this data is presented, because while some information is given for the state level, not much is provided for the local level. This discrepancy makes comparisons somewhat complicated. Regardless, a picture does emerge that can give a good overview of mobility in some states, but said overview might not always allow for an understanding of how these conditions are distributed within cities or municipalities.[6] This information can thus be used to compare the general conditions of mobility between the 32 states that make up the country, and from it, draw some conclusions as to the state of travel in Mexico. What is clear from the information collected so far, is that the country is "addicted" to cars.[7]

While individual studies of smaller cities across the country are lacking, an understanding of the preponderance of private vehicles is quite clear in all of the literature. From policy papers to books and academic articles, authors all agree that the regime of automobility has created a "cult" to the car.[8] Automobility has thus taken hold in Mexico, and the object of reverence is now used to create, reproduce, and enforce hierarchies within the realm of motion. In a country with high degrees of inequality, the car serves to perpetuate the clear divide between the haves and the have-nots, from which stem other social hierarchies of discrimination, such as those based on gender, ethnicity, or race. Because automobility cannot sustain itself, it seeks the aid of governments, who through infrastructure projects almost always guarantees the existence of the material conditions that ensure the regime can continue.

---

[6] The authors mention the high rates of bicycle use in the three states of the Yucatan Peninsula yet fail to disclose whether most riders are located in the cities or in rural areas. They cannot hope to know, for the information speaks only of bicycle use at a state, and not a municipal level. Gisela Méndez, Victor Velazco, Carmen Menéndez, Isabel Alduena, David Escalante, Jéssica Tapia, Erika Adaya, Juan J. Hernández., *Anatomía de la Movilidad en México*, Mexico City, SEDATU, GIZ, BID, 2018, p.3

[7] Lastra Suárez y Delgado Campos, *op.* cit., p. 104.

[8] *Loc. cit.*

Four out of every five pesos invested in transportation and mobility in Mexico's four metropolitan regions are used to fund automobile infrastructure.[9] This metric by itself is scandalous and seemingly enough to prove the dominance of the automobility regime. One could rightly contend that money invested to either build roads or maintain them is not exclusively spent to promote car use, for in a country that relies heavily on buses and collective taxis,[10] roads also serve public transportation. Yet this argument assumes that cars and buses are allowed to share the same kinetic space. Buses and collective taxis are prohibited from using certain roads,[11] and in those where they do drive, they do so on the lane that is closest to the pavement. This contrasts with automobiles, which have full access to roads in urban areas, meaning that the investment on transport infrastructure mainly benefits cars users. On top of them holding mobility rights over a larger kinetic space, private vehicles are also wasteful. In Mexico's metropolitan region, cars only carry (on average) 1.5 people during their morning commute,[12] meaning that they hoard space and transport roughly a person while on the move. The 80% (four out of five) figure, scandalous as it is, can only be said to be an accurate representation of the funds spent on transportation and mobility in Mexico's metropolitan areas. Thus, from the information presented in this paragraph, one cannot claim to speak for the state of automobility in Mexico as a country. For that we must turn to the work of Suárez Lastra and Delgado Campos.

Automobility in Mexico reflects class disparity. Roughly half of the adult population (48.43%) stated that they owned a car,[13] meaning that more than half of country cannot rely on a personal vehicle for their mobility. When expressed in terms of wealth, roughly all car owners find themselves among the most privileged in society. The class hierarchy is also expressed at scale, with most cars being concentrated in the affluent centre, north, and metropolitan regions, while car ownership in the south being the lowest in the country.[14] The regime that prioritizes private vehicles over other forms of travel did not introduce class disparities or birth the culture of machismo that is infamous in Mexico, but it perpetuated

[9] Daniel Zamudio and Víctor Alvarado, "Inversión e infraestructura estimada al uso del automóvil particular vs. Inversión en transporte público y movilidad no motorizada", *El Poder del Consumidor*, Ciudad de México, 2016, p. 3.

[10] Méndez *et al., op. cit*., pp. 4-8.

[11] Jennifer García, "Estos son los únicos vehículos que pueden circular en los carriles centrales de Periférico", *Fuerza Informativa Azteca*, 3 April 2024.

[12] INEGI, *Encuesta Origen Destino en Hogares de la Zona Metropolitana del Valle de México*, Comunicado de Prensa, Mexico City, 2017.

[13] Statista Research Department, "Mexico – Share of people who have access to a car in 2017-2018", *Statista*, 2021.

[14] Suárez Lastra y Delgado Campos, *op. cit*., p. 129.

their existence. What it has introduced is a new dynamic that has brought harm to the population in countless ways, with the majority of its victims being the most vulnerable in society.

Automobility, particularly the car, is responsible for vehicular violence. While 29% of journeys are made by pedestrians, this group represents 44% of the victims recorded due to transit accidents.[15] The states with the highest number of car ownership are (not surprisingly) the states that record the highest number of fatalities attributed to vehicular violence. These accidents also tend to cause more harm to the most vulnerable in society, with kids younger than 5 and adults older than 60 being likelier fatal victims of such events.[16] This trend observed in Mexico, where vulnerable peoples are subject to higher consequences due to the presence of cars, further proves the arguments the results of Gregg Culver study.[17] Although his studies focused on vehicular violence in the United States, we can observe that the presence of automobility brings with it a level of violence that is often justified as necessary for our current society to function as intended.

Despite the harm it might cause those most vulnerable in society, automobility is alive and well in Mexico. Rather than just a need, authors Suárez Lastra and Delgado Campos describe it as an "addiction",[18] one than can only be cured when the vehicle ceases to function. As the authors show, most Mexicans who own a car would only change their behaviour if their car stopped working, in which case they would consider options such as public transportation.[19] Though this confirms the addictive character of automobility in Mexico, it also shows that mobility infrastructure in the country facilitates and encourages travel by car. The hierarchy of urban kinetic space leaves little incentive for public transportation, which has become nothing more than an "engine for [the mobility of] the poor".[20]

Despite their fixation with the car, Mexicans mostly rely on public transportation for their motorised travel needs. Nominally the population has at its disposal a vast array of modes of transport to conduct its daily routine. Light rail, subway, bus rapid transit (BRT), buses, and collective taxis are some of the public transport services that they can allegedly turn to as they traverse urban space.

---

[15] Méndez *et al., op. cit*., p. 9.
[16] *Loc. cit.*
[17] For more on the work of Culver, and a thorough analysis of vehicular violence, see, *supra*, pp. 27 *et passim*.
[18] Lastra Suárez and Delgado Campos, *op. cit*., p. 104.
[19] *Ibid*., p. 138.
[20] *Ibid*., p. 69.

In Mexico, it is the legal responsibility of each municipality to provide public services for its inhabitants, such as transportation.[21] Buses and '*combis*' dominate the landscape of most Mexican cities since they can mostly transit on the same kinetic spaces as cars, which sees local governments focus their infrastructure budget on roads, enabling both the continuation of automobility while providing public transportation infrastructure (or in other words, an outlet for those who cannot afford to participate in the dominant regime). In terms of administrative costs, combis and buses are also a cost-effective means of providing transit. Most municipal governments have no direct control over the operation of buses and collective taxis, effectively eliminating the need to apportion any budget to the field of mobility. The result is that 87.7% of these vehicles operate under the "man-bus" system, which means that each driver owns the bus or collective taxi with which they transport passengers.[22] Since the law regarding the operation, routes, and conditions of these services is quite lax, the service providers respond to market dynamics rather than the needs of the people abord their vehicles.

The conditions described above affect both drivers and riders alike. The former compete amongst themselves to ensure they collect enough passengers to ensure an income, and if they happen to rent their bus or collective taxi from a third party, they are forced to pay a sum for the use of the vehicle, increasing their cost of operation, which sees them incur more risks (such as reckless driving) to secure a living wage.[23]

For passengers, this market-driven exercise in public transportation means that they are treated as a captive population from which rent can be extracted. They are beholden to the timetable of bus drivers, who prefer to circulate when demand is highest (to increase their earnings) and stop whenever they assess ridership will not match the cost of running their vehicle. Passengers must also contend with the state of disrepair in which many of these buses and collective taxis find themselves, which makes the journey unpleasant and often dangerous. Additionally, due to the lack of regulation, and the age, maintenance, and use of these units, many of them emit copious amounts of greenhouse gas emissions, which

[21] SAGARPA, *Guía para el Buen Gobierno Municipal*, vol. 1: *Introducción al Gobierno y Administración Municipal*, Mexico City, 2004, p. 66.

[22] Méndez *et al., op. cit*., p. 53.

[23] Due to the lack of any meaningful regulation, the ownership and operation of buses and collective taxis in Mexico varies wildly. As authors Méndez *et al.* show, over 87% of buses are owned by the driver (see, *supra*, footnote 39), nevertheless, this is not always the case. When drivers do not own their own vehicle, they normally work for a person who owns a flotilla, paying them a certain rent for the use and maintenance of the vehicle, and drawing a salary from whatever remains after they cover their dues.

ultimately harm urbanites as a whole. Lastly, passengers are exposed to theft and sexual assault, which are not uncommon and discourage many from using public transportation.[24]

Due to the lack of viable alternatives, people who are unable to afford a private vehicle are forced to rely on public transportation. On the side of drivers, the persistence of such conditions is merely the result of the lack of any economic incentive to improve the quality of their vehicles. The status quo is maintained with any eventual marginal improvements being quickly offset by any lack of interest by the relevant authorities. To reiterate the argument of authors Suárez Lastra and Delgado Campos, public transportation, as it is currently configured in merely an "engine of the poor".[25]

This dynamic is mostly beneficial for local governments and accrues some benefits to bus/combi owners and bus/*combi* companies. For municipal authorities, the status quo means less resources spent, and it allows them to place all responsibility on the private sector for failing to provide an adequate service. Meanwhile, owners of buses and collective taxis can continue to extract from a captive population who, unless they decide to walk or are able to afford other means, are forced to rely on the same service, even when it is itself unreliable.[26] Despite all of these shortcomings, combis and buses account for 60% of travel on any given mode of transportation,[27] with the latter holding a predominant role in the centre, north, and metropolitan regions, while collective taxis make up the bulk of transportation in the south of the country.[28]

The two major options available to those who do not rely on cars or buses, be it out of principle, convenience, or because they are priced out of both, are bicycles and walking. Sadly, numbers for these two activities are not abundant. The closest one can get to understanding the behaviour of cyclists and pedestrians is by analysing the data on commuters who travel to school or work. There we can observe that 54.8% of people walk to school, while only 1.5% choose to bike.[29] When it comes to work, 22.6% walk, while 5.4% cycle.[30] For those who are able, biking and walking are viable options that allow one to travel short distances practically for free. Unlike cars, they require much less infrastructure

[24] Méndez *et al., op. cit*., pp. 7-9.

[25] Lastra Suárez and Delgado Campos, *op.* cit., p. 69.

[26] Dorian Antonio Bautista-Hernández, "Commuting inequality, role of urban structure, and identification of disadvantaged groups in the Mexico City metropolitan area", *Journal of Transport and Land Use* 13, no. 1, 2020, pp. 172-174.

[27] This includes animals, bicycles, taxis, motorcycles, school bus, subway, light train, BRT, and cars. Lastra Suárez y Delgado Campos, *op.* cit., p. 110.

[28] *Ibid*., p. 111.

[29] Méndez *et al., op. cit*., pp. 2-4.

[30] *Loc. cit.*

for them to effectively traverse the city, sadly, the distribution of kinetic space favours private motorized vehicles, pushing many to adopt the car, use public transportation, or simply stay at home. Although one can infer certain realities from the little information that is available, it is not enough to understand the complexity of non-motorized mobility in Mexico. Authors such as Luis Chias Becerril, Manuel Suárez Lastra, Ruth Pérez López, among many others have made attempts to investigate the experience of pedestrians and cyclists,[31] but the literature still does not do justice to the phenomenon. Little is known about mobility in Mexico, but much less is known of those who rely on bikes or their feet to travel.

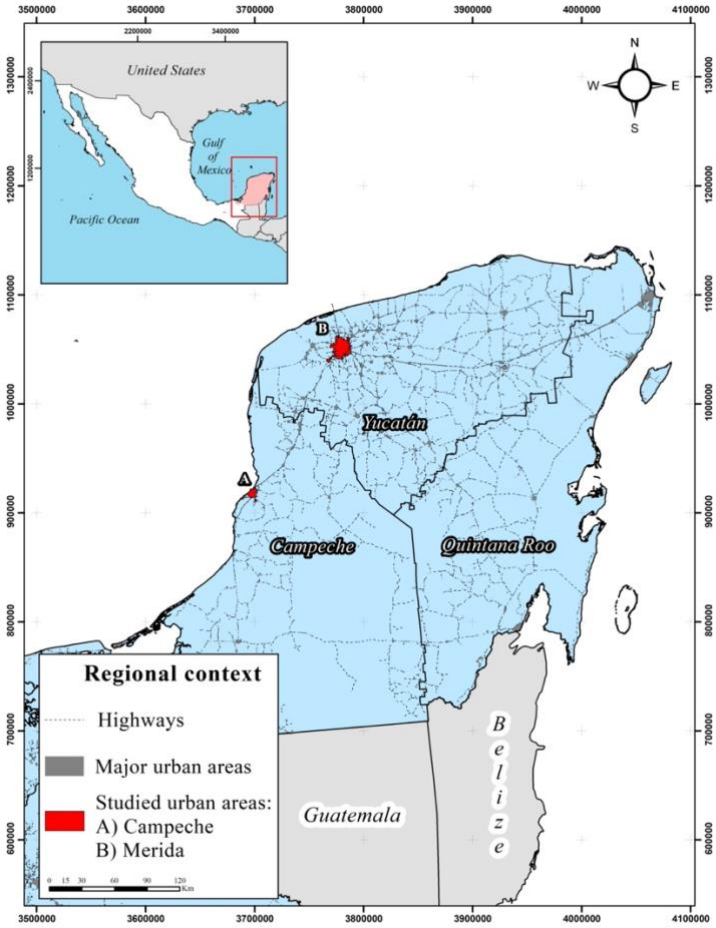
As the examples given make clear, automobility holds a firm grasp over movement in Mexico. The regime has created conditions that favour the construction and maintenance of roads, which nominally allow for the participation of both private and public forms of transportation but incentivize the use of cars. This push for the privatization of travel impedes the creation of quality mass transit infrastructure than would challenge the existing hierarchy of the current mobility regime. Those who choose to adopt private travel in the form of bicycle or pedestrian autonomous mobility find themselves, in the best of cases, competing with much larger machines for their right to exist in shared kinetic spaces. In the best scenario, they live in fear of the car's potential violence, in the worst of cases, they fall victim to vehicular violence.

The overarching dynamics of mobility previously described in this section are present, to a greater or lesser degree, throughout the whole country. However, to say that these are universal and that their implementation is homogenous would be a disservice to the study of travel. Historical, ethnic, and economic realities shaped the Mexico's diverse regions, and by extension, the ways in which people engaged with mobility. The remainder of the chapter will focus on those conditions which influenced travel in the Yucatan Peninsula, in particular, in two of the region's largest cities, Campeche and Merida. With these two cases, we can both study entrenched mobility and shed light on one of the country's least researched regions.

[31] Ruth Pérez López and José Manuel Landin Álvarez, "Movilidad cotidiana, intermodalidad y uso de la bicicleta en dos áreas periféricas de la Zona Metropolitana del Valle de México", *Cybergeo: European Journal of Geography*, 2019; Elisa Hidalgo-Solórzano, Julio Campuzano-Rincón, Jorge M. Rodríguez-Hernández, Luis Chias-Becerril, Héctor Reséndiz-López, Harvey Sánchez-Restrepo, Bernardo Baranda-Sepúlveda, Claudia Franco-Arias, and Martha Híjar, "Motivos de uso y no uso de puentes peatonales en la Ciudad de México: la perspectiva de los peatones", *Salud pública de México* 52, no. 6, 2010, pp. 502-510; Manuel Suárez Lastra, Masanori Murata, and Javier Delgado Campos, "Why do the poor travel less? Urban structure, commuting and economic informality in Mexico City", *Urban studies* 53, no. 12, 2016, pp. 2548-2566.

4.2 The context of the Yucatan Peninsula

The Yucatan Peninsula, located in Mexico's south-east, is one of the two peninsulas that give the country its iconic shape. Geographically, the region is relatively flat, with an increased elevation to the south of the peninsula in the direction of the state of Chiapas and the country of Guatemala, as can be seen in map 1.



Map 1. The Yucatan Peninsula
Source: Base map, Open Street Map. Urban areas, INEGI.

Geopolitically, the Mexican portion of the Yucatan Peninsula is comprised of three states: Campeche, Quintana Roo, and Yucatan. The largest (and oldest) of these three, is the state from which this peninsula gets its name: Yucatan. Its capital, the city of Merida, was founded in 1542 by Francisco de Montejo, who was charged by the Spanish crown with settling the south-eastern lands of their colony.[32] During the 300 years of colonial rule, and in the early period of the republic that emerged after Mexico's war of independence, it was

[32] Russell Cerón Grajales, "Las instituciones jurídicas en la conquista de Yucatán y fundación de Mérida", *Revista de la Facultad de Derecho de México* 64, no. 261, 2017, p. 237.

the state of Yucatan which exercised sole control over the entire peninsula.[33] The city of Campeche was also founded by Francisco de Montejo, two years prior (1540) to the founding of Merida. It would be but one city among many within the peninsula, until 1863, when President Benito Juárez ratified its emancipation and recognized the state of Campeche as a separate entity, with the city by the same name becoming its capital.[34] Following the emancipation, the land which Quintana Roo now claims was divided and shared by the two recognized Mexican states of the Yucatan Peninsula. Finally, in 1902, in an effort to address a number of pressing issues, such as the encroachment of British Belize and exploit the natural resources of the region, President Porfirio Díaz created the first iteration of the territory that the state now occupies.[35] Nevertheless, it would be another 70 years (1974) until the mass tourist project of the Peninsula (with Cancun as its flagship) created the conditions for the formation of Quintana Roo as a sovereign entity.[36]

As noted, the presence of western urban centres in the state of Quintana Roo is a recent phenomenon. Prior to the tourist project that saw the rise of vacation hotspots such as Cancun, Cozumel, Tulum, and Playa del Carmen, the territory had little in the form of contemporary urban infrastructure. This development, dictated by a particular model of exploitation, has determined the shape, scope, and services offered by these spaces under the emerging neoliberal model that began to take hold at the end of the 20th century. Its distinct infrastructure is mirrored by its unique demography. Unlike the population growth of its neighbouring states, Quintana Roo has experienced several waves of migration which have –at times– seen its population balloon at rates of over 100%. This latter phenomenon occurring in response to the high demand for labour in a state which seeks to enable the continued growth of the tourism industry.[37]

Due to the reasons outlined above, the following chapter will not include any city from Quintana Roo in this study of urban mobility in the Yucatan Peninsula, instead choosing to

[33] The war of Independence gave rise first to an empire and later to a republic. It was under the republic that Yucatan was branded as a state. Elda Moreno Acevedo, "De la independencia a la Constitución El tránsito de Yucatán de provincia a entidad federativa (1821–1825)", *Jahrbuch für Geschichte Lateinamerikas* 43, no. 1, 2006, pp. 351-370.

[34] Román Piña Chán, "Campeche: Un poco de historia", *Antropología. Revista interdisciplinaria del INAH* 66, 2002, pp. 20-31.

[35] Carlos Macías Richard, "El Territorio de Quintana Roo. Tentativas de Colonización y Control Militar En La Selva Maya (1888-1902)", *Historia Mexicana* 49, no. 1, 1999, pp. 8 *et passim*.

[36] Rebecca Torres and Janet Henshall Momsen, "Gringolandia: Cancún and the American tourist", in *Adventures into Mexico: American Tourism Beyond the Border,* Nicholas Dagen Bloom (ed.), Rowman and Littlefield, Maryland, 2006, pp. 56-73.

[37] María Bianet Castellanos, *A return to servitude: Maya migration and the tourist trade in Cancún*, U of Minnesota Press, 2010, pp. 77 *et passim.*

focus entirely on two of its neighbour's urban areas. The cities in Quintana Roo exemplify distinct economic and demographic dynamics, both of which are recent. This differs from the development of post-columbine cities in the states of Campeche and Yucatan, in particular their capitals Campeche and Merida, which developed throughout the course of roughly half a millennia, have responded to (and been shaped by) different economic pressures and historical moments, and whose demographic processes have proceeded at a much slower pace.

4.3 Demographic and socioeconomic composition of the states of Campeche and Yucatan

The following section explores the demographic and socioeconomic makeup of Campeche and Yucatan. The text provides data on the population, economy, and wealth distribution in these neighbouring states, to examine the points of convergence and departure. The purpose of this exercise is to provide an overview that serves as a platform from which to study public transportation in their respective capitals.

The state of Yucatan holds a population of 2,320,898, which is more than double that of Campeche's 928,363 inhabitants.[38] Both their capital cities, Merida, and Campeche respectively, are the largest urban centres in their states. In the case of Merida, the municipality hosts over 40% of Yucatan's population (995,129), however, the metropolitan region that makes up the totality of what is considered the city of Merida, holds 1,226,935 inhabitants, which represents 52.86% of the state's entire population.[39] The state of Campeche does not exhibit the same degree of centralization that is present in its northern neighbour. Its capital city, formally called San Francisco de Campeche, hosts 31.67% (294,077) of the state's population, narrowly beating the oil producing city of Ciudad del Carmen (248,845) located to the south.[40]

When speaking of the population that makes up this region, one must stress its heterogeneity. The Yucatan Peninsula is well-known for its Maya heritage, with the largest concentration of Mexican Maya people living in the region. The state of Yucatan is home to over 535,000 inhabitants who speak an indigenous language, the overwhelming majority of

[38] Secretaría de Economía, "Yucatán", "Campeche", *Data México*, 2020.

[39] In this text, metropolitan Merida will refer to the space that comprises the municipalities of Merida, Uman, Ucu, Conkal, and Kanasin. The latter four both share a municipal border, and their largest settlement is within 5 km of the main contiguous urban area. The number of inhabitants is thus a sum of the populations of all five municipalities.

[40] "Campeche", *Data México*, art. cit.

which speak Yucatec Maya (528,563).[41] When compared with the overall population of the state, one sees that over a fifth of the people who live in Yucatan (23.1%) speak an indigenous language. Campeche exhibits some similarities to the case of its northern neighbour. Of the over 85,000 Campechanos who speak an indigenous language, 64,799 speak Yucatec Maya,[42] which is certainly a substantial majority (75.69%), but not the overwhelming majority one can see in the case of Yucatan. This is mostly because indigenous people in Campeche speak other distinct variants of Maya, such as Ch'ol and Tseltal. The data presented above shows that while the largest ethno-linguistic minority are Maya people, a smaller percentage of the overall populace speak and indigenous language in Campeche when compared to Yucatan, both in absolute and relative terms, with speakers of an indigenous language only making up 9.22% of Campeche's total population.[43]

While both states share historical similarities, the development of their economies over the past 60 years has varied. As the cultivation of henequen fibres became less profitable, the state of Yucatan transitioned to an economy that mostly relied on tertiary activities –such as commerce– but held a firm manufacturing core that also contributed to its GDP. As presented in figure 1, of the state's 376.8-billion-peso output (in 2021), 66.1% was a product of tertiary activities, while secondary activities made up 29.4% (primary activities contributing the remaining 4.5%).

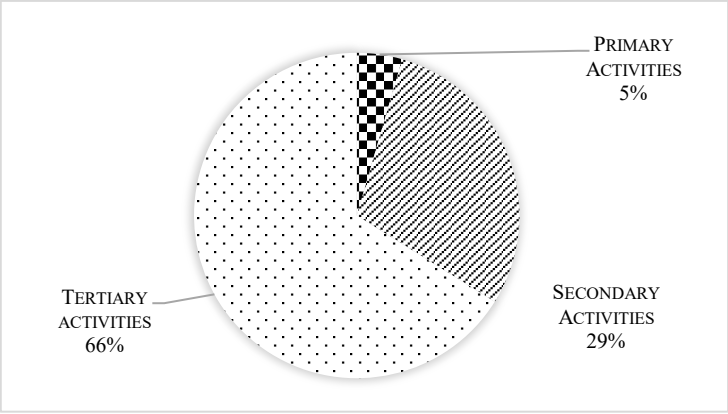


Figure 1. GDP of the state of Yucatan, 2021
Source: INEGI, Producto Interno Bruto por Entidad Federativa.

Campeche, which historically depended on primary resource extraction,[44] has continued to do so, relying at present on the rent accrued from the exploitation of its offshore oil fields by

[41] "Yucatán", *Data México*, art. cit.
[42] "Campeche", *Data México*, art. cit.
[43] *Loc cit*.
[44] Carlos Alcalá Ferráez, "Cambios demográficos en el estado de Campeche (México). Conflictos, desarrollo y economía, 1846-1910", *Revista de Historia Regional y Local* 10, no. 20, 2018, pp. 134-164.

the national oil company (PEMEX). Of the 483 billion pesos it contributed to the national economy in 2021, 76% corresponded to the secondary sector, which is mostly made up of mining activities. As seen in figure 2, this effectively makes up over three quarters of Campeche's GDP. It contrasts sharply with tertiary activities, which correspond to 21.8% (primary activities only accounting for 2.2%). Seen in this light, one can appreciate the difference between two economic models, one predicated on the rent accrued from resource extraction (Campeche) and the latter predicated upon the development of a local industry focused on manufacturing and services (Yucatan).

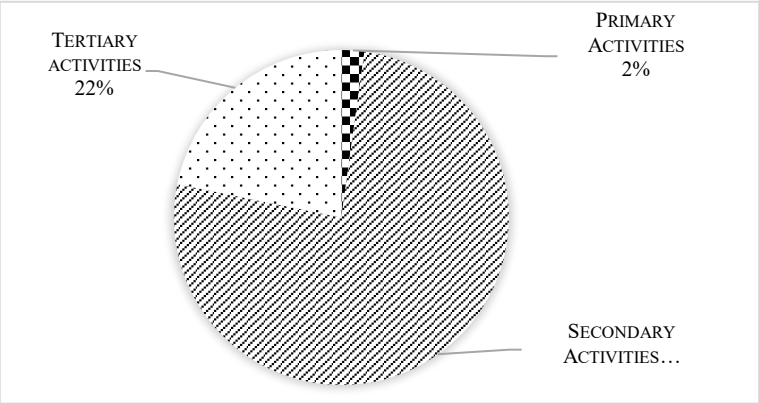


Figure 2. GDP of the state of Campeche, 2021
Source: INEGI, Producto Interno Bruto por Entidad Federativa.

Despite the vast amounts of wealth created in both states, these resources are not distributed equally, which is evidenced by the work of CONEVAL. They provide a multivariate analysis of poverty which incorporates access to essential services, providing a comprehensive view of Mexican society.[45] Figure 3, depicts the complex nature of poverty in the state of Yucatan. As is clear from the first metric, overall poverty affected more than 2 in 5 Yucatecos before the pandemic, impacting roughly half of the population (49.5%) by 2020. Meanwhile extreme poverty saw a huge increase during the pandemic, growing almost six percentage points from 6.5% in 2018, to 11.3% in 2020. While poverty rose across the board, the percentage of people vulnerable due to social deprivation decreased from 26.9% to 22.1%, which suggests that the federal government's response to the COVID 19 pandemic improved access to social services.

[45] María del Rosario Cárdenas Elizalde, Fernando Alberto Cortés Cáceres, Agustín Escobar Latapí, Salomón Nahmad Sittón, John Scott Andretta, Graciela María Teruel Belismelis, Metodología para la medición multidimensional de pobreza en México, CONEVAL, 3rd edition, 2019, pp. 21 *et passim*.

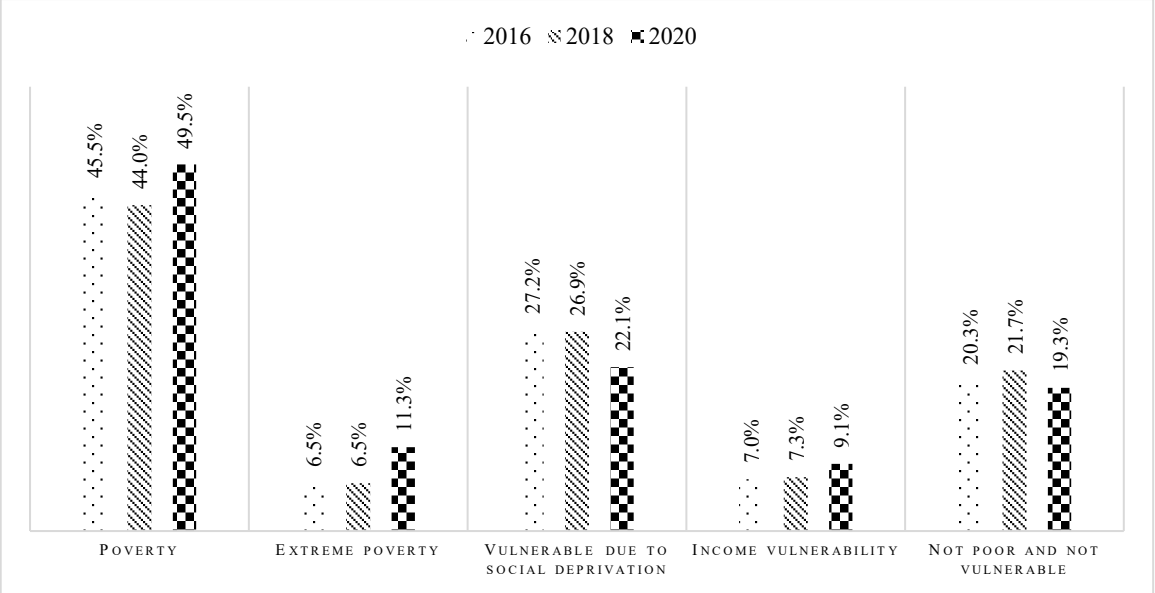


Figure 3. Poverty and social deprivation Index, Yucatan
Source: CONEVAL, Estadísticas de pobreza en Yucatán.

Like Yucatan, Campeche also suffered an increase in poverty over the same period. Figure 4 shows that poverty in Campeche has increased since 2016, rising from 45.7% to 50.5% by 2020, unlike Yucatan however, in Campeche poverty grew consistently, while its northern neighbour registered a slight improvement before the pandemic struck. Overall extreme poverty showed a more telling pattern of growth, increasing by over 2 percentage points both between 2016 and 2018, and then again between 2018 and 2020. This departs from the situation of those in extreme poverty in Yucatan, whose growth came only after the events of COVID 19. Where both states display a degree of similarity is with regards to income vulnerability and vulnerability due to social deprivation. The former growing in both states, while the latter has seen a significant decline in both entities.

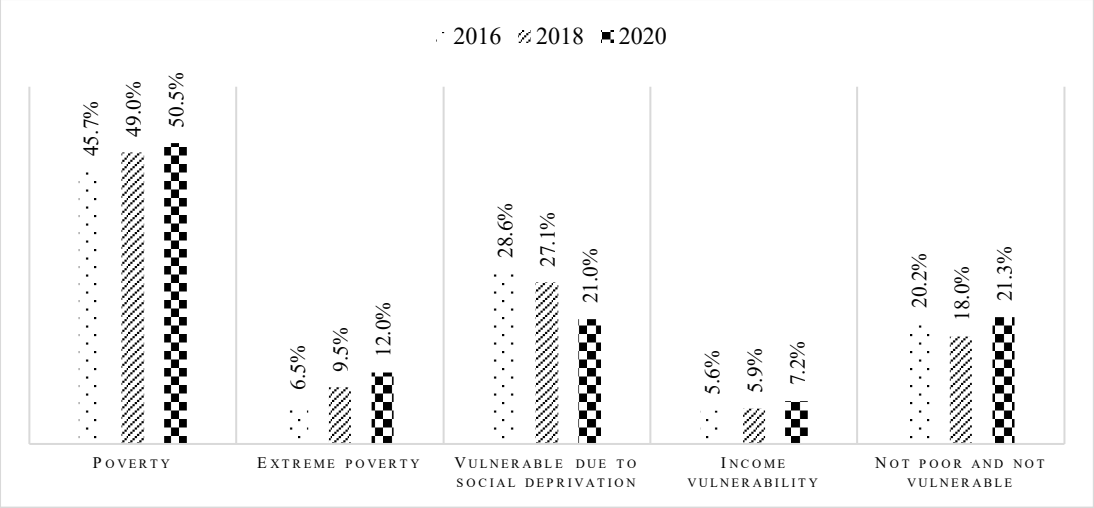


Figure 4. Poverty and social deprivation Index, Campeche
Source: CONEVAL, Estadísticas de pobreza en Campeche.

When put together, one can appreciate the state in which both Yucatan and Campeche found themselves prior to the pandemic, how it affected them, and what the current metrics tell us about where these economies differ, and where they exhibit similar patterns. Figure 5 shows that, in 2018, Campeche struggled more with both poverty and extreme poverty than Yucatan, but it is of note that its population was less vulnerable due to income. As concerns vulnerability due to social deprivation, in both states one out of every four Campechanos and Yucatecos were vulnerable due to social deprivation.

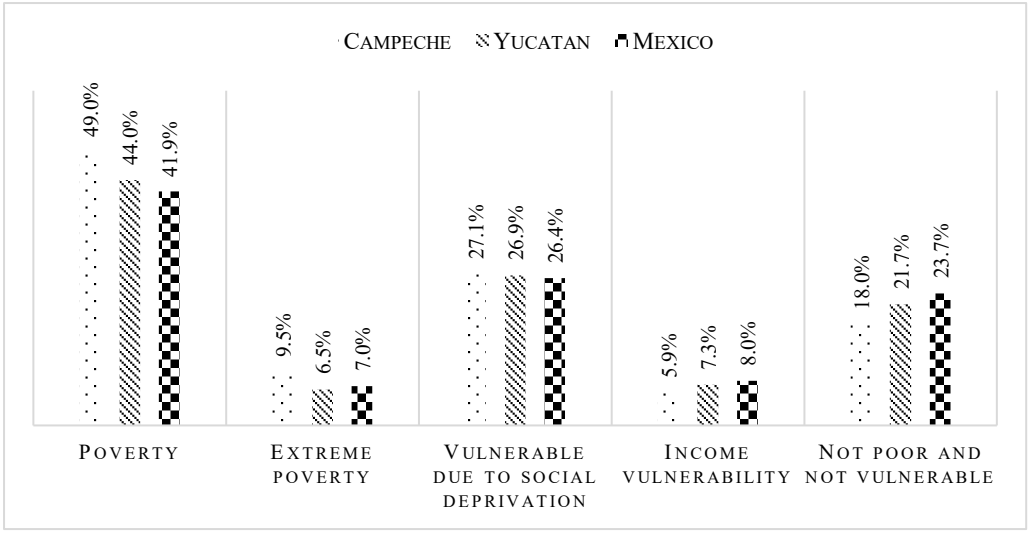


Figure 5. Poverty and social deprivation Index, Campeche, Yucatan & Mexico, 2018
Source: CONEVAL, Estadísticas de pobreza en Campeche, Yucatán, México.

Two years (and one pandemic) later, poverty rates in Yucatan jumped to 49.5%, while Campeche's grew to 50.5%, with in a percent of each other. Extreme poverty grew so rapidly in Yucatan, that it almost matched that of Campeche (a state from which it held considerable

distance two years prior). The population of Yucatan continued to be more vulnerable due to income and was now also more vulnerable due to social deprivation, as seen in figure 6. While these numbers describe the grim reality of an unequal society, they do not point out who bears the brunt of such inequity. For that, one must look at these figures through the lens of colonialism's legacy in the Yucatan Peninsula.

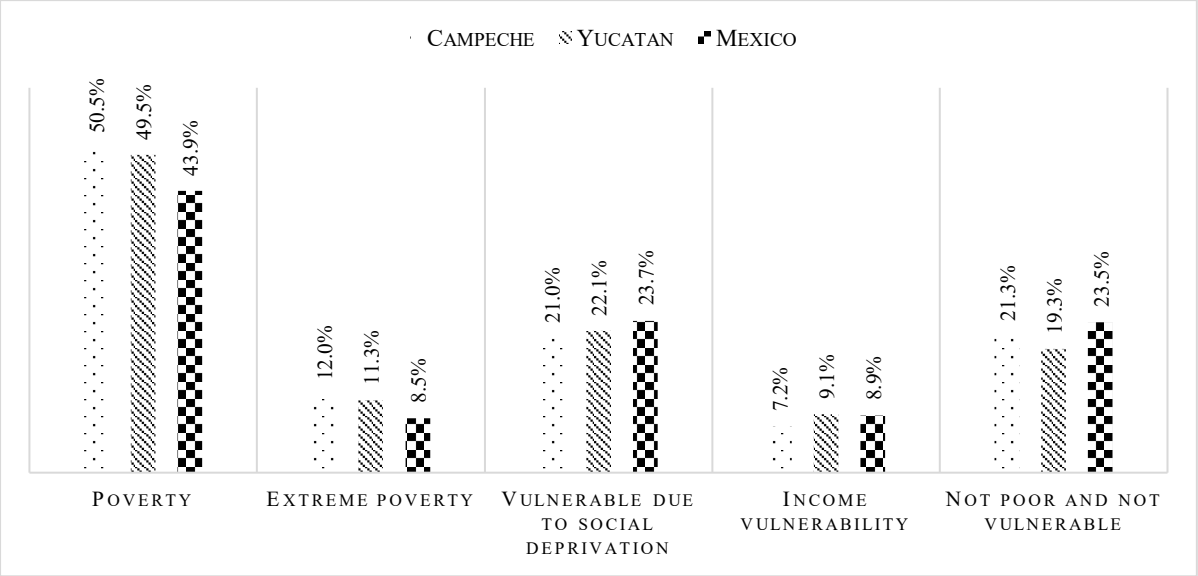


Figure 6. Poverty and social deprivation Index, Campeche, Yucatan & Mexico, 2020
Source: CONEVAL, Estadísticas de pobreza en Campeche, Yucatán, México

As CONEVAL's own reports for these states shows, poverty is disproportionately felt by three groups: speakers of an indigenous language, inhabitants of rural communities, and the under 18s. I will focus on the first of these. As is evident in figure 7, the poverty of people who speak an indigenous language has grown in both Campeche and Yucatan. While the poverty rate in the former stood at 55.4% in 2016, it has since ballooned to 73.1% in 2020. Yucatan, for its part, has managed to keep the poverty rate of speakers of an indigenous language constant. While it was higher than Campeche's in the year 2016 (62.8%), its growth has been much smaller, increasing by roughly 3 percentage, standing at 65.7% in 2020. Despite the difference in the rate of poverty, this still means that approximately two thirds of all people who speak an indigenous language in Yucatan live in poverty, the number being three fourths in Campeche.

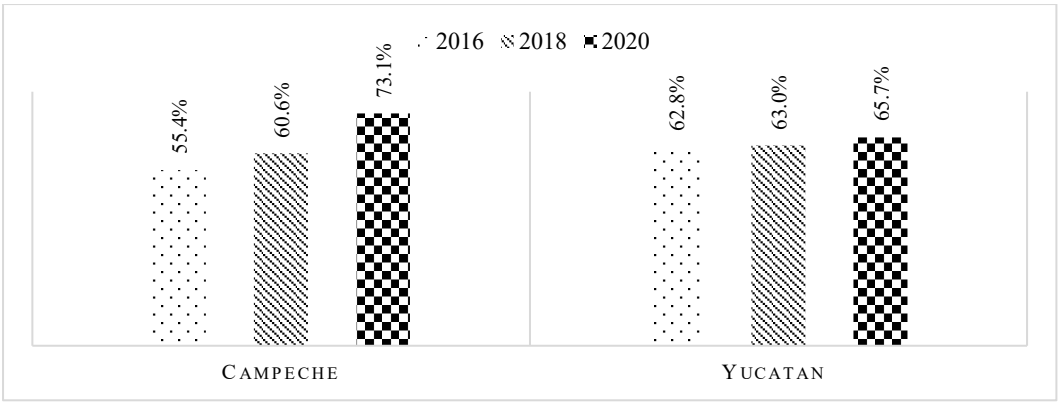


Figure 7. Percentage of people who speak and indigenous language living in poverty
Source: CONEVAL, Estadísticas de pobreza en Campeche, Yucatán.

The information presented by CONEVAL can be further validated by the data compiled by ENADIS (INEGI'S survey on discrimination). The latter distinguishes between speakers of an indigenous language who live in rural areas, and those who dwell in cities. Their findings show that over 85% of speakers of an indigenous language in urban areas in both states are part of either the lowest or the second lowest rung of socioeconomic status.

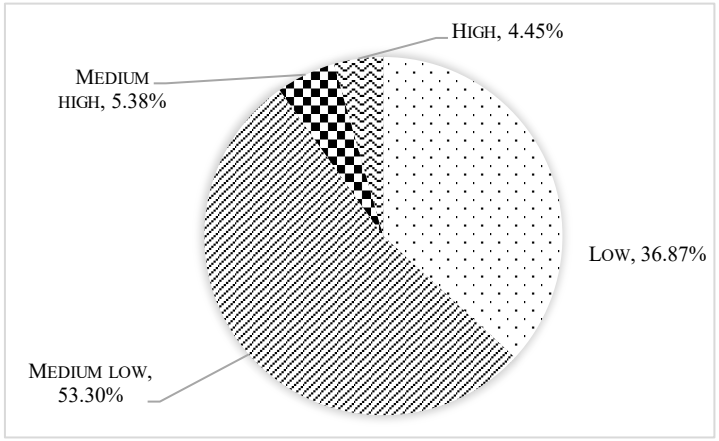


Figure 8. Socioeconomic status of indigenous people in urban areas, Campeche
Source: ENADIS, Información de Gobierno, Seguridad Pública e Impartición de Justicia.

In Campeche, 53.3% are in the medium-low category, with 36.87% being classified as low, as can be seen in figure 8. For the case of Yucatan, the data from figure 9 shows that the distribution between low (42.74%) and medium-low (43.65%) is practically identical, with a slight advantage for the latter. Taken together, the data from ENADIS and CONEVAL demonstrates that not only are most speakers of an indigenous language found in the lowest socioeconomic segment of urban space, but it is they who bear the brunt of poverty when it impacts the region.

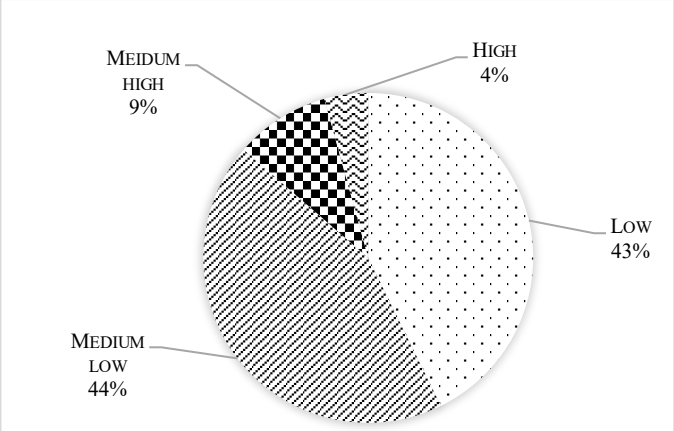


Figure 9. Socioeconomic status of indigenous people in urban areas, Yucatan
Source: ENADIS, Información de Gobierno, Seguridad Pública e Impartición de Justicia.

Taken together, the information presented thus far provides a rough outline of the demographic and socioeconomic conditions in Campeche and Yucatan. In terms of population, the latter is by far larger than the former, with the city of Merida alone being larger than the entire population of its southern neighbour. In terms of the presence of people who speak and indigenous language, both states are home to a significant Maya speaking population, Yucatan's again being larger in both absolute and relative terms. However, despite demographic differences, indigenous people face comparable levels of urban poverty in both states, with overall indigenous poverty growing in both Campeche and Yucatan. The relation these issues hold to mobility is the purview of the following section.

4.4 Mobility in the states of Campeche and Yucatan

4.4.1 Monetary expenditure on transportation in the states of Campeche and Yucatan

The privatized nature of mobility in Mexico (especially urban mobility) means that wealth is a measure of one's motility. The unequal distribution of such wealth in the states of Campeche and Yucatan unevenly allocates the capacity to consume the city by limiting access to transportation. Mobility, due to its lack of recognition as a right, allows for market dynamics to take hold, which restricts the travel capacity of those whose purchasing power is found lacking. This effectively disenfranchises them, limiting the degree to which they can partake in society, and urbanity more broadly.

The unequal nature of mobility in Mexico was summarised at the beginning of this chapter, and as the following tables shows, this pattern is present in the Yucatan Peninsula. Divided by deciles of income, table 2 shows the percentage of monetary expenditure that each family spends on transportation in the state of Yucatan over a three-month period.

Wealthier families (deciles VI through X) spend more on transportation that those with less financial capital. Even when one includes the information compiled during the first year of the COVID-19 pandemic, one can observe that spending among the upper deciles remained higher (on average) than that of their counterparts.

Table 2. % Monetary expenditure on transportation, Yucatan

	Year									
Decile		I	II	III	IV	V	VI	VII	VIII	IX	X
	2016	9.3%	13.4%	14.1%	15.3%	18.6%	21.0%	19.1%	22.2%	24.1%	19.8%
	2018	9.9%	11.8%	16.1%	15.8%	17.1%	20.0%	23.3%	20.7%	23.5%	28.3%
	2020	11.2%	11.0%	13.3%	15.7%	15.6%	16.4%	21.4%	21.4%	22.5%	19.0%

Source: ENIGH, Información Demográfica y Social, Yucatán.

While those with more economic means outspend their peers on the issue of mobility, they choose to do so by removing themselves from collective means of transportation. As evidenced by table 3, the money spent by the wealthiest families on transportation is not reflected in their use of public transport. One can observe that the trend present in table 2 is reversed, with the lowest deciles (I through V) spending more as a percentage of their expenditure on transportation than their peers on the other end of the spectrum. This means that, although the poorer deciles spend less money on transportation, whatever they do spend is significantly (if not mostly) spent on public transportation. This contrasts sharply with the spending patterns of wealthier deciles, specially the wealthiest (X), whose spending on public transportation is dwarfed by that of all other deciles.

Table 3. % Transport spending used for public transportation, Yucatan

	Year									
Decile		I	II	III	IV	V	VI	VII	VIII	IX	X
	2016	62.2%	56.0%	45.6%	51.1%	44.7%	39.1%	36.5%	33.6%	18.2%	10.4%
	2018	49.6%	49.7%	49.1%	47.0%	38.2%	39.2%	26.3%	30.1%	22.4%	6.8%
	2020	37.4%	34.3%	30.4%	22.7%	25.6%	23.3%	16.4%	18.9%	10.2%	4.0%

Source: ENIGH, Información Demográfica y Social, Yucatán.

While table 3 provides a seemingly clear-cut case that the wealthiest families segregate themselves by not consuming public transportation, it is important to emphasize one last element. The ENIGH considers taxicabs a form of public transportation, which they indeed are, since taxis offer a service that is open to the public. Nevertheless, it is also of note that once hired, the driver cannot simultaneously offer its service to another party. So, while not purely private, they do serve to segregate the rider. It is no coincidence then that, in 2016,

the families in the highest decile (X) used almost 30% (29.95%) of their spending on public transportation on taxis. The relevance of this seemingly meandering comment is to emphasize that, even when taking public transportation, families at the very top opt for services that further their isolation.

One final topic of note is the sharp decline in spending on public transportation in the year 2020. The COVID-19 pandemic, and the mandates that imposed strict distancing rules, limited the ability of people to physically congregate in enclosed spaces, such as buses and collective taxis. Furthermore, fear of the virus and its potential repercussions meant that people began to avoid these forms of transportation, even without a direct government mandate. In table 3 this translates as a drop in the use of public transportation by all deciles, regardless of wealth, for both the states of Yucatan and its neighbour to the south

While the pandemic changed mobility in the state of Campeche, inequality was present prior to the complications that arose from it. Like table 2, table 4 divides society into deciles according to wealth, and shows the average monetary expenditure of Campechano families on transportation over a three-month period. One can readily observe that people in the highest deciles (VI through X) spend progressively more of their monetary expenditure on transportation than do the families who find themselves at the other end of the spectrum (deciles I through V).

Table 4. % Monetary expenditure on transportation, Campeche

	Year										
Decile		I	II	III	IV	V	VI	VII	VIII	IX	X
	2016	14.9%	13.3%	17.6%	14.8%	16.8%	17.9%	19.5%	19.7%	25.2%	24.9%
	2018	14.3%	11.8%	14.8%	17.3%	16.3%	19.4%	19.7%	19.3%	23.8%	25.9%
	2020	11.1%	12.0%	14.6%	13.7%	14.4%	18.5%	17.7%	17.8%	25.1%	23.8%

Source: ENIGH, Información Demográfica y Social, Campeche.

As in Yucatan, while the wealthiest families spend more on transportation overall, this expense is not evenly distributed. As in the case of Yucatan, this discrepancy between deciles is often a reflection of the isolationist mobility practices of the wealthy. Table 5 shows that while in 2016 the lowest earners used almost 15% of their monetary expenditure on transportation, nearly half of it (44.7%) was used for public transportation. Conversely for that same year, while the highest earners spend nearly 25% (24.9%) of their monetary expenditures on transportation, only 6.5% of it was used for public transportation. One can thus argue with ease that the wealthy seldom partake in collective mobility. This latter

statement is further advanced by the fact that, for the year 2016, the wealthiest decile (X) used over a third of their spending for public transportation (34.22%) on taxis.

Table 5. % Transport spending used for public transportation, Campeche

Year / Decile	I	II	III	IV	V	VI	VII	VIII	IX	X
2016	44.7%	45.1%	31.0%	51.2%	39.0%	42.1%	32.9%	32.6%	18.5%	6.5%
2018	38.8%	37.6%	40.7%	37.3%	40.1%	41.0%	30.1%	23.0%	20.9%	6.3%
2020	33.3%	22.3%	26.6%	22.0%	23.6%	15.5%	14.7%	15.5%	4.9%	3.0%

Source: ENIGH, Información Demográfica y Social, Campeche.

From the tables presented thus far, one can observe that mobility in Campeche and Yucatan is unequal. In a country that views transportation as a for-profit endeavour, travel is predicated on the purchasing ability of the individual. In both states, it is the wealthy, particularly the two wealthiest deciles (XI and X) who consistently use more of their monetary expenditure on the rubric of transportation. Despite this vast pool of wealth earmarked for travel, they only spend a small amount on public transportation. Their mobility is, by these metrics, a segregated affair. The highest deciles outspend their peers, yet do not do so by relying on the same means of transportation. The state of mobility in Campeche and Yucatan is thus one of class division, where travel is measured in pesos, rather than in the needs of the people who both produce and reproduce the spaces that Campechanos and Yucatecos inhabit.

4.4.2 The legacy of colonialism

The socioeconomic and demographic information presented earlier showed the Yucatan Peninsula to be not only an unequal society, but one where the legacy of colonialism intertwines poverty and ethnic identity. With the data on transportation, we can go further and argue that such legacy has a direct impact on the ability of peoples to travel. Not only does their indigenous identity have repercussions on their ability to accumulate wealth, but it also limits their capacity to move, which in turn restricts their ability to use kinetic spaces, further curtailing opportunities that might improve their socioeconomic standing.

While the information presented thus far is not sufficient for categorical claims, it allows for some conclusions to be drawn. In both Campeche and Yucatan, poverty affects roughly half of the population, a problem which has worsened due to the impact of the COVID-19 pandemic. The people who bore the brunt of growing poverty are those who

speak Yucatec Maya, who make up the largest indigenous group in both states. Not only do half of them live in poverty, the number of people who find themselves in that situation is growing (figure 7). As concerns Maya people in urban areas, most of them are classified as either middle-low or low in socioeconomic terms, as seen in figures 8 and 9.

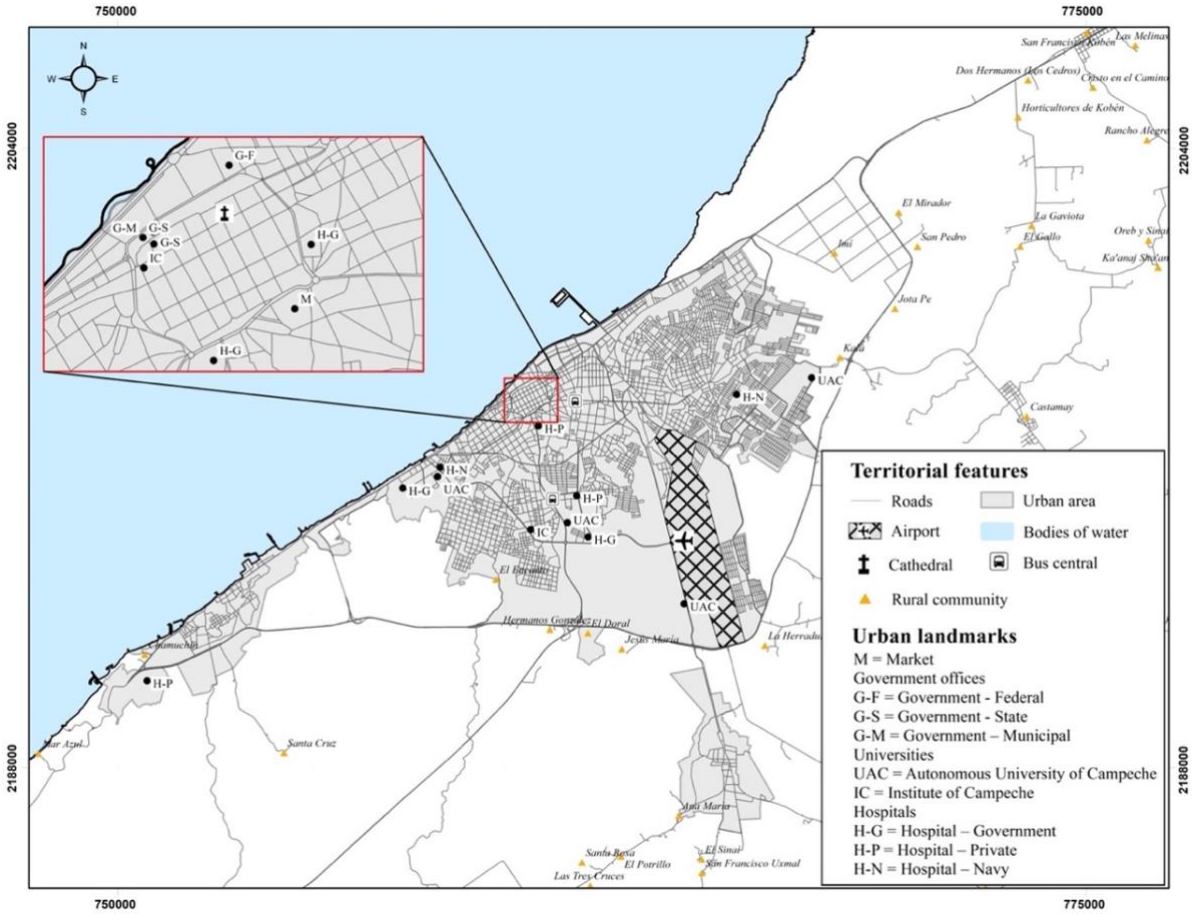
Mobility in Campeche and Yucatan is unequal (see tables 2 and 4). The wealthiest families far outspend the poorest by large margins yet choose to spend their resources on secluded forms of transportation. As tables 3 and 5 show, the wealthiest deciles of society seldom turn to public transport as a form of travel, while the lowest deciles channel what little they use for transportation on collective modes of transport. Taken together with the previous data on the ethnic identity of the least wealthy in society, one can claim that in Campeche and Yucatan, users of public transportation in either state's urban areas will likely be indigenous people found in the lower deciles. This then helps us establish that buses and collective taxis are mostly the tools that ferry those who cannot actively participate within the automobility regime and are thus forced to find refuge in the only mode of transportation which they can afford.

The overview of the socioeconomic and demographic makeup of these states, coupled with the class analysis of mobility, provides a rich context for the maps that follow. With the data provided above, the public transportation routes, the places they connect, and the kinetic spaces they occupy, can be viewed through the lens of class and ethnicity that dictates social relations in this region. The following analysis of the cities of Campeche and Merida study how they are spatially organized, and which factors affect how the ability to move (and the subsequent ability to consume the city) is predicated on practices of exclusion; in short, unequal mobility.

4.5 Economic and demographic distribution of the city of Campeche

Even a cursory glance of the city of Campeche reveals an arbitrary division that roughly splits it between the northeast and southwest, with the airport serving as the imaginary dividing line. Map 2 displays the position of relevant landmarks, considered as such due to the services they offer the community. One such example are government buildings, which are all clustered around the historical city centre, close to the avenue locally known as the "Malecon" (a promenade or corniche), which allows for easy access with cars, yet limits access for public transportation. In this same map, one can observe that all long-distance forms of transportation find themselves on the city's west-side, as exemplified by both bus

stations. Although the airport cannot be said to be squarely in one side or the other, access to it is only granted through its western-facing entrance, which effectively favours those living in that half of town. This trend continues with the central market. While it is true that the city hosts many smaller markets, the largest one is found in the west, close to the historical city centre.



Map 2. Relevant Urban landmarks, Campeche
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Landmarks, gathered by the author.

Discrepancies in the trend seemingly appear when one considers educational and healthcare facilities. A quick look at the map shows that one university campus and one hospital are found in the city's east, both of which deserve a quick explanation. As concerns the medical facility located in the southern portion of the eastern side, it is a military hospital, which means that access is exclusively granted to military personal, which effectively uphold this uneven distribution of services. However, it is the case that the university's facility breaks with the trend. The Autonomous University of Campeche has one campus on the eastern side of town, which means one cannot categorically assert that all infrastructure can be found in the west. Nevertheless, rather than dispel the claim that no infrastructure of note is in the

north-eastern side of the city, this last example serves more as contrast than a rebuke of the critique, as it serves to illustrate the deep divisions between east and west.

To the latter description one can add a 'periphery vs. centre' divide, which accompanies the 'southwest vs. northeast' dynamic previously described. Besides finding themselves in the west of the city, most of the services that are often frequented by urbanites are clustered closer to the waterfront, near the city centre. In map 2 this is clear for the case of hospitals and government facilities, with future maps in this sub-chapter showing that this extends to other relevant rubrics, such as education, healthcare, and financial services. Citizens who wish to access vital resources must thus travel westward and inward, a price they pay in either time or money, making living more costly. With map 2 one can begin to appreciate the degree of unequal mobility in the city of Campeche, for while some residents have easy access to most services, the rest are forced to travel great distances to secure them.

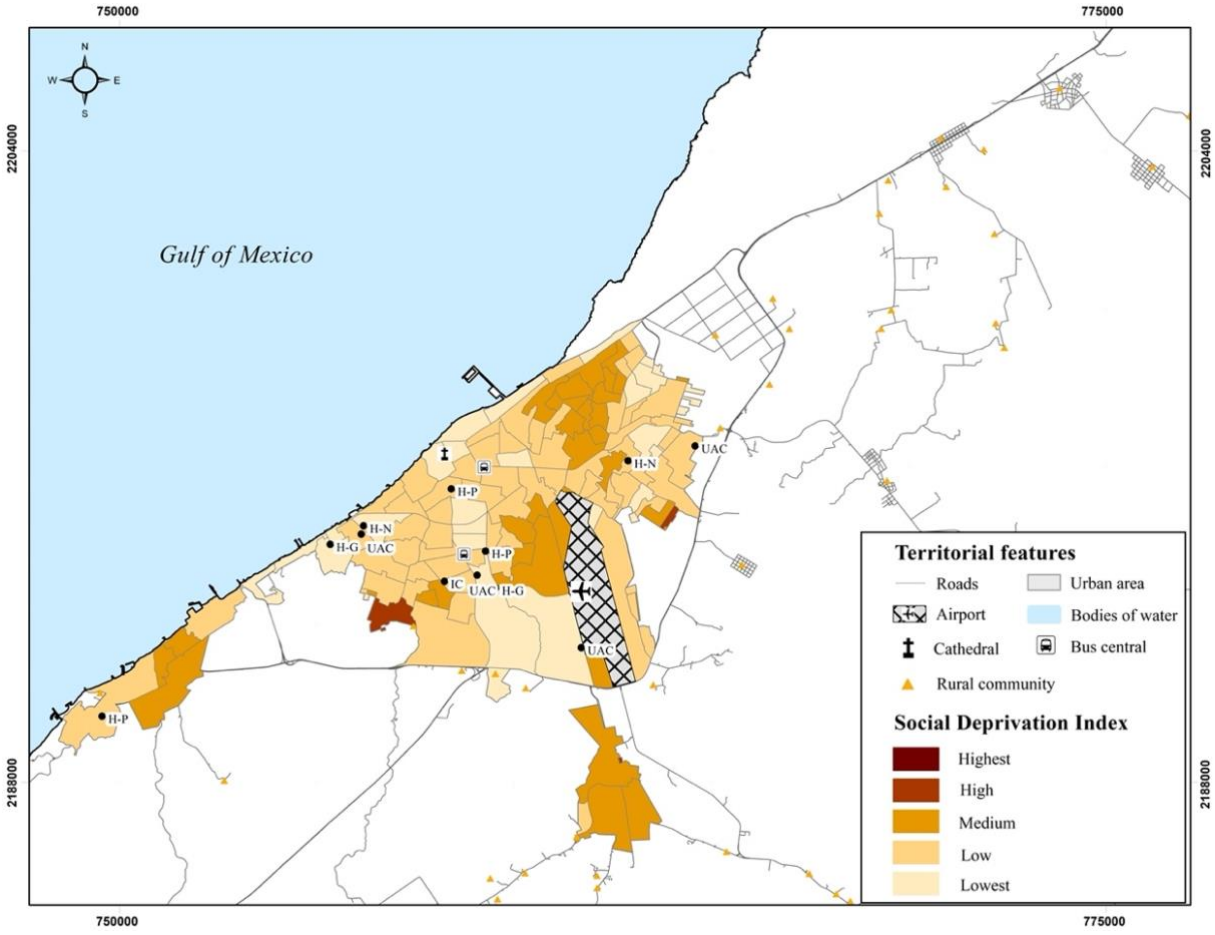
This seemingly simplistic narrative offers an apt summary of the current configuration of Campeche's urban landscape. One which relies on time and distance as instruments of dissuasion, which simultaneously secludes marginalized communities, while they facilitate access to various amenities for those who are deemed worthy. Although irresponsible to draw these conclusions from the information presented thus far, the following data will elaborate not only on the city as a physical manifestation of exclusionary practices, but on public transportation subsumed to automobility as the tool that enforces and perpetuates seclusion.

4.5.1 Spatial distribution of social deprivation in Campeche

Map 2 allows us to determine the distances people must cover to access vital services. Nevertheless, long distances are covered daily by wealthy people living in massive suburban mansions, and they do so by relying on their cars. So large distances do not necessarily tell us about the conditions in which they live or how they move. For that, we must turn back to CONEVAL's social deprivation index, and cartographically present their data to better understand the city of Campeche. Map 3 does so by providing a spatial representation of inequality in the capital. In it one can observe a rough centre-periphery dynamic, with most of the AGEBs with 'medium' and 'high' deprivation indexes located on the outskirts, with the polygons marked as 'low' or 'lowest' being mostly found in the centre. [46] This outward-

[46] Keen observers will note that although the table detailing the social deprivation index contains the category 'highest', this does not appear on the map. It is important that it remain for two reasons. The first,

inward dynamic of socioeconomic disparity is also visible when looking at it along the southwestern/northeastern axis. As is clear in the same map, the largest cluster of polygons deemed to suffer from 'medium' social deprivation are found in the northeast of the city. This opposite is true of the western part of town, which concentrates a larger number of polygons deemed to have the 'lowest' social deprivation, due in no small part to their position near hospitals, facilities of higher education, and other social amenities.



Map 3. Degree of social deprivation by AGEB, Campeche
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Social deprivation, CONEVAL.

The data from ENADIS (figure 8) and ENIGH (tables 4 and 5) lead us to conclude that there is a high likelihood that the least wealthy in society are both ethnically Maya and spend more on public transportation. Let us review the two parts of the statement. On the one hand, it is an indictment of a society that has clearly lacked both the willingness and the conviction to cast asunder its racist colonial past. That ethnically Maya people are still poorer than their

because it is also present in the map of Merida. The second, to serve as a reminder that higher degrees of deprivation exist across the states and the country.

white counterparts is evidence to the racist legacy that continues to plague the Peninsula. The second half of the statement is equally damning. That public transportation is overwhelmingly used by the poorest in society speaks to perceptions of modal inadequacy. In a society that has wholeheartedly adopted the tenants of the automobility regime, public transportation is the refuge the carless; the tool of last resort. Taken together, one can observe that automobility erected itself upon the foundations of a racist colonial hierarchy that contained within itself a stark class divide. The difference between public and private mobility acquired a new meaning, one in which differing transportation methods were allotted by purchasing power, which was itself determined by perceived racial or ethnic identity.

Taken together with the information presented in map 3, one can safely deduce that people who mostly rely on the option provided by public transportation will probably reside in polygons deemed 'medium' or 'high'. In other words, that people who are most likely indigenous or of indigenous heritage, and as a consequence of arbitrary birth allocation will have less economic capital, will reside in areas of the city with comparatively higher social deprivation. From this one state that people who live in the city's peripheral neighbourhoods often rely on public transportation when they seek to traverse urbanity in search of essential services.

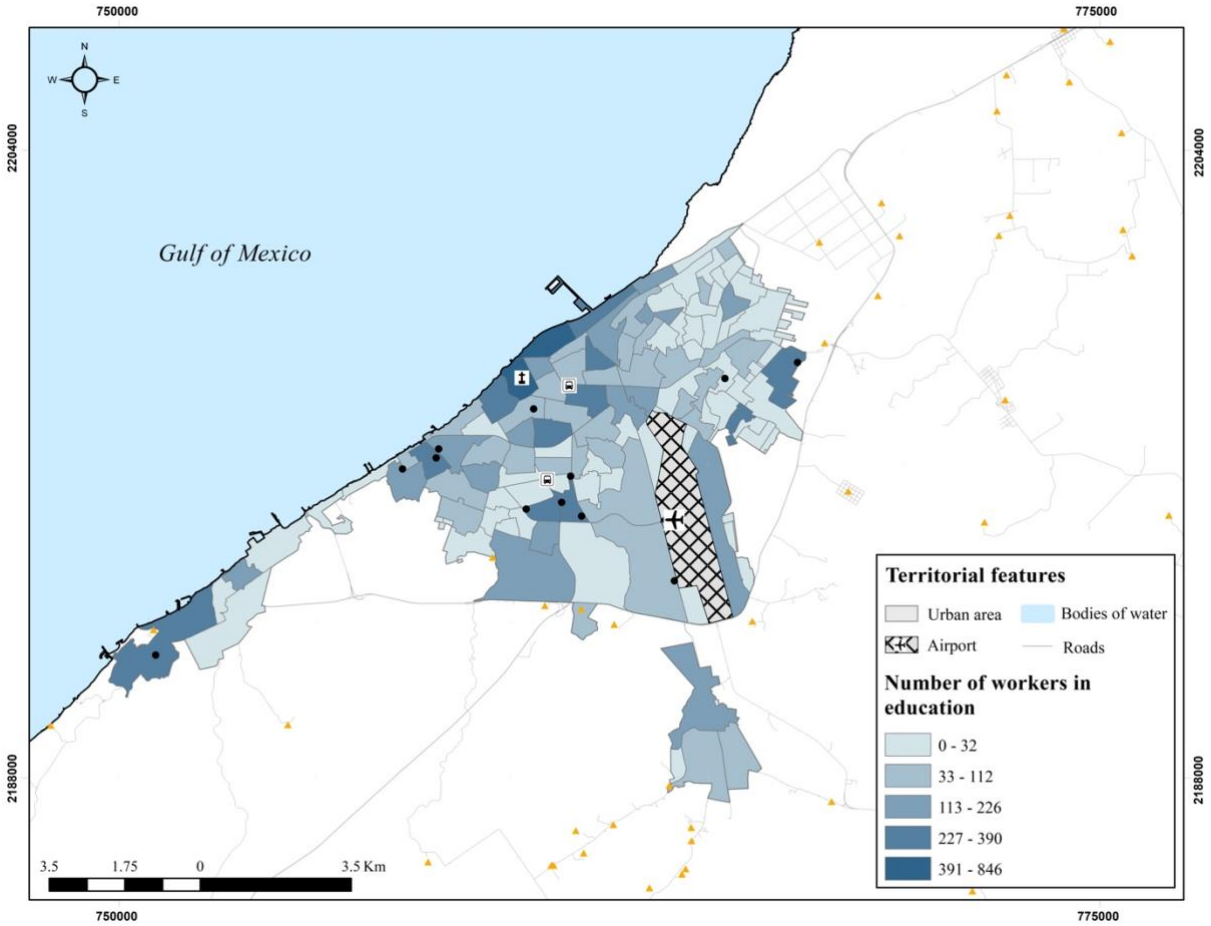
The geographical distance from hospitals, universities, and the city centre as represented in maps 2 and 3 offer a preliminary view of the uneven distribution of services throughout the city. They allow readers to visualize the point to which consecutive governments in Campeche have favoured the placement of essential infrastructure in the southwestern part of the city, near the historical centre, rather than distributing these assets throughout urban space, in a measure that would have facilitated access for a majority of the population. The information presented in both maps, however useful, is partial in its depiction of the degree to which the periphery is neglected. A more comprehensive account, however, would require a view of services on which most inhabitants rely on a daily basis.

4.5.2 Spatial distribution of economic activities in Campeche

For a better account of the unequal distribution of services, we turn to INEGI's DENUE registry of economic units, which provides a comprehensive overview of economic activity across Mexico, including their location within each AGEB. Rather than just highlighting a couple of relevant landmarks, DENUE's registry allows us to verify that it is not just the

landmarks which are to be found in the southwestern part of the city, but that economic activity itself favours this area of the capital. This gives further credence to the statement that people who live in the periphery must travel westward and inward if they wish to gain access to basic services.

The first of these services concerns education. As map 4 shows, most large educational facilities are found close to the waterfront, slightly to the west. If one contrasts this with map 2, one will notice that the AGEB with the highest density corresponds to the historical city centre. The further one ventures from the centre, one can notice that the numbers drop dramatically, especially in the eastern part of town, where the lighter colour areas often correspond to AGEBs marked as 'medium' in map 2. The outlier in this case is the are furthest to the east, near the highway. This correspond to the university's campus which, as mentioned previously, breaks with the trend of all services being placed west of the airport.

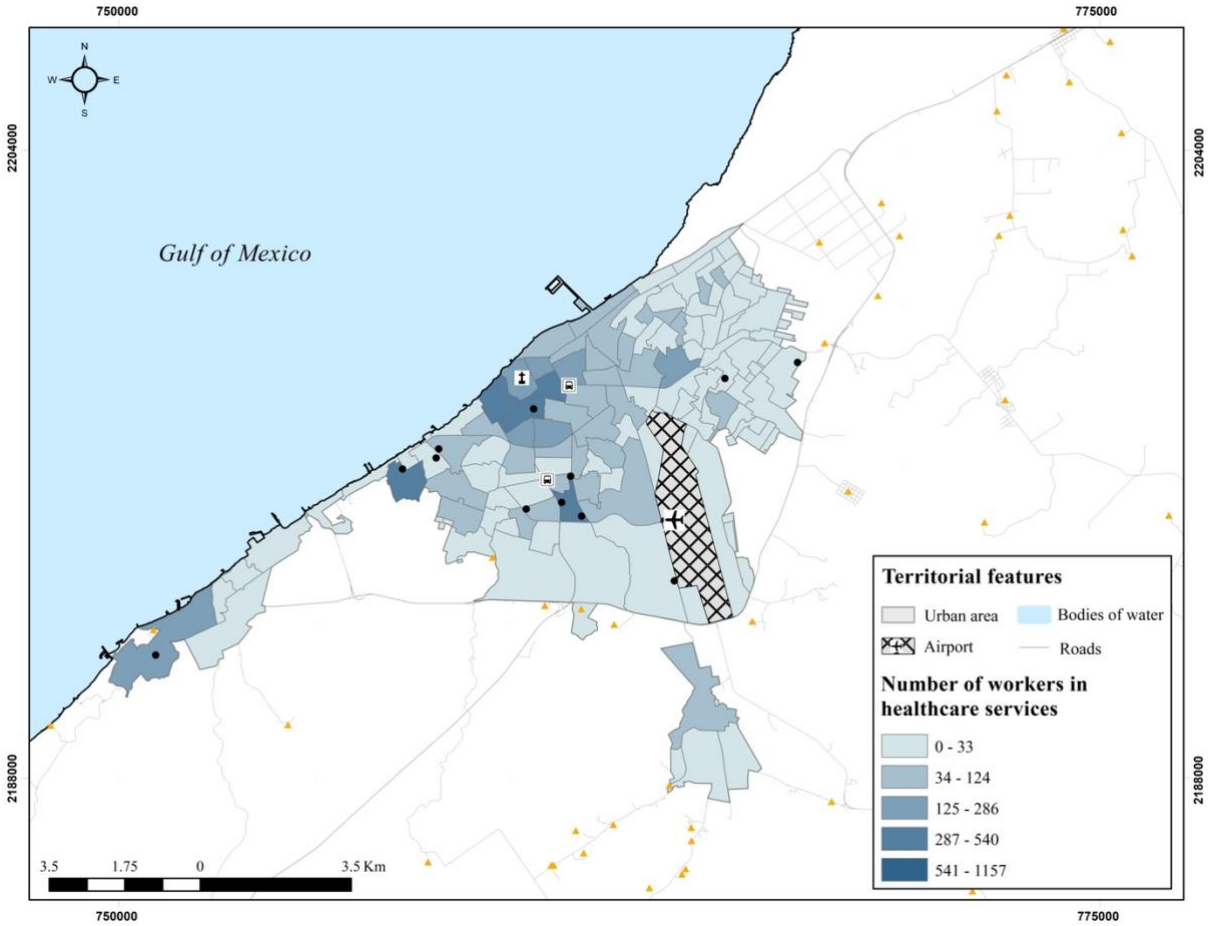


Map 4. Number of workers in education, Campeche
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

Education demands that students are present in the classroom daily during the workweek. This is important to stress, for it means that for those who do not live in walking distance of

a school, a commute involving a motorized vehicle will likely be necessary. For those who cannot afford a car, this means relying on public transportation to achieve their goal. As mentioned before, this situation mostly affects people who are both Maya and less wealthy.

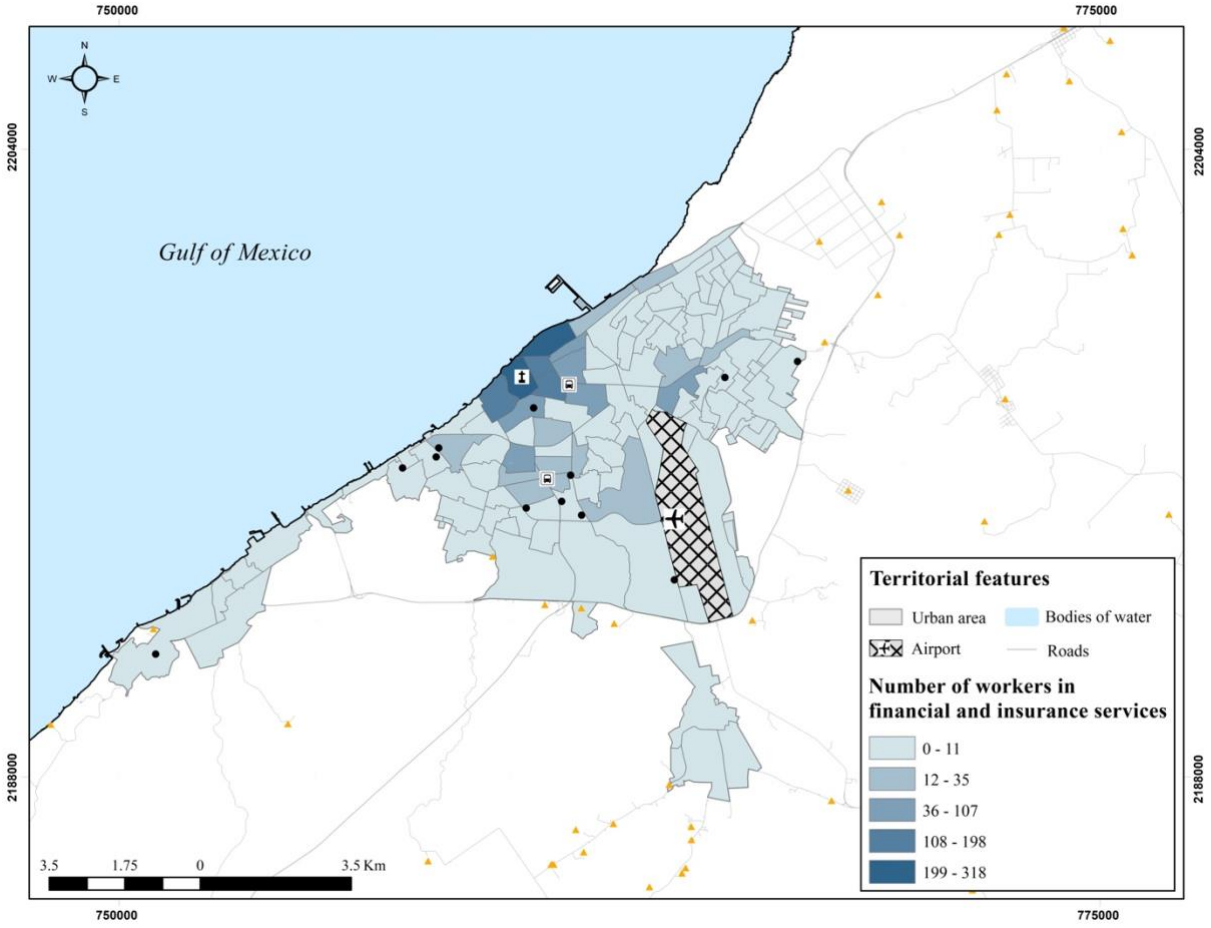
Another service of undeniable value is healthcare. As seen in map 5, healthcare in Campeche practically sets the bar for the trend mentioned at the beginning. The infrastructure available is firmly located in the western part of town, with the largest concentration surrounding the historical city centre. Two AGEBs of significance are found outside of this area, one to the south and one to the west, but both firmly within the western part of town. For anyone seeking to visit a medical facility to attend a routine check-up, consult with their physician, or visit a relative that is interned in a hospital, the distances can be prohibitively long. This mostly affects people living in the eastern part of town, where healthcare facilities are practically non-existent.



Map 5. Number of workers in healthcare, Campeche
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

While the placement of healthcare facilities clearly favours the western part of the city, the centralization of financial institutions borders on the outrageous. As one can observe in map

6, banking and insurance services are almost exclusively found in the historical city center, which correlates with AGEBs marked as 'lowest' in map 3. Access by car is facilitated by the avenue that runs parallel to the Gulf of Mexico, all of which makes these services ideally located for higher income groups. Conversely, people in AGEBs deemed 'high' or 'medium' must travel large distances if they wish to cash checks or request loans, both of which require them to be there in person due to the abhorrent state of internet banking in Mexico.

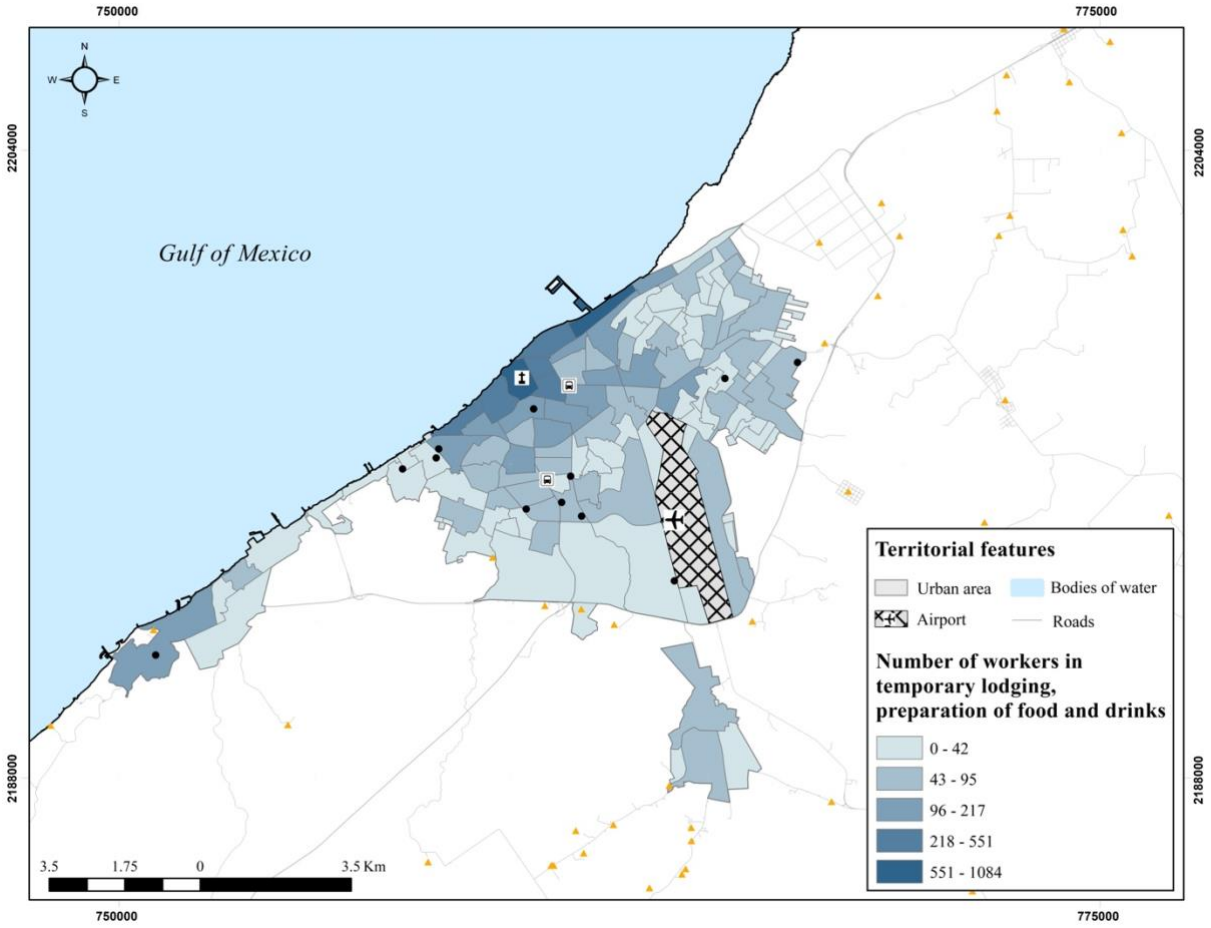


Map 6. Number of workers in financial and insurance services, Campeche
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

The vast distances that separate the least wealthy from financial institutions impose on them a burden that requires that they pay with money and time. Those at the periphery, who are already more likely to rely on public transportation, must embark on long journeys that are not merely emotionally draining, but consume time that could have been employed for either personal, career, or household endeavours. Distance, in Campeche, is not the meters that separate two points, but a barrier that conditions peoples' quality of life.

Inarguably, education, healthcare, and financial services are all quintessential requisites for life in modern society. This indisputable nature cannot be said to extend to

recreational activities. Nevertheless, I believe that a right to the city constitutes a right to participate in ludic activities, which in Campeche revolve constantly around food and drink. Map 7 shows the average number of workers in the industry concerned with hospitality, which mainly involves restaurants, bars, and hotels. While not as egregious as the financial or healthcare sectors, one can observe that businesses which hire a larger number of workers are found in-and-around the historical city centre. As it radiates outward, the average number of workers per business drops, until it peters out.



Map 7. Number of workers in lodging, food, and drink, Campeche
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

Much like is the case for other services, people who live in AGEBs deemed 'medium' or 'high' must travel vast distances to visit popular bars and restaurants. While depriving them of a "good time" is hard to argue as equivalent to limiting a person's access to healthcare or education, it does echo the underlying message present in previous maps, to wit, "access will cost, in either time, money, or both". The argument could be made that, unlike healthcare or education, maps 6 and 7 (more so the latter) reflect market dynamics to which the private sector adheres. While true, I argue this is also a reflection of the infrastructural desirability

of these spaces, such as the connectivity offered by well-kept road networks, the presence of parks, sidewalks, and functioning streetlights, and the overall popularity of a space that is perceived as beautiful and safe. All these attributes occur as a direct consequence of government driven infrastructure, which the private sector later occupies due to their desirability by potential customers.

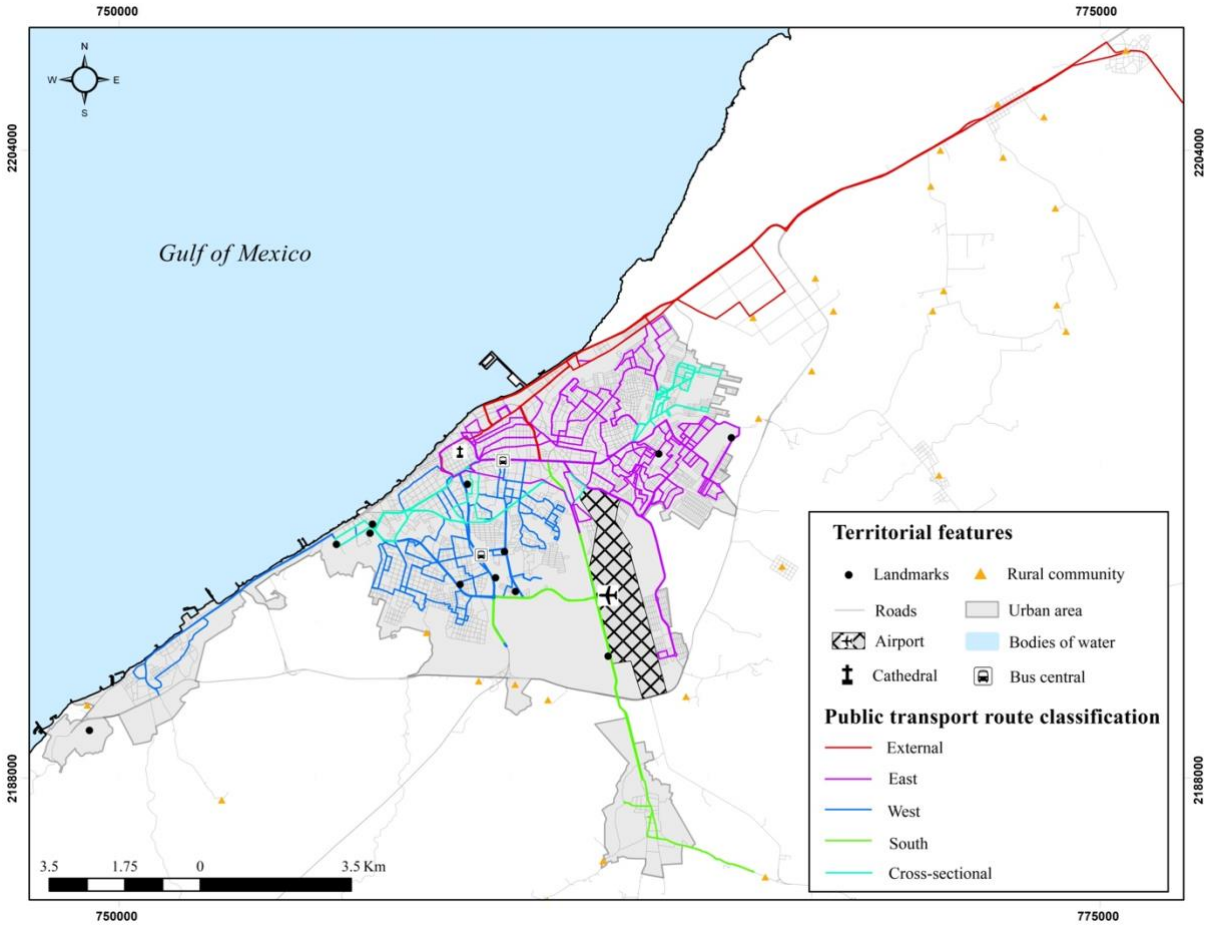
So far, we have been able to establish that people who are either poor, indigenous, or both rely mostly on public transportation when they seek to travel through urban space. Furthermore, we have seen that in the city of Campeche, they mostly live in the capital's periphery, in AGEBs that CONEVAL shows as exhibiting 'medium' or 'high' social deprivation. Additionally, we have provided evidence that, should they wish to access services such as healthcare, education, financial tools, or recreational activities (bars and restaurants), they would need to travel westward and inward. It is now incumbent upon this paper to study public transportation itself, and the options people in the capital have when they wish to travel.

4.6 Mobility in Campeche

Two elements are core to the provision of public transportation: coverage and schedules. The transit system on which people rely should provide a comprehensive set of routes that allow people to easily traverse the city. This network, governed by the mobility needs of the population, should provide a larger supply for those routes deemed more necessary, but do so without neglecting to interconnect all of urbanity. Schedules should, likewise, respond to the demand for transportation services, which coincide with routines dictated by work, school, and other rhythmic activities that are at the core of urban experience. Additionally, schedules should account for arhythmic travel patterns, those which fall outside expected mobility peaks, yet are necessary for those whose schedule deviates from the norm. People who prefer to move when demand is low, be it early in the morning or late at night, should not find themselves immobile due to a lack of options.

The first element, coverage, is presented in map 8. Even a cursory reading gives the impression of a hub-and-spoke distribution of transportation routes. Other than the cross-sectional route, all others have a centre-periphery design, which while channelling the rider into the centre of town, disincentivizes periphery to periphery travel. The first of these, the external route, is a clear example of the centre-periphery pattern. It transports people from communities outside the urban area into the city's historical centre, and eventually heads

back. In a similar vein, the southern routes travels almost exclusively in a straight line to the market (which is the central hub for all public transportation) and back to the community known as Chiná. These routes could both have alternative pathways, and be structured in a complementary fashion, such that it travels through parts of the city to complement their mobility needs. However, they only travel back and forth, furthering the hub-and-spoke rational.

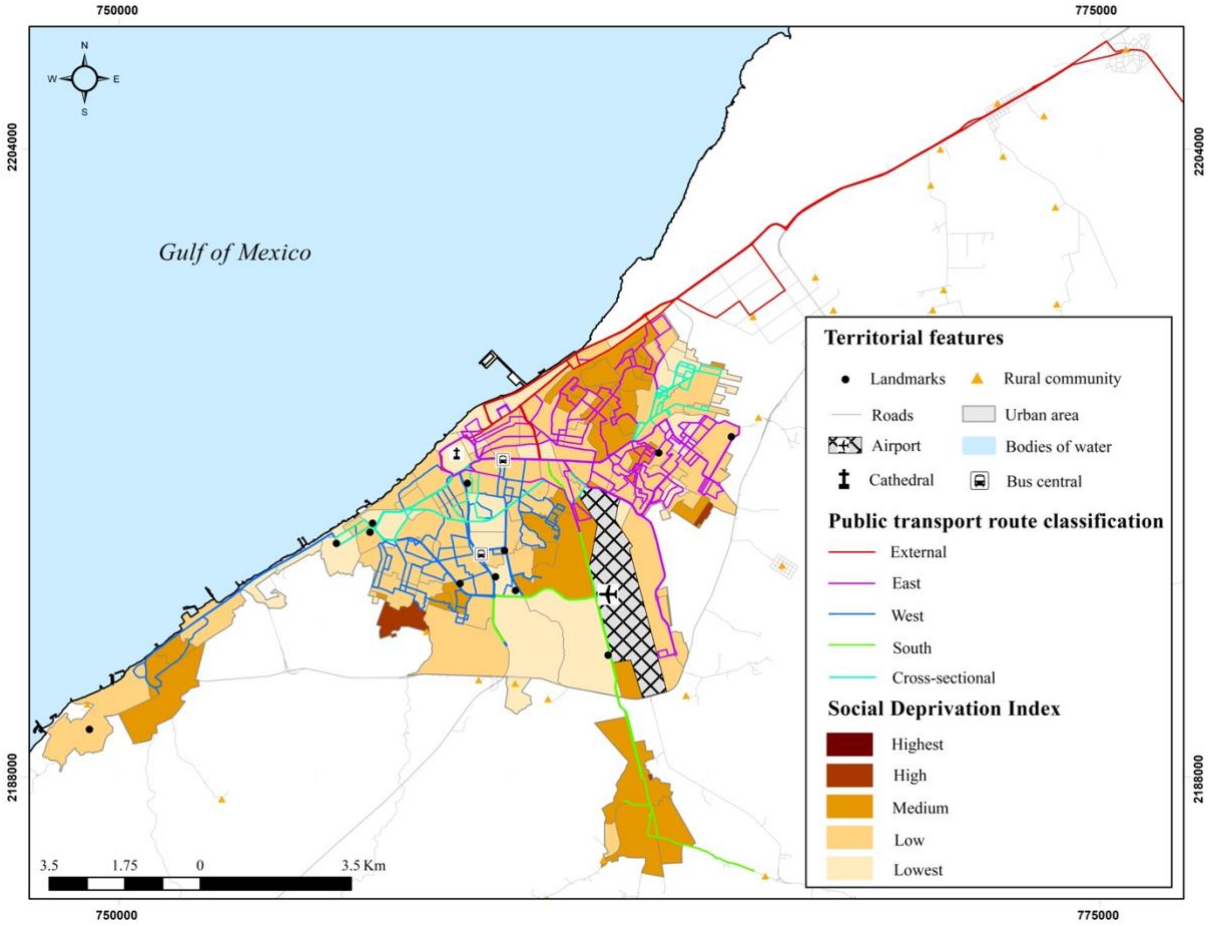


Map 8. Bus routes, Campeche

Source: Base map, Open Street Map. Urban area & rural community, INEGI. Bus routes, gathered by author.

Beyond the two routes already discussed, all others travel exclusively within the city. The eastern routes, for example, has several lines that travel from the historical centre due east. Despite these buses and collective taxis all travelling in that direction, there is little coordination that would lead to a complementary network. They start in the central market, travel eastward, and then veer either northward or southward, depending on their destination. Upon arrival, they turn around and retrace their route, eventually returning to their starting point. While the orange web might suggest complexity (as compared to the external or

southern routes), they reproduce the same model of centre-periphery travel, which sees people move from the spaces where they work, to the spaces where they live, and back. What is telling, however, is that the eastern bus routes fail to adequately service two areas in the spaces they visit. These become apparent when the bus routes are correlated with the AGEBs from CONEVAL (map 9).



Map 9. Bus routes and the AGEBs they service, Campeche

Source: Base map, Open Street Map. Urban area & rural community, INEGI. Social deprivation, CONEVAL. Public transport routes, gathered by the author.

Western routes share many similarities with their eastern counterparts. Whether they hug the coastline or veer inward, they adopt a centre-periphery travel pattern that sees them move back and forth, without offering any connection to other spaces within the city (as do the three routes mentioned so far). This means that people who live in the western part of town and rely on public transportation are only offered the main market in the city centre as their ultimate destination. Of note are the spaces not covered by the western route, particularly those that correlate with the AGEBs deemed ‘lowest’, ‘medium’, and ‘high’ on the social

deprivation index. Based on the information in tables 4 and 5, one can expect that public transportation services do not waste time servicing those who seldom require their service, which would mean AGEBs identified as 'lowest' are omitted. What is striking is that areas with 'medium' and 'high' social deprivation are not adequately covered. Seeing as inhabitants of those areas are more likely to turn to buses or collective taxis for their mobility, it does raise the question if distance is the culprit.

The cross-sectional routes are the only ones that provide an alternative to the centre-periphery model of mobility in Campeche. These traverse the city from west to east part, with the government hospital furthest to the west being the starting point for both. One of the routes travels through the market, reaching deep into the city's eastern side; the other avoids the market altogether, and stops at the northern most point of the airport, without crossing into the east. What is of note is that it seems to be designed as a response to the lack of healthcare facilities near the communities it services, a conclusion drawn from the starting point of both routes (a hospital) and their respective end points (houses). Despite the obvious benefit of having routes that go beyond the hub-and-spoke approach, these routes do not extend this privilege to all urbanites, for as is clear from map 9, the eastern most point of the cross-sectional routes coincides with AGEB's deemed to have 'low' or the 'lowest' degree of social deprivation. It means that this service seems geared towards a socioeconomic stratum, not a service for the totality of people in the eastern part of town.

This study cannot categorically claim that all public transportation in Campeche is restrictive. Yet, the picture that emerges shows that most of the routes available to those who rely on public transportation direct them almost exclusively into the historic city centre. Because the transport industry is dominated by private concessions, the routes offered only cater to destinations and timetables that ensure the largest number of travellers. This effectively means that the profit motive is the force that dictates the routes that public transportation offers. Those who wish to travel to other destinations find themselves having to dramatically increase their travel time.

The limiting nature of public transportation in Campeche is further elucidated when the schedules are considered. Buses run exclusively from 5am to 10pm. Although people on the street argue it does not operate for as long as they claim, I will adhere to the data provided by the municipal government. Even if correct, this means those living in Campeche are not only limited by the lacklustre coverage of the transportation network, but they are also limited temporally as to what they can do both throughout the week and during the weekend. Granted the period in which public transportation operates does not affect those who attend

school (either as workers or pupils), nor does it modify the travel patterns of those working at a bank or seeking services from one, nor does it interfere with many of the rubrics outlined in maps 2 through 9. Nevertheless, it does constrain the ability of people to frequent restaurants, bars, and other similar establishments. In a country known for its late-night parties, restricting public transportation means limiting their ability to consume this recreational side of the city.

Beyond the temporal limitations imposed on ludic activities, it is relevant to highlight the restrictive nature of the current timetables. Many an industry relies on the presence of workers that can labour throughout the day. From people working in legally recognized jobs, such as nurses, firefighters, police officers, and security guards, to those who operate on the fringes of the law, many are made to rely on privatized mobility or suffer partial immobility due to the profession they exercise. Those who must choose between automobility and immobility have not been afforded full mobility rights. Barred from accessing kinetic space due to the temporal lack of public transportation, they are forced to expend more in the way of time, energy, or money to guarantee their right to move.

4.7 Preliminary analysis of Campeche

Unequal mobility is thus present throughout Campeche in many places, at many times, and for different peoples. Those living on the outskirts of the city are beholden to the hub-and-spoke method of travel, which potentially increases their mobility, but constrains their overall motility. In addition to the centre-periphery network that complicates some journeys, the timetables offered by public transportation represents a barrier for those whose commute is different from the peak hours from which companies that run the buses extract their rent. These limitations on mobility are further compounded by how the system renders ethnic diversity invisible, for the service is only offered in Spanish, completely ignoring the presence of Maya people. They are often the victims of an automobility regime which builds on colonial legacies that have resulted in their impoverishment. This lack of capital, which also results in their spatial marginalization, leads to their geographical distance from essential goods and services, and limits their modal options as they seek to bridge the gap.

One can thus observe that the structural conditions that impose limits on the ability of the citizens of Campeche to travel freely have entrenched their mobility. First and foremost, they are tethered to this mode of transport. Lacking the resources to partake in the upper echelons of the automobility regime, they rely on public transportation to ferry them across

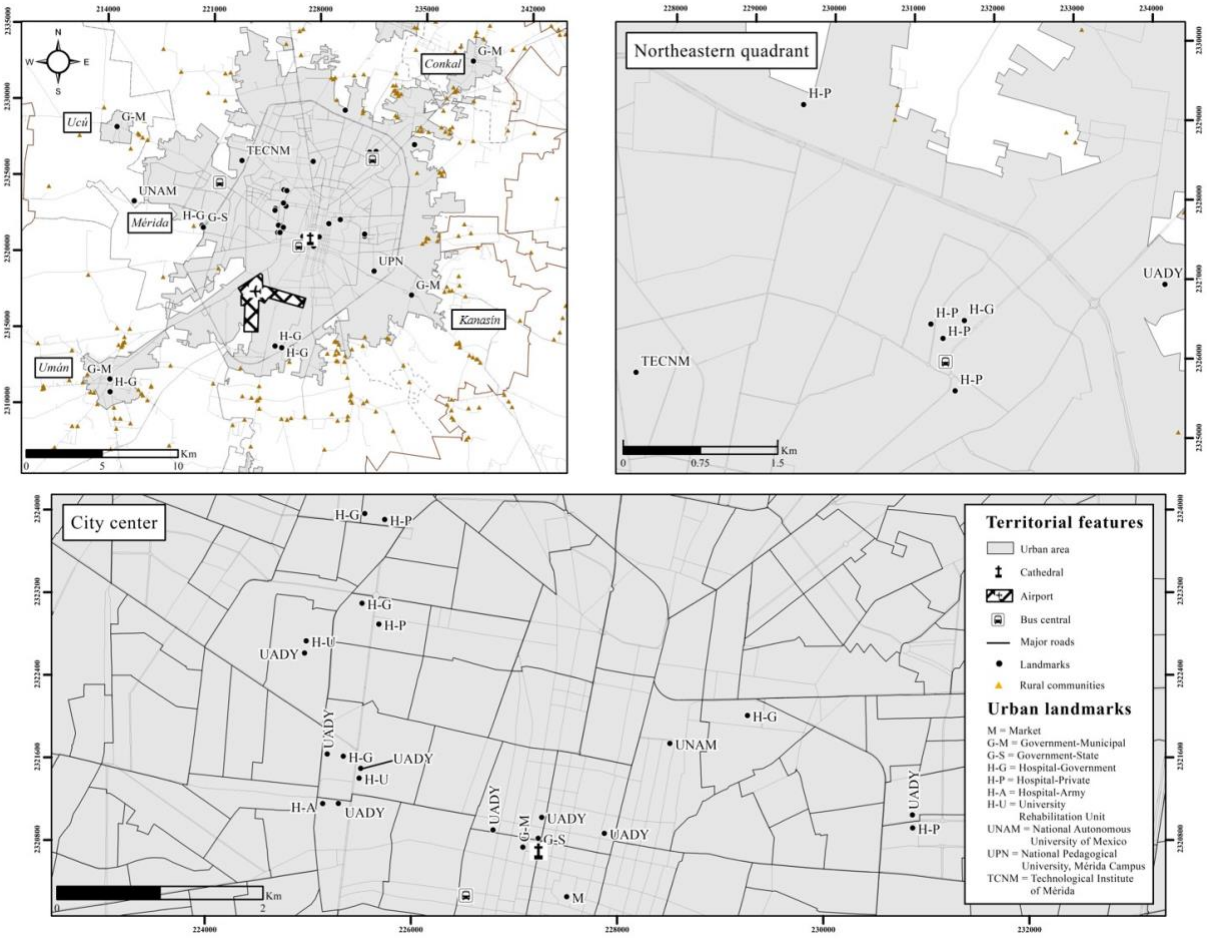
town, restricting their participation in kinetic space to the routes they offer. They cannot walk, for the distances are too vast and the conditions –infrastructure and climate– too unforgiving. They are modally entrenched, reliant on public transportation, such as buses and collective taxis, for it is all they can afford. They simply move from the spaces of social reproduction to those in which they either consume or labour, only to move back out to the periphery. They travel along a trench-like pattern, following the lines that take them from A to B. And were this route to fail, they would find themselves completely immobile due to a lack of options to help them traverse their city, the unreliability of public transportation a constant threat. This threat becomes all too real after 10pm, when the service is suspended. At night, a city of nearly three hundred thousand is deprived of any form of public mobility, all of those who wish to travel being expected to rely on automobility or embrace immobility. The choice being mediated by income (and therefore ethnic identity) rather than the needs of society. Their mobility being temporally entrenched, we can find that most in Campeche have little motility, and therefore, no real right to the city.

4.8 Economic and demographic distribution of the city of Merida

When looking at the Yucatan Peninsula, the city of Merida stands out due to its sheer size. As seen in map 1, it is easily recognizable and is, by far, the urban settlement with the largest sprawl in the region. Unincumbered by the limitations that the sea imposed on Campeche, the city of Merida is free to expand in all directions. In Map 10, one can appreciate the magnitude of such growth, one that is so aggressive that the urban area has escaped the limits of the municipality of Merida and begun to merge with its neighbours.

As was the case when analysing the city of Campeche, the purpose of map 10 is to provide a comprehensive view of relevant landmarks and their placement within urbanity. In it, one can observe the overwhelming concentrations of hospitals in the north-eastern and centre-western portions of Merida, which stand in stark contrast to the number of installations in the south and south-eastern parts (the latter of which roughly corresponds to the neighbouring municipality of Kanasin). As concerns public institutions of higher learning, most are clustered in or around the centre and northern quadrants of the city. Only federal public institutions of higher education are found to break with this norm, the UNAM at the western-most edge of the city, and the UPN located in the south-eastern portion. The picture that begins to emerge is that Metropolitan Merida is roughly divided between the centre-north and the south, with the former granted easier access to services such as higher

education and healthcare. The latter, particularly the south-eastern portion of the city, is far removed from governmental, educational, and healthcare services, having to travel to the centre or north should they wish to access them.



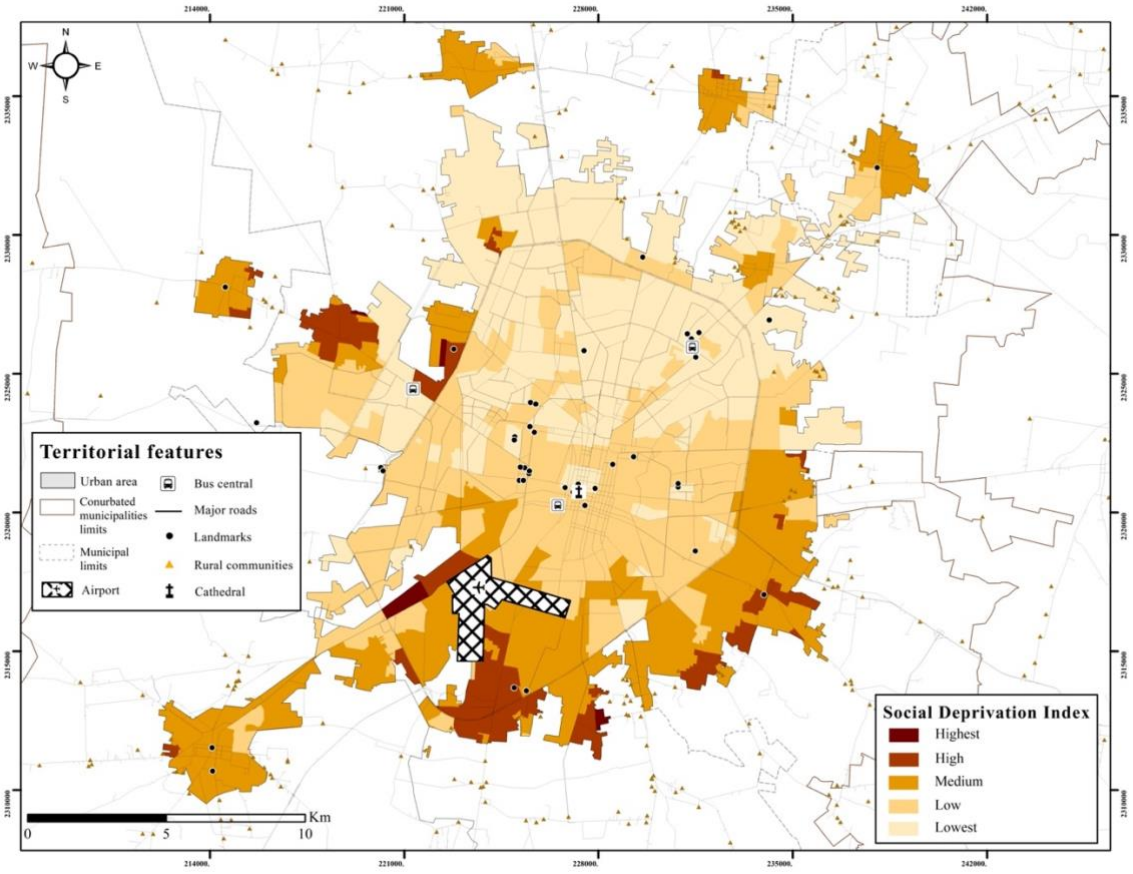
Map 10. Relevant urban landmarks, Merida
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Landmarks, gathered by the author.

A simplistic argument can be made that Merida exhibits a basic centre-north vs. south divide. However, this narrative erases the municipalities of Conkal, Ucu, and (to a degree) Kanasin that exist in the periphery unto which the city has expanded. What is present in Merida is a core, surrounded by the periphery that, as of now, mainly constitutes the south of the city, and the municipalities which surround it. The core itself is made up of the historical centre and the more affluent north, both of which concentrate most of the landmarks highlighted above.

4.8.1 Spatial distribution of social deprivation in Merida

The core-periphery image becomes clearer when seen from the perspective of social deprivation, as provided by map 11. When one looks at the AGEBs of Yucatan's capital,

one begins to identify that the peripheral ring, while not contiguous, is mostly represented by the municipalities of Uman, Ucu, Conkal, and Kanasin. Emphasis must be placed on the notion of "mostly", for the southern portion of Merida (in particular that surrounding the airport), is as much a part of the peripheral ring as are the municipalities that have been drawn into Merida's orbit. As evidenced in the map, the southeastern and southern portions of the city concentrate the largest number of 'medium' and 'high' AGEBs, while also hosting two of those deemed 'highest'. The western portion of the city and the satellites to the north hold the remainder of those AGEBs deemed 'medium', 'high' or 'highest', the latter category found in the western part of the city. Conversely, the core is mostly made up of the city centre and neighbourhoods to the north of it. They concentrate all the AGEBs deemed 'lowest' in terms of social deprivation, meaning they are well provided in matters of social services, having easy access to hospitals and public universities. Inequality in Merida is thus not simply a problem that divides the city, but one that creates a rift between the different municipalities that encompass what constitutes this metropolis.



Map 11. Degree of social deprivation by AGEB, Merida
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Social deprivation, CONEVAL.

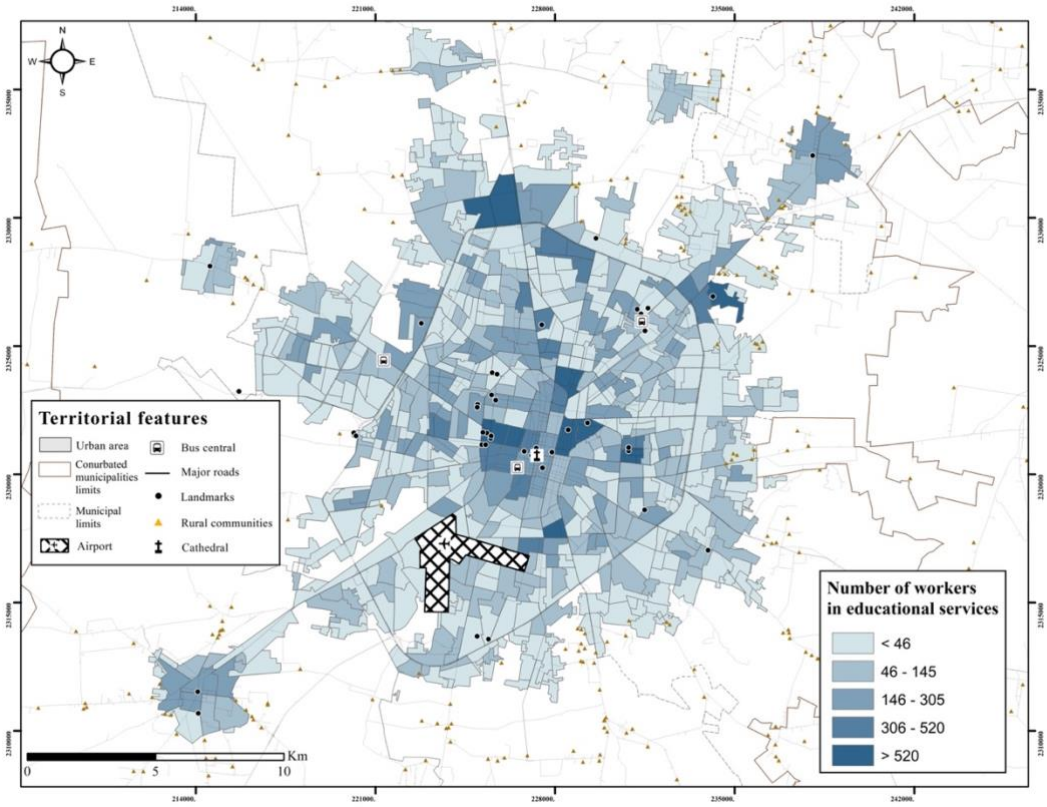
As for the prior case, the data from ENADIS (figure 9) and ENIGH (tables 2 and 3) lead us to conclude that, in Merida, people who are socially deprived have a higher likelihood of being both ethnically Maya and spending more on public transportation. Since Merida and Campeche share historical similarities, the analysis of the prior case is mirrored here. Nevertheless, I find it relevant to highlight some of the most poignant arguments. Above all, the continued deprivation suffered by those who are indigenous to the region is a consequence of the lack of political will to extricate the ever-present racist regime. Maya people are still poorer than their white counterparts, which in turn means that their access to housing is limited to those spaces that are deemed affordable. These spaces, often peripheral, are seldom close to essential services, meaning access is contingent on the use of motorized transport. Due to the prevalence of the automobility regime, those without a form of individual mobility (a car) are forced to turn to the refuge of the poor: public transportation. This characterization as a tool that allows those without financial wealth to travel stigmatizes this form of transportation, leading governments to pay little or no attention to this essential service. If this argument is then read within the context of maps 10 and 11, one can deduce that in the city of Merida, those who live in the periphery (in the AGEBs deemed 'medium', 'high' or 'highest') are likely Maya, and they will –in their effort to access essential services– likely turn to public transportation.

While maps 10 and 11 serve to show the degree of centralization of services present in this city, they are not sufficient to establish the need of peoples to travel from the periphery inward. For a more accurate account of the distribution of essential services such as education and healthcare, we turn to the information on economic activity provided by DENUE.

4.8.2 Spatial distribution of economic activities in Merida

Our current technological advancement is such that most services do not require us to engage with them on a daily basis. This cannot be said for education, which requires that students and teachers be present, which in turn demands they travel to school. In Merida, map 12, shows that the largest educational facilities are found in the city's centre, with two large pockets in the northwest and northeast. The core concentrates most of the educational services, some of which correspond to the universities highlighted in map 10. Conversely, although they are supposed to be distinct entities, one can observe that the municipalities that surround the core are not as well provided as is the centre-northern part of town. For

those students who wish to pursue their education, crossing the border into the municipality of Merida is their only option.

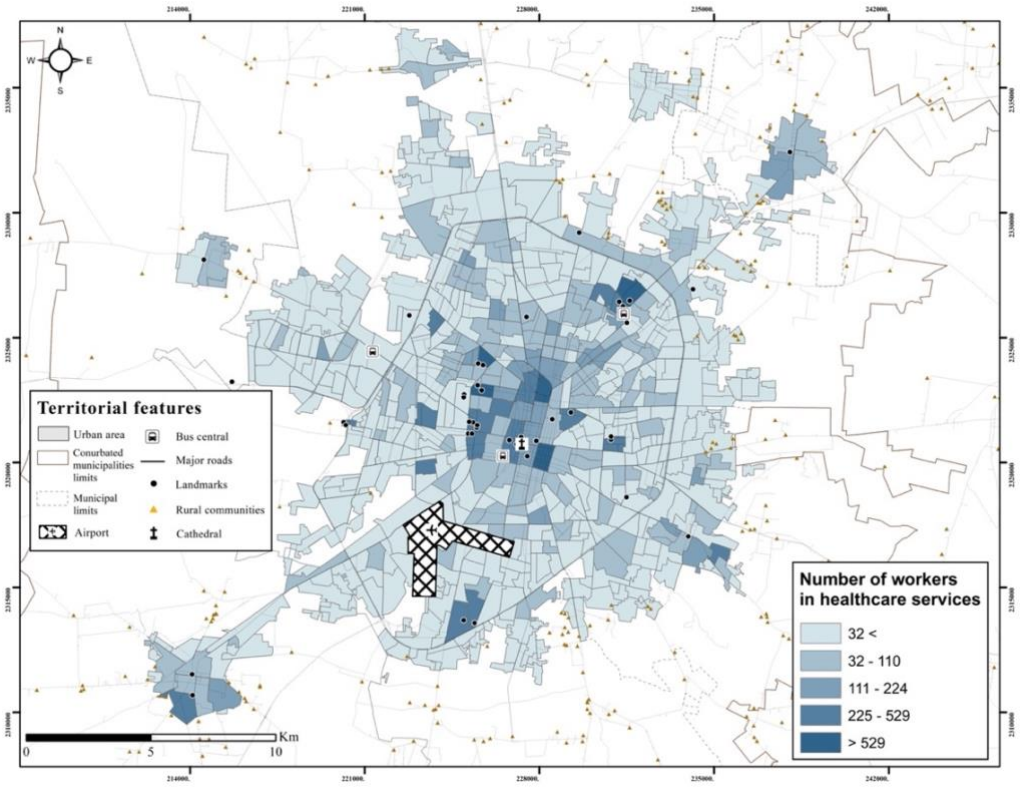


Map 12. Number of workers in education, Merida
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

There are several ramifications to this journey that bear keeping in mind. The first is the cost incurred by the student who wishes to continue their studies. People who live in AGEBs labelled high or highest cannot count on a private automobile. Their reliance on public transportation means that they often pay in time, a cost associated with a commute that generally involves changing, in cases more than once. Those who wish to attend a public university –and do so by relying on the local bus system– find that they almost invariably must travel far if they live in one of the AGEBs that suffer the most from social deprivation. This effectively perpetuates the condition by which those who live in underprivileged areas, are also more likely to abandon their pursuit of higher education, due in no small part to the slew of costs associated, one of which is undoubtedly travel time. The same costs incurred by students are expected of the workers that provide these educational services. While true that some turn to automobility, not all can afford it. Thus, those teachers, janitors, and other members of the school's staff that live in the periphery are expected to rely on public

transportation to complete their journey. This burden on the members of our community who educate the new generations offers a glimpse of the values of the society in which they live.

Even more concentrated than education services are healthcare facilities. Map 13 shows how the latter are distributed throughout the city. As is clear to see, they are mostly clustered around the city centre and in the north-eastern part of town, with a noticeable pocket to the south the airport that deserves a mention. Being of such importance for the wellbeing of a society, the concentration of healthcare facilities in such a small part of town deprives users of access to their right.



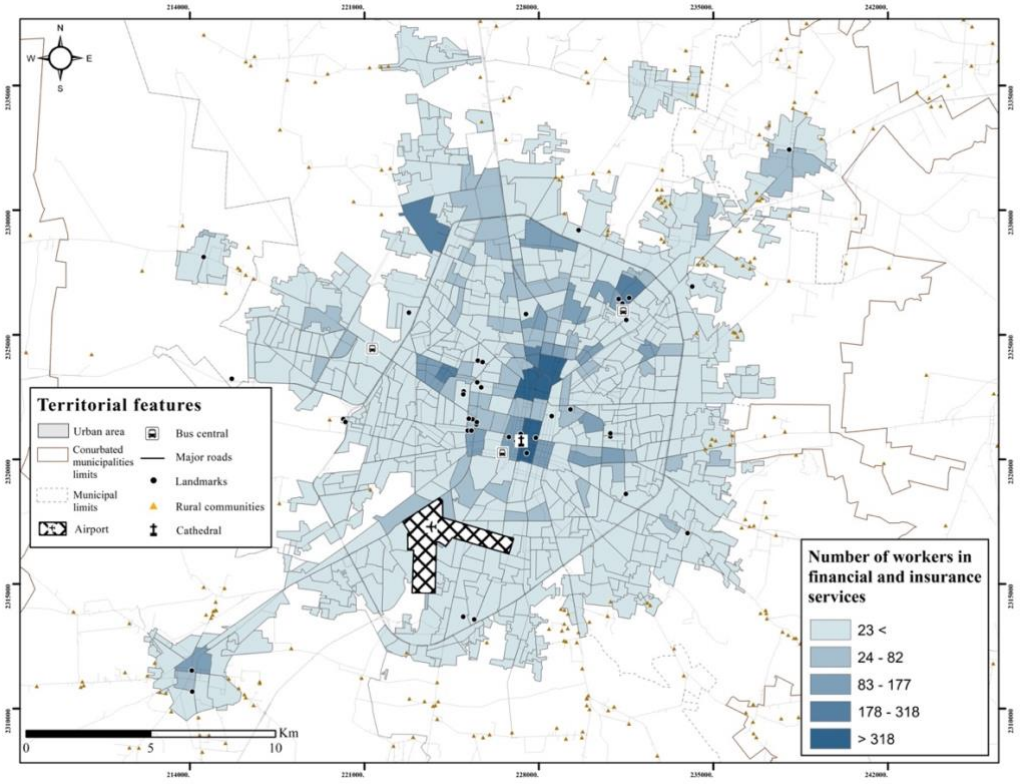
Map 13. Number of workers in Healthcare, Merida
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

The distribution of healthcare in the city of Merida effectively limits access for those who live in AGEBs of high social deprivation. Being all clustered around the affluent centre-north, those in the periphery are forced to pay a high price if they wish to readily access medical facilities. The long journeys might also have the (un)intended consequence of limiting the number of people who visit these facilities, which (as seen in map 11) will mostly restrict access to those living in AGEBs of 'medium', 'high', or the 'highest' degree of social deprivation. Additionally, this distance, which in non-emergency situations is paid in time and money by those who seek it, has the enormous potential to inflict permanent

damage if the person requires emergency care and lives in one of the many areas that are underserved.

Hospital workers who live in the periphery face many of the same hurdles as the patients they receive. While wealthier member of the staff, such as doctors, turn to automobility, those who cannot, are forced to reckon with the shortcomings of Merida's public transportation network. Their plight made worse by the timetables in which they operate. Those who cover late shifts, cover overtime, or simply miss the last bus, are rendered immobile, having to rely on some form of privatized mobility to ferry them home.

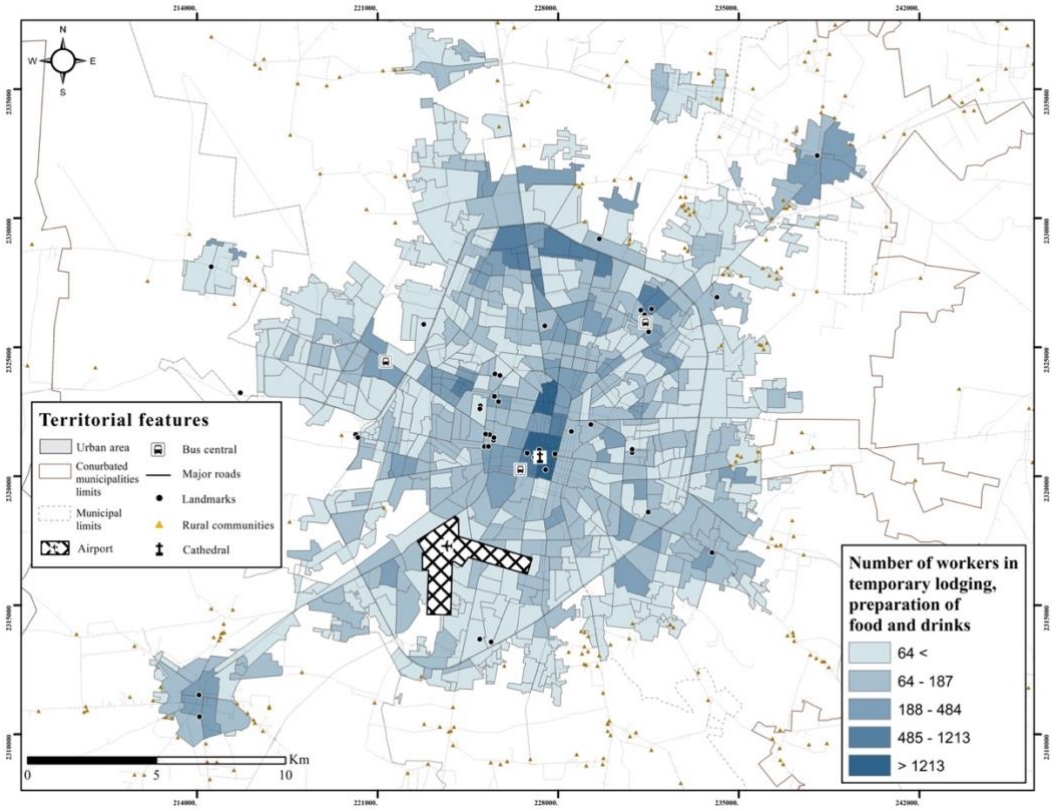
The concentration of education and healthcare facilities is concerning due to the burden it imposes on travellers. It still pales in comparison to the egregious hyper centralization of financial services. While maybe not as vital to the physical wellbeing of urbanites, financial and insurance services are a necessity for those who live in modern cities; in map 14 the problem is made evident. They are almost exclusively present in the centre-northern part of town, occupying the same AGEBs as do people found in the 'lowest' rung of social deprivation.



Map 14. Number of workers in financial services, Merida
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

While it is not a surprise that these spaces favour the wealthiest members of society, it is worth remembering that the degree of unbanked and underbanked individuals in Mexico forces many to rely on these institutions to serve their monetary and financial needs. In other words, access to their money comes at the expense of travelling to the centre of town. While for some it may be a stop in their commute, others might have to incorporate a long detour which adds to a long journey back home, especially for those living in the periphery.

Financial, healthcare, and educational services are all cornerstones of a functioning society. They provide essential tools we need to conduct our everyday lives. Nevertheless, the importance placed on them due to their tangible impact on our society sometimes obfuscates the complexity of the human experience, and of our myriad needs and wants. One such example is that of ludic activities, such as those that take place in bars and restaurants, usually involving family and friends. They are a core component of the urban experience, and of conviviality in the Yucatan Peninsula. Yet here too we find a similar pattern of centralization, which further restricts the way in which urbanites can participate in their city, and the right they have to it.



Map 15. Number of workers in lodging, food, and drink, Merida
Source: Base Map, Open Street Map. Urban area & rural community, INEGI. Economic activities and services, DENUE.

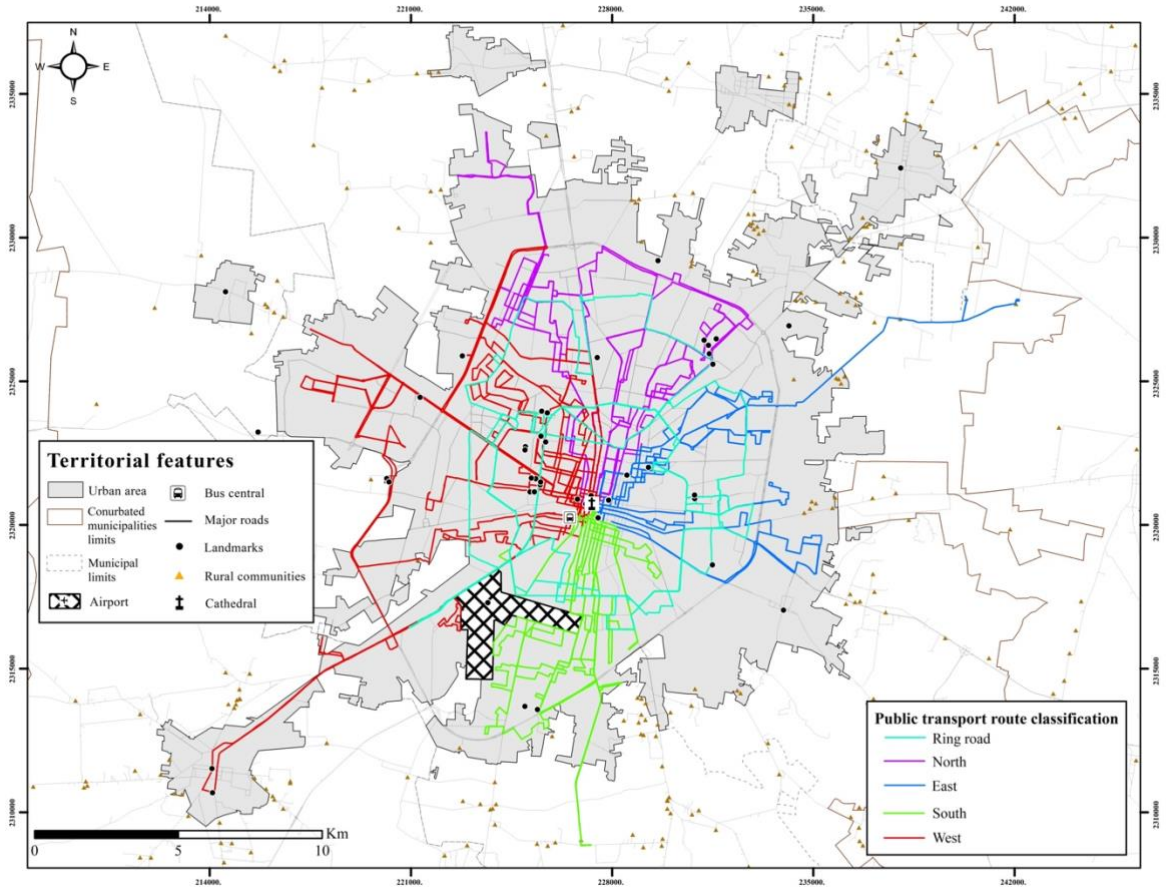
Map 15 shows the presence of hotels, bars, and restaurants in Merida's metropolitan region. Though not as striking as the agglomeration of healthcare facilities or financial services, one can identify that the largest concentration of workers in the industry is in the centre and the north, which implies that the large and most frequented establishments lay at the city's core. The periphery, on the other hand, is not as blessed with these services. People who live in the municipalities that now form the edge of this urban project must travel inward to visit the larger (and likely better) restaurants and bars of the city. While not depriving them of any essentials, the costs incurred to visit these spaces turn them into prohibitive luxuries, rather than viable options.

The maps presented thus far show that Merida is a city dominated by a core which concentrates most essential services and ludic activities. One can intuit the former from looking at map 10, but other information, such as that of map 11 shows that it is not just a concentration of relevant infrastructure that is found in the core, for it also houses wealthier members of society. This centralization and its relation to wealth is further evidenced by maps 12 through 15, which indicate that this centralization of services both favours those residing in the area, while conditioning the degree to which those in the periphery can access them.

4.9 Mobility in Merida

Coverage and scheduling are, as mentioned previously, essential pillars of public transportation. The former determines the degree of spatial mobility that the user will be afforded by the system, while the later determines the temporal constraints of travel. Both should cater to the demand spikes that arise because of the daily commute, without neglecting the travel needs of those whose schedule does not align with less usual schedules.

Pertaining to the issue of coverage, map 16 offers a first account of the patterns exhibited by public transportation in the city of Merida. As one can observe in the description, these are divided into five distinct categories. This should not be taken to mean that there are only five routes, rather that each of these is a collection of individual routes that travel in a similar direction, but do not share the same destination. Of these, all but the ring road exhibit a hub-and-spoke pattern of travel, whereby buses start their route in or around the central market, travel outwards to the periphery, and then return to their base. This pattern of core-periphery mobility contributes to a fragmented city that disincentivizes inter-peripheral journeys for those who use public transportation.

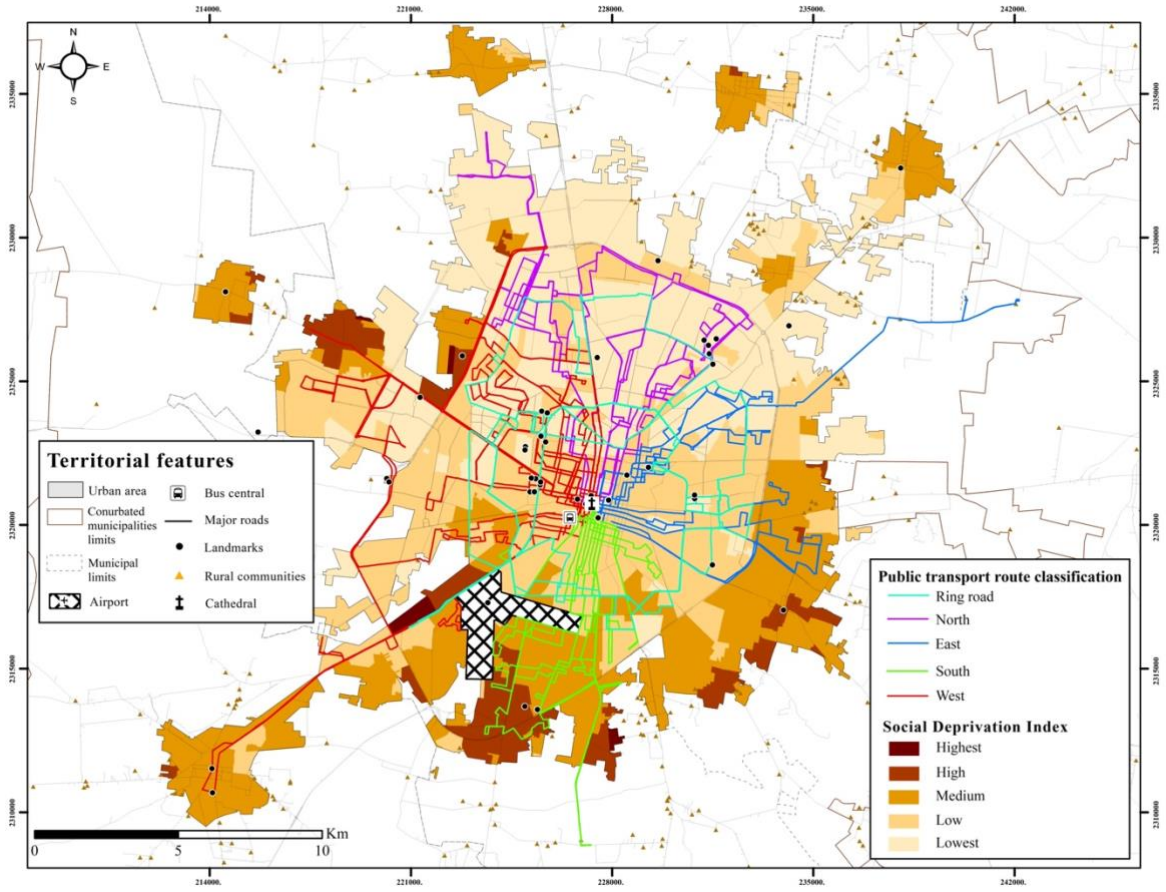


Map 16. Bus routes, Merida
Source: Base map, Open Street Map. Urban area & rural community, INEGI. Bus routes, Moovit.

The northern routes effectively provide public transportation for the wealthiest parts of town, which can be discerned by comparing maps 11 and 16. They are charged with servicing private hospitals located to the north-east of the historical city centre, and mostly travel through the AGEBs that always show the largest degree of economic activity as depicted in maps 12 through 15. These routes, which serve as a clear example of the hub-and-spoke mode of travel, do not reach all the way out to the urban satellites that lay just beyond the contiguous city, leading one to speculate that they serve more as tools to move people up from the city centre into the affluent businesses of the north, rather than a service to bring people from the north into the city.

Like the northern routes, the western routes also provide transportation services for hospitals, in this case, it is those located west of the historical city centre. Beyond that, it links the centre of the city with the broad swath of the western part of town, going as far west as the housing development known as Caucel, but stopping short of the municipality of Ucu, effectively limiting the degree of travel of this community. The western route thus seems to provide two key services, the first being to transport of people from the western

periphery inward, and the second being to transport people (in the centre or from the west) to the hospitals it services. One aspect it does replicate from the norther route is that it provides a core-periphery service but does so without reaching the outer most point.



Map 17. Bus routes and the AGEBs they service, Merida

Source: Base map, Open Street Map. Social deprivation, CONEVAL. Urban area & rural community, INEGI Public transport routes, Moovit.

Unlike the western and norther routes, which do not leave the contiguous urban area, the southern and eastern routes travel beyond the limits of Merida into smaller rural communities. The Southern route mostly services all communities south of the city centre and provides a much-needed connection for those people living behind the city's airport. As one can observe in map 17, these routes mostly service AGEBs with 'medium' and 'high' indices of social deprivation. Additionally, these routes leave the urban area and travel to smaller rural communities, which are seldom serviced by public transportation. Despite providing an option for those in the south who rely on public transportation, these routes only offer journeys as far as the city centre, imposing unnecessary complications on travel.

Similarly, the eastern route spreads beyond the city's limit and provides bus services to rural communities at the very edge of the municipality. It also serves as a bridge, connecting the municipalities of Merida and Kanasin, serving to join the 'high' and 'medium' AGEBs of the latter municipality with the city centre (as seen in map 17). Despite the nominal point of contact it provides, it fails to offer comprehensive coverage that would allow people to move with the same freedom afforded to others in the city. Lastly, as is the case of all the routes mentioned so far, they get you as far as the centre, a place from which you will have to change if you wish to travel anywhere else.

The only routes that differ from the ones previously discussed are the ring roads. These circulate around the city centre and formally provide an alternative to the hub-and-spoke approach of latter routes. Technically, people from the south or east could visit the western hospitals without the need to transfer in the centre by looking at spots where their line and the ring roads meet. However, this is easier said than done. Many buses stop at the request of the rider, with little in the way of properly demarcated bus stops. Additionally, the ring roads, as of 2021, did not provide a wider service that would include the municipal centres and satellite urban spaces that lay beyond the contiguous city. In this way, while useful as a means of intra-city travel for those who live in central areas, it does not fulfil its full potential as an alternative to the core-periphery structure that is currently in place.

The goal of public transportation in Merida, when studied through its relationship with social deprivation, cannot be said to respond to mobility rights. Evidenced by map 17 is the fact that the connection offered by bus routes merely serves to funnel those in conditions of 'medium', 'high', and 'highest' deprivation into the city centre, where educational, healthcare, and banking facilities are located. For those who work or require services that are located north of the city centre, they must switch buses in arbitrary locations, or travel inward, to subsequently travel outward.

4.10 Preliminary analysis for Merida

The design of the bus routes, as it stands, does little in the way of connecting the areas hardest hit by social deprivation. Rather, it is only a tool of periphery-core travel, but not a service that provides an opportunity to move within or between communities. The southern lines do little to connect to either of the neighbouring municipalities of Kanasin and Uman, instead only funnelling riders into the centre of town. Furthermore, there is a perverse border, known as the city centre, which severs the connection between the south and the north. Buses could

travel from one area to the other, yet they choose not to do so, effectively imposing an unnecessary barrier to mobility.

The case outlined above extends to the entire city. Bus lines seem designed to cater to groups depending on their degree of social deprivation. In so doing, they ferry them into the centre, with the ring-road and norther routes serving as the last leg of the journey for those who seek access to services such as banking, healthcare, and education. The precarity of the system is further compounded by the lack of effective coverage. Kanasin, Uman, Ucu, and Conkal are severely underserviced, and even when public transportation in a more formal presentation does exist –as in the case of the Eastern lines that travel to Kanasin– they neglect large swaths of the community. Rather than a service that guarantees a right to mobility, public transportation is a funnel. One which robs people of their time, and extracts from them coin, all to channel people into the spaces where they will perform their labour, or access much needed healthcare of education facilities.

In Merida, restrictions to mobility are further compounded by the time restrictions imposed on travellers. Buses and shared taxis circulate from 5:30 to midnight, which is reasonable (for most) during the week, but is an absurd proposition during the weekend (which can start as early as Thursday). These constraints impose an unfair burden on those who labour past 2am –at those same restaurants and bars–, and for those who seek to enjoy the night scene Merida has to offer. The current timetables are thus a deterrent rather than a tool, forcing workers to find creative solutions to get home after hours, and possibly curtailing the ability of the carless to participate in these spaces. They serve to remind the population when kinetic spaces are available to them, and to unequivocally state that automobility is the name of the game.

Taken together, the information points towards the existence of a regime of unequal mobility in the city of Merida. As established at the beginning of the chapter, of the ethnic Maya who live in urban areas in Yucatan, 44% of them live in the lowest socioeconomic level (see figure 9). The state-wide data by ENADIS is corroborated by information from El Colegio de Mexico's PRODER research on ethno-racial discrimination. Their study of Merida shows that 40% of its wealthiest inhabitants had no Maya last name, did not speak the language, nor did they self-identify as Maya. This contrasts sharply with those who have a Maya last name, speak the language, and self-identified as Maya. While this group only made up 7% of the wealthiest quartile, they constituted 42% of members of the lowest socioeconomic quartile. As the authors of the study note, "To the extent that a person reports

fewer ethnoracial characteristics associated with 'indigenous' belonging, he or she will be more likely to be in higher socioeconomic and educational levels, and vice versa".[47]

The latter data must be held concomitantly with that of public transportation use. As established by the information provided by ENIGH in tables 2 and 3, deciles with the lowest incomes spend less on overall mobility but more on public transportation. This then means that the Maya population is more likely to rely on buses and collective taxis when compared to people who have little or no Maya heritage (which for all intents and purposes in the Yucatan Peninsula means the white inhabitants). Thus, the network of concessioned mobility predominantly services a society that relies on it due to a lack of funds to fully participate in the upper echelons of the automobility regime's hierarchy.

The low degree of motility for the lower classes driven by the concentration of services in the city's centre-north is evidenced in maps 12 through 15. This effectively means that those living in the south and the periphery are forced to travel inward to access these facilities, either as workers or consumers. Coupled with the periphery-core travel patterns displayed in map 16, it is easy to see that these services are not designed as an integral network to communicate the city, but a funnel to channel people into a particular part of town. This transportation network preys on the needs of a population that must travel to access essential services such as education and healthcare. Yet in a system that commodifies mobility, those who are unable to afford a car or a motorcycle are forced to purchase the privilege to travel from a private provider.

Thus, mobility in the city of Merida can be said to be entrenched. Those in the lowest rung of society are forced to rely on a system of public transportation that takes them to a city centre that concentrates resources needed by all. Their access to kinetic space, always mediated by private providers, sees them travel back and forth, limiting their ability to consume the totality of the city. The network of streets that favour automobility are of no use to those who cannot afford privatized mobility. Limited by the lack of comprehensive routes, and temporally restricted by timetables that curtail travel at night, people in Merida's periphery travel back and forth following a trench-like pattern they cannot abandon without incurring heavy costs.

[47] Braulio Güémez and P. Solís, "Estratificación etnorracial y discriminación percibida en Mérida, Yucatán", *Reporte de la Encuesta Proder # 5*, México, El Colegio de México.

4.11 Final Remarks

The complex nature of unequal mobility in the cities of Campeche and Merida (and their respective states) required an overview of economic and demographic conditions. With a brief historical account that provided some necessary context, metrics such as population size, the productive nature of the economies of Campeche and Yucatan, and the demographic make-up of each state set the foundation for the case study. Two relevant data sets required for the analysis of unequal mobility were the socioeconomic conditions of indigenous people, and the information on spending on public transportation. This latter point helped us establish that indigenous people are among the poorest urban dwellers in both states, and that people with less wealth (who tended to be indigenous) relied more on public transportation.

The chapter then focused on the city of Campeche. As established from the beginning, the text stated the obvious by noting the clear bias the distribution of key facilities had towards the centre-western part of town, as shown in map 2. This area of town also showed a larger concentration of AGEBs with 'low' and the 'lowest' degrees of social deprivation, as evidenced by map 3. Further cartographical analysis of the city (maps 4 through 7) demonstrated that necessary services such as education, healthcare, and finance were mostly clustered in or around the historical city centre and were found almost exclusively on the centre-western part of town. When taken in conjunction with the network of public transportation, maps 8 and 9 showed that they very narrowly served (both in temporal and spatial terms) the mobility needs of the population. Implementing a hub-and-spoke approach, for-profit private contractors ferried people into the centre of town but provided little in the way of comprehensive mobility that allowed them to consume their city.

The chapter then turned to the city of Merida. Like with Campeche, the first maps (10 and 11), served to identify the broad division present in the city. Not unlike the first case, with its bias towards the centre-western part of town, the concentration of wealth and services was found in the centre-northern portion of the contiguous urban area. Upon closer inspection, one could identify that it was itself surrounded by both municipalities and urban satellites, meaning that rather than a south-north divide, Merida is the site of a core-periphery division in socioeconomic terms. With the aid of maps 12 through 15, the text was able to identify that the degree of centralization extends also to services, which are clustered around the centre-northern core of the city, forcing citizens to travel inward if they wish to access them. To guarantee their mobility, people rely on the concessioned network of public transportation, which offer a similar system to that of Campeche: a hub-and-spoke travel

pattern than funnels people into the city centre, without providing a comprehensive mobility scheme that would allow them to consume the totality of urbanity.

In both cases we see a pattern of travel beholden to routes that only help transport people in and out of the core. While their mobility might entail long journeys, their motility is always limited, beholden to the patterns set by the systemic conditions imposed by the regime of automobility. Their participation in kinetic space, restricted physically by the few options put forth by public transportation, is further cut short by the constraining timetables, which almost eliminate the mobility of people after hours. That these conditions mostly afflict the least wealthy (a significant number of which are Maya or have some Maya heritage), makes it clear that this is an unequal mobility regime. It is the purpose of the following chapter to build on the former statement, and unequivocally argue how both are cases of entrenched mobility.

5 Comparative analysis of the case studies

Unequal mobility conditions the ability of the citizens of Merida and Campeche to consume urbanity. The previous chapter presented data that showed how class and racial disparities dictate the means of transportation and overall travel patterns of the inhabitants of two of the largest urban centres in the Yucatan Peninsula. It highlighted the close connection between ethnic identity and poverty, and the subsequent relation between poverty and public transportation use. When presented within the context of both cities, it showed that relevant services are mostly clustered around the city's core, while less wealthy individuals live on the periphery. This urban configuration forces many to journey inward, likely relying on the inefficient public transportation routes available.

The purpose of this chapter is to analyse the previous data through the theory of entrenched mobility. This will bring clarity to the relation between lived conditions, urban travel, and the position these hold when understood within the historic context of the Peninsula. For this, I rely on the comparative method to elucidate the structural limitations to movement in both cities. This illustrates the explanatory potential of this novel lens of study, both for the cases at hand, and as a tool for unjust mobility beyond the region.

First, the text analyses how mobility is perceived and experienced by people in the cities of Merida and Campeche –and Mexico more broadly. The purpose is to highlight an often-overlooked aspect of mobility, frequently neglected due to the undervalued nature of qualitative experiences over quantitative data. While the irony is not lost on me, I believe that as modest as my contribution is, it is of tremendous value. To underscore its importance is to understand that entrenched mobility is directly related to a person's travel experience. In other words, knowledge of how a person perceives their motion broadens our understanding our knowledge of the inherent complexity of mobility, both in the Yucatan Peninsula and beyond it.

Second, the chapter delves into the comparative study of entrenched mobility in the cities of Campeche and Merida. The purpose is to illustrate that this novel approach is a theoretical device born out of a need to more adequately represent the unequal travel patterns of the urbanites of the Peninsula. I compare both cases to emphasize the similarities between two cities whose economy and population differ in size yet exhibit similar public transport networks. This section serves as evidence that the socio-political, economic, and

infrastructural problems of these two urban areas contribute to the modal, temporal, and spatial entrenchment of the local population, in particular those of Maya heritage.

Criticism of entrenched mobility, however useful as an explanatory lens through which to understand inequality in the Yucatan Peninsula, would be of little value if did not offer other ways of imagining urban travel. The third part of the chapter offers possible solutions for the cities of Campeche and Merida, which range from the immediately feasible, to the long-term, horizon-oriented approach. These focus on the need to redesign transportation networks, while simultaneously advocating for a more comprehensive reorganization of urbanity to meet the needs of all.

Lastly, the chapter looks beyond the region of these case studies. I argue that, while the Yucatan Peninsula illustrated the need to contextualise and reimagine our understanding of unequal urban travel, this phenomenon is not circumscribed to it. Entrenched mobility, as an analytical tool, can help us better comprehend the constraints to which the movement of peoples is subjected. That hierarchies that impede equal travel are not endemic to a region, but are the product of societal, political, cultural, historical, and economic forces (to name but a few). This section provides some examples that stand to benefit from this novel approach.

5.1 Mobility as experience

This work has, so far, adopted a quantitative approach to the limitation surrounding urban travel in the Yucatan Peninsula. While that approach is indispensable to understand the structural barriers people face when moving, the unequal reality of travel in the Peninsula, as described in the previous chapter, is incomplete without an account of movement as it is experienced. The region's colonial past is embedded within the automobility regime, and it has served to perpetuate a societal segregation along racial-class divides, a structural inequity which daily affects the lives of hundreds of thousands in the cities of Campeche and Merida. One such way in which this injustice is corporealized is through the waiting game played by those who stand by the side of the road in hopes of boarding a bus or collective taxi. This experience is characterised by unease, discomfort, and uncertainty, due to the lack of infrastructure demarcating the zone as a stop, the absence or disrepair of amenities such as benches, and the non-existence of schedules showing when the bus will appear.

The feelings of unease and discomfort are not assuaged once their ride arrives. The dilapidated state of many buses and collective taxis combines with the profit incentives to

make for packed, unpleasant journeys. The uncertainty previously described persists even once the rider is 'on the move', for while the machine might want to advance, kinetic space does not favour its motion. While rhetorically placed above cars within the hierarchy of urban mobility, they are well below the car within the automobility regime. When blockages appear due to the large number of private vehicles, public transportation is stuck in traffic, due in no small part to an inadequate number of exclusive bus lanes (such as in Merida) or a complete absence of them (as is the case in Campeche).

Towards the end of their journey, a lucky few will be able to alight and find themselves within reasonable walking distance of their destination. Others, however, will know that stepping off the bus is the beginning of a long walk, one they must embark on to bridge the gap left by routes that do not adequately service the entirety of the city. People modally entrenched in relation to buses and collective taxis, unable to buy their way out of their predicament, are forced to pay with time. They are constantly on the go, even when they stand still and wait, for theirs is a pause not filled with calm, but with angst.[1] Time they could spend with their family, or on productive or ludic activities, is spent in uncertainty. Echoed throughout Mexico,[2] time poverty is not experienced equally, but falls along racial and class lines, which in the Yucatan Peninsula (and country more broadly) mostly affects people with indigenous heritage.

In addition to the unease suffered by commuters as they wait, they must also contend with the conditions to which their bodies are subjected as they travel. The vehicles used for public transportation are thought of as tools to provide a service: transporting people from one space to another. There is little incentive to provide the rider with a comfortable experience, since the goal is to function as a conduit that facilitates travel from A to B. While many drivers might hold some concern for the well-being of their passengers, modernizing these vehicles to provide baseline levels of comfort would result in losses to over exploited chauffeurs, some of whom barely make ends meet after handing over part of their daily

[1] Judith Keller, "The slow violence of waiting in the unmaking of public housing", *Urban Geography* 45, no. 7, 2024, pp. 1256-1266.

[2] For an overview of the conditions of public transportation in Mexico, with a detailed account of the system in Mexico City, see Priscilla Connolly, "Mexico", in Dorina Pojani and Dominic Stead (eds.)., *The Urban Transport Crisis in Emerging Economies*, Springer, 2017, pp. 145-171. For more detailed accounts of public transportation in other cities across the country, see José Alfredo Jáuregui Díaz, María de Jesús Ávila Sánchez, and Rodrigo Tovar Cabañas, "Movilidad cotidiana de la población trabajadora en la Zona Metropolitana de Monterrey, 2015", *Revista transporte y territorio,* no. 23, 2020, pp. 201-221. Alberto Arellano Ríos, "El transporte público en el área metropolitana de Guadalajara: agenda, proyectos y "gatopardismo", *Revista Mexicana de Análisis Político y Administración Pública* 7, no. 1, 2018, pp. 11-32.

earnings to the owner of the bus or collective taxi. Without any intervention from the State to guarantee better conditions, the market continues to operate to minimize cost.

For passengers, this translates into an uncomfortable commute. The act of getting on the vehicle is the first of many challenges along the journey. Due to the steep steps one must clime up to access the vehicle, boarding becomes a hurdle that is challenging for senior citizens, pregnant people, or children, while being nearly insurmountable for people whose mobility is restricted. Once inside, finding seating becomes a challenge unto itself. If taken during rush-hour, the lack of sufficient units sees passengers squeezed beyond the carrying capacity of the bus. This puts many in danger, for if the driver takes a sharp turn or is forced to break suddenly, passengers who are unable to hang on are at the mercy of those surrounding them. If they are lucky enough to find a seat, those available are uncomfortable and designed to maximize ridership, making the trip unpleasant for those who commute long distances.

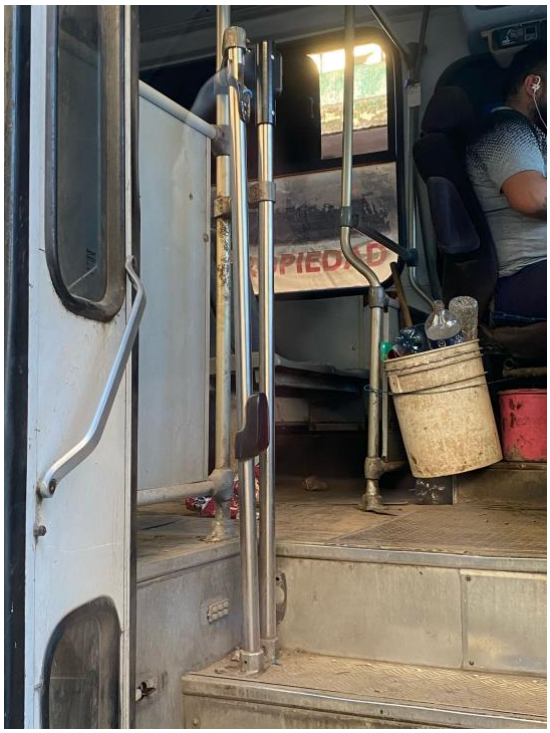


Image 1. Bus steps
Source: Photo by the author

To these conditions one must add environmental factors. Both Campeche and Merida experience warm weather throughout the year. The lack of air conditioning in these vehicles means that, even when empty, the sun heats up the interior to a point where the shade provided by the roof offers little respite from the oven-like effects of the metal structure. To combat this, buses and collective taxis often circulate with the windows open, which is

accompanied by the deafening sound of rushing air (when the vehicles is not stuck in traffic), which combines with the sound of the large diesel engine making for a cacophony that drowns out one's own thoughts.

Image 2. Bus seats
Source: Photo by José Antonio Abreu Montero

These conditions serve as a reminder of why public transportation in Mexico is viewed as "the engine of the poor".[3] The system of concessions sees the state surrender its responsibilities to private companies, which in turn provide a very low-quality service as a result of their goal to protect their bottom line. Because it is a service on which mostly the carless rely, it is the poorest in Mexico who suffer the long waiting times and uncomfortable journeys. Under the current paradigm, passengers are often viewed as a homogenous mass from which the driver can extract a rent, and not as what they truly are, a heterogenous group of people who turn to buses and collective taxis for financial, health, age, or environmental reasons. In the Yucatan Peninsula, it is mostly the Maya population who is subjected to abhorrent conditions of public transportation. Modally entrenched individuals are meant to suffer throughout their journey, in a practice akin to punishment for poverty, a regime within which mobility becomes a burden.

[3] Manuel Suárez Lastra and Javier Delgado, *Entre Mi Casa y Mi Destino: Movilidad y Transporte En México: Encuesta Nacional de Movilidad y Transporte*, Primera edición, Los Mexicanos Vistos Por Sí Mismos. Mexico City, UNAM, 2012, p. 69.

Image 3. Buses in Merida
Source: Photo by the author

For the carless, there is little in the way of options to avoid the tortuous journey that awaits those who choose the bus. As noted in the study by Gisela Méndez *et al*., walking and public transportation are the means of travel that most Mexicans rely on.[4] Nevertheless, as might be inferred, the former is not always reliable in large cities, especially if the need is to visit the city centre. People in Merida and Campeche cannot truly hope to have full lives if they choose to exclusively move within the radius that is afforded to them by their own two feet. This latter argument resonates more profoundly with the inhabitants of the periphery, who are largely deprived of essential services. This leaves people with the possibility of turning to bicycles as a tool to bridge these gaps. While not unheard of, the problem in cities like Campeche and Merida is the lack of infrastructure that would either enable or incentivise the practice. This leaves the carless either spatially or modally entrenched. They are forced to either stay put or venture out and risk their lives due to the inherent violence automobility presents for people on bicycles.

Safety is another concern for the people of the peninsula and for how they experience mobility. As noted in the study by Méndez *et al*. cyclists and pedestrians are the victims of a disproportionate amount of violence doled out by the automobility regime.[5] Walking on narrow, unpaved, and sometimes non-existent sidewalks sees pedestrians exposed to the dangers visited upon them by fast moving cars or buses, neither of which has much concern for their well-being. Similarly, cyclists, forced to share the road with the heavy machinery many use as transportation, are constantly under threat. Those who cannot buy a car but seek

[4] Gisela Méndez, Victor Velazco, Carmen Menéndez, Isabel Alduena, David Escalante, Jéssica Tapia, Erika Adaya, Juan J. Hernández., *Anatomía de la Movilidad en México*, Mexico City, SEDATU, GIZ, BID, 2018, p. 2.
[5] *Ibid*., p. 9.

an alternative to the dilapidated system of public transportation, are forced to choose between two very demanding and harmful forms of locomotion, or thus opt for immobility (or very constrained mobility).

In terms of physical integrity, some modes of transportation are a safer alternative within the contested kinetic spaces of automobility. Nevertheless, the well-being of citizens extends into the modes of transportation themselves, and the risks and harms can manifest in many ways beyond the straightforward violence of the car. Within public transportation itself, women across Mexico are constantly exposed to sexual harassment, making these spaces not only dangerous, but perceptually staining them with the possibility that they might be the victim of such an attack.[6] While it is true that men are themselves victims of violent crimes, such as armed assault, in both these cases and those of sexual harassment, the perpetrators are men.[7] The Yucatan Peninsula is not much different from the rest of the country. As data from Merida shows, women suffer sexual harassment at home, work, and spaces of education.[8] However, numbers surrounding harassment in public transportation are not readily available. In terms of data, the situation in Campeche is similar; work exists on the violence women face, but not much exists on the threats that mobility poses.[9]

The repercussions of sexual assault, or the perceived threat thereof, determines the degree to which women in the cities of Campeche and Merida are modally, spatially, and temporally entrenched. If public transportation is perceived as dangerous, the population (women in particular) will refrain from using it. This could lead them to shift the mode within which they are entrenched, in this case depending only on taxis (which are expensive and not devoid of harassment), or on cycling or walking (the latter two having been discussed already as potentially dangerous in their own right).

---

[6] For one of many works that study the violence that women suffer in Mexico while on the move, see Arturo Alvarado Mendoza, Emelina Nava García, Jaime Ramírez Muñoz, Raúl Lemus Pérez, Gustavo Adolfo Urbina Cortés, Susana I. Esquivel Cortés, and Serena Chew Plascencia, *La movilidad y la violencia contra las mujeres en los espacios públicos de la Ciudad de México*, El Colegio de Mexico, 2021.

[7] "Índice de Paz México, 2019", *Institute for Economics and Peace*, 2019, p. 3.

[8] Although literature studying violence against women in the state of Yucatan is abundant, they often neglect to study violence on the move, focusing more on the that experienced at home or at work, see, Leticia Janet Paredes-Guerrero, Rodrigo Llanes-Salazar, Nayelli Torres-Salas, and Alejandra Pamela España-Paredes, "La violencia de género contra las mujeres en Yucatán", *LiminaR* 14, no. 2, 2016, pp. 45-56; Perla Fragoso Lugo, "Violencia de género contra mujeres y niñas y feminicidio en Yucatán: apuntes para su investigación", *Península* 16, no. 1, 2021, pp. 191-217.

[9] Much like for the state of Yucatan, studies exist for the scourge of violence against women in Campeche, yet little of it focuses on that faced while on the move, see Juan Iván Martínez-Ortega, and Armando Hernández-de La Cruz, "Violencia contra las mujeres en el estado de Campeche. Un análisis desde la perspectiva de género", *LiminaR* 14, no. 2, 2016, pp. 28-44.

If certain parts of town, or a number of the possible routes a person could take, are associated with sexual violence, a person might be restricted to a single path to avoid these unwanted interactions. This person –most likely a woman– will become spatially entrenched, traversing the city along a small number of routes to safeguard her mental and physical wellbeing. Lastly, spaces that during the day might have been adequate to travel are transformed at night. Buses, streets, and parks turn into areas women should avoid, due to the potential harm that a man (in almost all cases) would inflict. This sees their mobility become temporally entrenched, as their ability to travel is dictated not by their needs, wants, or desires, but by the time of day. In Merida and Campeche –and Mexico more broadly–, women are forced to contend with the constant threat of violence that not only has severe repercussions on their health and their place within society, but also on their ability to navigate the cities they call home. While long commutes, buses in disrepair, and the threat of vehicular violence are felt by all, safety while on the move has a gendered dynamic that should not be overlooked.

Users of public transportation in the cities of Campeche and Merida thus have a turbulent time navigating urban space. Long waiting times, coupled with long commutes, make for an experience that is embodied as violence, albeit "slow violence".[10] Their journey, made unpleasant by the crammed and substandard conditions of the buses and collective taxis, continually reinforces public transportation as the refuge of the carless, rather than an alternative mode of transportation. This narrative conveniently ignores the fact that public transportation is often chosen for its capacity to ferry people faster and further through the city landscape. This modal choice is not foremost in their mind but is what is available to those who wish to safeguard their lives in cities that lack kinetic spaces that protect bicycles and pedestrians. As it stands, the streetscapes of the Peninsula are first and foremost the stomping grounds of cars, and only public transportation functions as a credible safe alternative. These conditions mean that the carless of the region are subjected to a regime of unequal mobility, which determines how they access the places in which they live, to wit, Campeche and Merida.

5.2 Urban travel in the Yucatan Peninsula

Travel in the cities of the Yucatan Peninsula is viewed, by the government, as transactional. The day-to-day commute is understood as the activity in which people participate to journey

[10] Keller, *op. cit*., pp. 1256-1266.

from their homes to the places where they study, work, or procure a service. Thus, public transportation is merely a tool that bridges the gap. When viewed exclusively through the lens of motion, these structures provide a service to those who are unable to cover the distances involved, be it because these are too vast to overcome via bicycle or by foot, or because they cannot afford a car. Mobility in these cases, informed through a rough reading of transportation geography, is to be addressed by providing the necessary infrastructure to facilitate the flow, and is to be guided by the economic forces that dictate the direction of movement.

This unidimensional understanding of movement fails to acknowledge the current configuration of urbanity, that is to say, the core-periphery model of development that prevails in both Campeche and Merida. This view does not contemplate nor seek to comprehend the concentration of essential services that cluster around the core; the reasons why they do so, the forces at play, or their own role in this configuration. The current interpretation of urban travel thus fails to take a holistic approach that perceives spatial distribution as the first element of mobility. Rather than viewing it as complex, transportation is the technical solution implemented to bridge the gap that separates two points in an otherwise inert space. This then translates into solutions like an expanded road network that can accommodate the flow from the periphery inward. This solution, while nominally accommodating non-motorised forms of locomotion, such as cyclists and pedestrians, reproduces kinetic spaces dominated by the prevailing logic of the automobility regime. For the residents of Campeche and Merida, the configuration of urbanity warps spatiotemporal perceptions of the city, and thus shapes their relationship to it.

Transportation is viewed as a connection –a means to an end– with travel being the necessary evil that allows the transition from one space to another. Mobility is not perceived as a right, rather it is understood as transactional. It is always the threshold, the tunnel, the bridge, but never the goal. It is the perennial in-between, where bodies lie suspended as they transition from one space of relevance to another. This is exemplified in the cases of Campeche and Merida, where public transportation acts as a pipeline that funnels resources from the periphery inward. Privatization is an acceptable avenue for such a service, for it is not a necessity; not an end unto itself. Those who require the tool must cover the cost, for travel is understood to further individual wants rather than collective needs.

Relation to mobility in the cities of Campeche and Merida mirror a broader trend, that of mobility as viewed across Mexico. As Lastra Suarez and Delgado Campos note, the

country has built a "cult" surrounding the car.[11] This object of reverence is used to create, reproduce, and enforce hierarchies within the realm of motion. In a country with a high degree of inequality, the car serves to perpetuate the clear divide between the haves and the have-nots, from which stem other social hierarchies of discrimination, such as those based on gender, ethnic background, or race. This practice is ideologically upheld by the positivist approach to transit that permeates the ontologies of the fields of economics and engineering. It is then materially enforced by the governments throughout the country which transform the built environment into one suitable for this regime.

The underlying logic of transportation geography is palpable in the organization of Campeche and Merida. The ideas of spatial and technological neutrality naturalise the ideologies that accompany the motor vehicle and the asphalt road.[12] These are presented as uncontested answers to the question of mobility, with the desire for cars upheld as the pinnacle of automobility. The narrative which simultaneously depoliticises mobility while turning it into a numerical-mechanical phenomenon (more roads equals more mobility) conceptualises immobility as an individual choice, which neglect its systemic condition. Thus, immobility in Campeche and Merida is perceived as a result of not having travel needs, rather than the consequence of an ideology that views mobility as purely transactional.

Another result of this perception of mobility is that it fails to fully comprehend the identity of the traveller. People in the Yucatan Peninsula are not an amorphous, homogenous blob that move solely for economic ends, unaffected by the historical, societal, and political reality that surround them. As mentioned in the previous chapter, the region's colonial history of exploitation created a two-tiered society that placed those of Maya heritage in a precarious socioeconomic condition. Thus, race and class cannot be unwoven, which means that a person who speaks Maya, has a Maya last name, or self-identifies as Maya will see their financial situation conditioned by their heritage. This latter point is relevant for this study because mobility in the peninsula, as seen in tables 2 through 5 is a class issue,[13] with the lowest deciles in society relying more on public transportation than the wealthiest people in the region. By providing public transportation devoid of historical and cultural understanding, the cities of Campeche and Merida reproduce segregation within kinetic space, and ignore the hurdles faced by Maya urbanites.

---

[11] Lastra Suárez and Delgado Campos*, op. cit.,* p. 104.

[12] Steffen Böhm, Campbell Jones, Chris Land, and Mat Paterson. "Introduction: Impossibilities of automobility", in Steffen Böhms *et al*. (eds), *Against automobility*, Blackwell Publishing, 2006. "Automobilities", *op. cit*., pp. 3-12.

[13] See, *supra*, pp. 100-102.

The class disparity observed in urban mobility in the Yucatan Peninsula is not exclusive to this region. Nation-wide, over 50% of cars are owned by the wealthiest upper fourth of the population, while the lower fourth own less than 10%.[14] This distribution based on income is also present at scale, with the more prosperous north concentrating most of the country's private vehicles, followed by the metropolitan area, the centre of the country, and the south coming in dead last.[15] Given that, as the PRODER survey has shown, skin tone and income are correlated,[16] we can confidently assume that the group that possesses the largest flotilla of private vehicles are white Mexicans.

Overall, the lack of context surrounding the provision of transportation in the Peninsula –and Mexico more broadly– is the product of a failure to understand the relational nature of mobility. As alluded to in the chapter titled "From transportation to mobility studies", the transition therein mentioned allowed scholars to avoid the pitfalls of decontextualised travel, by dispelling the notion that it can be, in any way, neutral. In Campeche and Merida, the class and racial component is ignored, and therefore, how these are perpetuated through automobility is not fully understood. 'More roads' is the answer provided by these cities when discussing the provision of infrastructure that will enable the free flow of goods and people. An attitude that reflects current spending across Mexico's metropolitan regions, which destine four out of every five pesos to fund automobile infrastructure.[17] What is left unaddressed when these actions are undertaken is the very nature of these newly created kinetic spaces, and the hierarchies inherent within them. The implicit argument is that all manner of vehicles can make use of them, meaning that the carless can opt for buses or cycling if they so choose, while pedestrians can make use of the pavement to navigate the streets safely. Were they to be consulted, mobility scholars would correctly diagnose that this understanding does not account for the class distinction in the use of modes of transportation, inherent violence of automobile use, and the implicit hierarchy that favours the car, both for its cultural capital and its deadly potential. In perpetuating the simple road as a tool to guarantee mobility for all, Campeche and Merida uphold the car as the machine best suited for participation in this kinetic space.

---

[14] Lastra Suárez and Delgado Campos*, op. cit* p. 130.

[15] *Ibid*., p. 129.

[16] Braulio Güémez and P. Solís, "Estratificación etnorracial y discriminación percibida en Mérida, Yucatán", *Reporte de la Encuesta Proder # 5*, México, El Colegio de México, in https://discriminacion.colmex.mx/.

[17] Daniel Zamudio and Víctor Alvarado, "Inversión e infraestructura estimada al uso del automóvil particular vs. Inversión en transporte público y movilidad no motorizada", *El Poder del Consumidor*, Ciudad de México, 2016, p. 3.

Users of public transportation must thus coexist with the expansion of the road network and the message it conveys. If they do not have a car, they are immediately excluded from all spaces not serviced by buses or collective taxis. While they can use their bicycles, they do so under the threat of vehicular violence, which throughout the country mainly harms the most vulnerable, such as the elderly, children, pedestrians, and cyclists.[18] Over time, the city's infrastructure conditions their motion, therefore distorting the traveller's understanding of urban space and imposing limits on their ability to freely consume it.

In Merida and Campeche, the distances involved and the distribution of both services and public transportation directly influence how people interact with their city. Carless residents of the periphery often rely on public transportation to travel to the core, rendering them hypermobile. They traverse the city with the goal of reaching their job or accessing vital services concentrated near or around the city centre. Paying for this service in both money and time, the inhabitants of the periphery journey through a city with which they interact only in passing. The mentally taxing exercise of investing time and energy on long journeys that funnel citizens from their houses to areas of increased economic activity is exacerbated by the conditions of public transportation, which impose a heavy toll on the travelling body. This activity –repeated over time– carves out a path, one from which people can seldom deviate due to the complexity and cost of the alternatives. Those trapped in this routine are not a random selection of citizens, but –as seen in tables 1 through 4– are mostly made up of people from the lowest deciles in society, with inhabitants with Maya heritage figuring prominently therein.

Despite the costs incurred by the kinetic elite, they move through their cities at will, thanks in large part to the vast network of roads, avenues, and city highways that subsidize the automobility regime from which they profit. As mentioned earlier,[19] this is not exclusive to the Peninsula, but a larger trend throughout Mexico. Hypermobility, although a phenomenon affecting both the wealthy and those whose finances are less robust, shows that the degree of agency both groups enjoy is asymmetrical. While one drives for extended periods of time to visit wealthy or secluded enclaves, the other group is forced to traverse large distances to access essential services.

Hypermobility also warps the fabric of urban space, since areas that share geographical proximity need not be connected. A system of public transportation whose function is to

[18] Gisela Méndez, *et al*., *op. cit*., pp. 9-10.
[19] See, *supra*, pp. 82-88.

funnel people from the periphery inward is not required to care if it serves the need of inter-peripheral travellers; its motive is profit. The current conditions observed in Merida and Campeche effectively distort the distance between locations. For the carless, this means that a journey between peripheral neighbourhoods might demand as much time as would a trip to the core, due to insufficiencies such as poor infrastructure and limited public transportation. This contrasts sharply with the accessibility granted to the kinetic elite, who might view urban space as relatively flat, given the effort to provide ample roads for automobility to prosper. For them, little stands in their way as they traverse urbanity from one side to the other.

Motility is what distinguishes the effects of hypermobility on urbanites. People who rely on public transportation –usually the less wealthy– are besieged by time poverty; lacking agency over their movement, they sacrifice what time they have to guarantee they can access the services they need. They are unable to capitalise on the options offered by the field of motion, since they are found lacking in financial capital that would allow them to make use of kinetic spaces ever-present for the kinetic elite. While during the day they are limited to the routes offered by public transportation, come nightfall they are reduced to effective immobility; the cost of taxis being the only refuge of the carless who are willing and able to afford them. Under those conditions, mobility and income become intertwined, and since income and ethnic identity are strongly correlated, Maya heritage becomes a factor on the overall mobility in Campeche and Merida.

The limitations described so far, those which primarily affect indigenous people found in the lowest economic deciles of society, are a description of the unequal mobility practices present in the urban centres of the Yucatan Peninsula. This phenomenon, as elaborated upon earlier, creates patterns of motion that are etched into the fabric of society. This is as much a study of the routes taken, as that of those not used. Mobility in Campeche and Merida is entrenched, distorting urban dimensions and conditioning how the city is consumed.

In the chapter titled “From transportation to mobility studies”, I pointed to the socio-political, economic, and infrastructural nature of the limitations certain people face when traversing urbanity. Given the information provided in said chapter, we can apply those to the travel limitations that many indigenous people face in Merida and Campeche. As alluded to prior, in the Yucatan Peninsula, race and income are intertwined, which is to say that the effects imposed on motion by socio-political and economic factors are practically indistinguishable. This means that people with Maya heritage, who are likely economically disadvantaged, will turn to means of transportation they can afford. As seen in tables 2 and

4, this will see them turn more often to public transportation, since it is understood to be a more cost-effective measure to traverse urbanity. This option does serve to travel from one place to another, but its use of kinetic space is limited to the routes that connect the periphery to the core. Additionally, this option does not allow for unrestricted movement throughout the day, given the nature of the timetables offered by buses and collective taxis.

The mobility of this particular group in the cities of Campeche and Merida is thus modally, temporally, and spatially entrenched. They are modally entrenched due to infrastructural and economic limitations, a contributing factor to which is the prevalent automobility regime. Infrastructurally, kinetic spaces in both cities favour internal combustion vehicles due to street design that prioritizes the transit of buses, cars, and other motorized machines, whilst neglecting to provide safe spaces for pedestrians or cyclists. These last two groups face the threat of violence that accompanies the kinetic energy of fast-moving large objects, a dynamic tolerated due to the widespread internalization of automobility as not only necessary but righteous.[20] Economic conditions also contribute to modal entrenchment. As previously mentioned, Maya people and those of Maya heritage often find themselves in precarious economic conditions due to the historical oppression they have endured. Public transportation, due to its relative affordability and the protection it provides from other participants in kinetic space, is relied upon ad the cost-effective travel method. This dynamic, rather than challenge automobility, further contributes to the modal entrenchment of this group.

Under current conditions, people who turn to buses and collective taxis can only traverse urbanity via the routes chosen by the companies that own them. This spatial entrenchment is the product of the current configuration of public transportation in Merida and Campeche, for as argued in the previous chapter, its goal is to ferry workers and potential consumers from the periphery inward, while extracting rent from the passengers. Users have little motility, even if their mobility is high, since their access to kinetic space is always mediated by the private concessions that own public transport. This case of spatial entrenchment is compounded by the lack of infrastructure that would allow people to turn to bicycles, walking, or other forms of non-motorized travel to reach their destination.

The limitations that arise from the restrictions imposed on their ability to select the routes they can traverse is compounded by temporal restrictions due to the limited schedules

[20] For more on the normalization of vehicular violence under the automobility regime see, *supra*, pp. 27 *et passim*.

on which these providers operate. The profit motive is directly tied to the way in which timetables are designed, a logic which dictates that a decrease in ridership be translated into an absolute suspension of services after midnight. This imposes immobility on the carless, who must then turn to dangerous or expensive solutions if they find themselves in need to journey through urbanity. People in this condition are temporally entrenched, facing severe restrictions to movement –maybe outright immobility.

The physical manifestation of what has been previously discussed is evidenced in the previous chapter. Maps 8 and 9, and 16 and 17, are examples of the hub and spoke patterns of public transportation routes, and how these serve as pipelines that funnel people from the periphery inward, and back again. These lines, that connect the less wealthy parts of the city to the affluent core that concentrates the jobs and services, constitute the trenches that enable movement but limit mobility. These trodden paths, formed after repeated interactions with the social forces that condition their ability to travel, constitute a barrier that prevents urbanites from consuming the city. The conditions that corral them into these trench-like structures serve as the outside threat, which instigate and perpetuate these patterns of movement.

To argue that the sole cause of entrenchment is the reliance on commodified public transportation would be to ignore the socio-political, economic, and infrastructural conditions that shaped the cities of Campeche and Merida. The hyper concentration of essential services in the core compels urbanites of the periphery to travel inwards if they wish to guarantee their access to essential rights such as education and healthcare. Their reduced motility is thus not merely a consequence of their inability to profit from the totality of the mobility field, rather, it is a confluence of factors such as forced hypermobility, commodified transportation, and unequal urban design which robs some of their ability to decide over their time and travel patterns.

The value of entrenched mobility as an analytical category is its ability to distinguish the degree to which the limitations imposed on motion change as the travelling subject shifts geographically. The location of any given person within urbanity might itself determine the degree of motility they enjoy. Their familiarity with the modes of transportation available, the language spoken by users, providers, and fellow citizens, and the relative cost of services will influence the degree to which they can appropriate the field of motion. Residents of the municipal centres of Conkal, Ucu, and Uman will experience shifts in modes of transportation as they traverse metropolitan Merida. In their respective municipalities, they can turn to bicycles as a form of autonomous travel throughout the smaller urban

agglomeration, due to the reduced number of cars and the threat of violence that accompanies them. Additionally, they can request the service of moto-taxis or bicycle taxis, which offer privatised travel at a fraction of comparable rates for taxi-cars in the centre of the city of Merida. The same applies for the cases of Lerma, the urban agglomeration along Campeche's western coast, and China, the community south of the city airport (see map 2). Motility will change as they venture closer to the core, as the price of transportation (particularly that of taxis) increases drastically, the number of people who speak an indigenous language (or their willingness to do so) decreases, and the symbolic violence of automobility increases with their growing presence in the cores of both cities. Thus, the centre, with its lager supply of transportation modes, does not increase mobility for all, rather it detracts from motility, the periphery for some being a space that offers a larger degree of freedom.

As people journey through space, their motility fluctuates –increasing and decreasing– as they switch from one mobility field to another, and in so doing they discover that their capacity to navigate it is conditioned on the shifting nature of their mobility capital, which shifts geographically. This has a tangible impact on their ability to traverse urbanity, the modes of transportation they turn to, and their overall perception of travel and the space they inhabit. These experiences are meaningful when understood as the frequent contact between urbanites (and their identities) and the socio-historical context in which they live and move.

5.3 Right to mobility as a precondition for urban equality

The main contributor to the entrenched mobility patterns of urbanites in Campeche and Merida –be it spatial, modal, or temporal– is their lack of motility. People in these cities are compelled to move out of need, so they can guarantee their access to essential services and economic activities concentrated in the urban core. As shown in the previous chapter, the design of the cities is practically concentrical, with the productive core surrounded by rings of decreasing density where most of the population live. Travel is essential, given this configuration, because people are unable to procure services such as education, healthcare, or financial support without venturing inward.

While the provision of quality public transportation would improve the lives of many daily commuters, it is the act of commuting itself which should be questioned. One alternative to this urban configuration is offered by redistributing services throughout the

city.[21] This would see the creation of several districts within urbanity, each coexisting and offering slightly different services, but effectively devolving functions back to neighbourhoods, so these can satisfy the needs of residents. If done properly, these urban spaces would procure housing, education, financial services, basic healthcare, and leisure activities,[22] all planned around a functioning transportation network that would allow for mobility within it,[23] as well as facilitating a connection to the broader metropolitan region.

A redistribution of services at this scale would reduce the need to venture to the core. Services once available (almost) exclusively in and around the city centre would be available within reasonable proximity. This proposal echoes the thoughts of Carlos Moreno,[24] who advocates for resilient solutions in the face of mounting ecological problems caused by our current urban configuration. The arguments put forth by those advocating for a more equitable city emphasize the benefits to mobility, among which is an increase in the motility of those who face time poverty as the direct consequence of current urban design.

Implementation of such a project in metropolitan Merida would require a multi-municipal collaboration effort. Urban sprawl, as a condition of the core's economic growth, has led to the extension of Merida beyond its municipal borders. At present, the municipalities of Kanasin and Merida are so closely intertwined that they are effectively merged. While surrounding municipalities such as Ucu, Uman, and Conkal are inextricably linked to the economic processes of the city Merida (understood beyond its municipal borders). An effort to provide a more equitable distribution would necessitate the provision of basic services such as education and healthcare in localities currently considered peripheral. While it might be necessary for large facilities –such as university campuses or specialized hospitals– to remain in place, essential services such as primary, secondary and high schools, basic financial services, and health clinics should not require people to cross the breadth of the city. This urban model would not simply empower municipalities which

[21] While the blue-print offered by the 15 minute city is enticing, urban areas like those formed by Merida, and –to a lesser degree– Campeche require solutions tailored to their environment. I recognise the use of this approach, and I believe in its goal, but recognise its limitations, at least as concerns there urban spaces. Carlos Moreno, "*The 15-Minute city: a solution to saving our time and our planet*", New Jersey, John Wiley & Sons, 2024.T. Abbiasov, C. Heine, S. Sabouri, et al., "The 15-minute city quantified using human mobility data" Nat Hum Behav, vol. 8, 2024, pp. 445–455. Thomas Papas, Socrates Basbas, and Tiziana Campisi, "Urban mobility evolution and the 15-minute city model: from holistic to bottom-up approach", *Transportation research Procedia*, vil. 69, 2023, pp. 544-551. Carlos Moreno, Zaheer Allam, Didier Chabaud, Catherine Gall, and Florent Pratlong., "Introducing the "15-Minute City": Sustainability, resilience and place identity in future post-pandemic cities.", *Smart cities*, vol. 4, no. 1, 2021, pp. 93-111.

[22] Moreno, *op. cit*., pp. 95 *et passim*.

[23] Papas *et al*., art. cit., pp. 545 *et passim*.

[24] Moreno, *op. cit*., pp. 5 *et passim*. Moreno *et al.*, art. cit., pp. 93 *et passim*.

have historically interacted with Merida but have been systematically ignored (such as Uman and Kanasin), it would also allow for more recent participants in the metropolitan dynamic to benefit from the exchange as much as they contribute to it (such as Ucu and Conkal).

Campeche finds itself in a similar dynamic, although at a much smaller scale. While the city does not have to contend with the difficulties posed by intermunicipal cooperation, it does have to consider the consequences wrought by urban sprawl. Like in Merida, the hyper concentration of services in the core directly impacts the motility of locals. Those who have a car and live due west of the airport can indeed enjoy the benefits of a more equitable city, with hospitals, schools, financial institutions, and leisure spaces all a quick drive away. That is not the case for the carless or those in the eastern side of town. As seen in maps 2 through 7, they are placed in a condition that renders them time poor. Like its neighbour to the north, the reduction of Campechano motility is a product of the distribution of services throughout urbanity. Rather than a city designed to benefit its inhabitants through equal access, it has evolved (due to the colonial legacy that shaped it) into an exclusionary and segmented urban landscape, favouring automobility above all.

The restructuring of urbanity to prioritize a city that allows for better mobility and easier access would inevitably increase urban density throughout. While travel through urban space would still be possible via the use of cars, single-rider motor vehicles would quickly congest the main arteries of cities, as more and more inhabitants live closer together. This model requires that mobility be rethought beyond the current regime.

The first solution is to walk. In a dense urban area where essential services are located within relative proximity, walking is a healthy, time-effective and cost-saving measure to travel from one point to another, be it from home to school, or from work to the market. In Mexico, where walking is still –alongside public transportation– the predominant means of transportation,[25] a city with more equitably distributed services would encourage such an approach to mobility. The shift that would most likely need to occur in both Campeche and Merida to facilitate this (beyond the redistribution of services) would be to provide the infrastructure and maintenance required so that all people (elderly, disabled, children) can travel down the streets.

Another mobility solution would be the expansion of cycling as the main form of transportation. While the peninsula already has some of the highest numbers in the country,[26]

[25] Méndez *et al.*, *op. cit.*, p. 2.
[26] *Ibid*., p. 5.

the cities of Merida and Campeche do not possess adequate infrastructure that interconnects the totality (or a majority) of urban space. Cars, via their symbolic violence,[27] monopolize kinetic spaces competing only among themselves and against public transportation (which they cannot bully off the road). By creating smaller integrated units, this urban configuration would incentivise users to exchange their cars for bicycles. This would, of course, require that streets be redesigned to accommodate cyclists over car drivers by decreasing the number of spaces that cars use to park, and instead ceding those areas to potential bike lanes.

The municipality of Merida has already taken steps in this direction and has provided exclusive kinetic spaces for cyclist across the city. While one can comprehend why these efforts were undertaken in more affluent neighbourhoods, such as *Paseo Montejo*, this cannot be labelled a triumph of local or state governments. For one, this was the result of pressure by local groups which demanded more infrastructure for cyclists.[28] Secondly, there is little in the way of a comprehensive endeavour to cover the totality of urban space. It is only natural that the project adopts a neighbourhood-to-neighbourhood approach, but it is yet to cover them all, and there is little indication of a metropolitan wide initiative to achieve this goal. While Merida is large, it is not impossible to traverse it almost entirely via bicycle due to its relative flatness. With adequate infrastructure, including trees that provide riders with shade, traversing urbanity would not be out of the question.

Campeche, on the other hand, offers more of a challenge for cyclists. While it is by no means situated in the mountains, hills surround the bay around which the city is built. The centre and the neighbourhoods immediately adjacent to it are all relatively flat, meaning that people could feasibly travel exclusively by bike. City administrators often promote the seafront promenade, known as the *malecón*, as a space for people to exercise, cycle for leisure, but also as a highway connecting one end of the city to the other. While there is little in the way of infrastructure for cyclists who wish to move around the core, the comparatively flat topography means that people can feasibly use bicycles. Inland neighbourhoods on the other hand, in particular those situated in steeper terrain, suffer both from the accidents of topography and the lack of purposely reserved kinetic spaces. The hills of the city of Campeche, while not insurmountable, pose more of a trial for the average rider, and might prove a tall ask given the temperatures that can surpass 40 ºC.

---

[27] Gregg Culver, "Automobilities", in Audrey Kobayashi (ed.), *International Encyclopedia of Human Geography*, 2nd edition, Elsevier Science, 2020, pp. 3.

[28] Miguel Lisbona Guillén and Ricardo Sánchez Martín, "La ciudad en bicicleta. Ocupación del espacio público e higienización social en Mérida, México", *Disparidades. Revista de Antropología* 76, no. 1, 2021, pp. 2-10.

Despite these challenges, cycling in Campeche can become a very cost-effective way to guarantee mobility within each neighbourhood. Were the adequate infrastructure provided, it would allow people within each district to meet their travel needs, ensuring that they have ready access to spaces such as schools, hospitals, recreational areas, markets, and their place of work. Nevertheless, as things stand, local officials seem to view cycling as an activity best done by the sea, and for those who wish to practice it within the city, there is little to protect them against the natural elements or vehicular violence. For both Campeche and Merida, cycling is integral to a project that would further the implementation of a city that foments equal access to all. It offers a cost effective, ecological, healthy alternative to automobility. In addition to these benefits, cycling can also spearhead efforts to redesign urbanity. Projects could reorient mobility in a zone by pivoting to bicycle driven mobility, and in so doing, change the mobility make-up of the city one neighbourhood at a time.

A more equitable city must also rely on public transportation to guarantee equal access. Under this model, travel would no longer obey a core-periphery exchange, but would instead function as an interconnected network, where each of the multiple urban centres act as a node that facilitates travel between them. Bus Rapid Transit systems (BRT) would offer one solution that would help swiftly connect key areas of town, while requiring very little in the way of infrastructural adjustment. This technology is tried and true, as exemplified by the case of Mexico City. Other metropolitan areas across Mexico have adopted the idea,[29] meaning that it inhabits the collective imaginary of both people and politicians. Cheap and efficient, this could be one of the solutions to facilitate urban mobility.

Trams are also contenders as instruments to improve urban travel and alleviate car-dependency in both cities. Both Campeche and Merida possessed tramway systems at the beginning of the 20th century, but like in the United States,[30] they were slowly replaced by cars and buses, and eventually disappeared altogether.[31] Their adoption would mean a reintroduction of this system, one which would rely on the reconfiguration of kinetic space. The infrastructure needed for their adoption would be costly, given they would practically start from scratch. Nevertheless, the success of this means of transportation across Europe,[32]

[29] Lastra Suárez and Delgado Campos*, op. cit.,* p. 66 *et passim*.

[30] Brian Solomon and John Gruber, *Streetcars of America*, Bloomsbury Publishing, 2014.

[31] I must clarify that streetcars (as they were know in America) never completely disappeared, but they became relics and attractions on quaint towns, rather than integral parts of the transportation services of major cities. *Ibid*, pp. 9-10.

[32] Rob van Der Bijl, Niels Van Oort, and Bert Bukman, *Light rail transit systems: 61 lessons in sustainable urban development*, Elsevier, 2018, pp. 62-71.

and its renaissance in the United States could serve to promote them as viable alternatives to the regime of automobility.

The solutions presented thus-far are a call for the current urban configuration of both cities to be totally upended. They would require a shift not simply of infrastructure, but and ontological reconfiguration of the relation between urbanites and the space they inhabit, produce, and reproduce. Walkable dense cities that equitably redistribute services to grant access to a majority of its inhabitants, while promoting large transit systems such as trams and BRT, are all goals for a long-term project. These options, however, should function as a horizon to which we orient ourselves; one that keeps us going forward.

These promises of future improvement should not, however, distract from more immediate solutions that acknowledge the need for change, yet work within the existing capabilities of the governments of these municipalities and their states. The answer can be found in mobility at a smaller scale; in improving current strategies and modes of transportation. Buses must continue to play an important role in connecting neighbourhoods within themselves and to each other. Given their carrying capacity, these would be better at servicing densely populated areas and could also operate on longer roots while the infrastructure for BRT and Tram lines are installed. Collective taxis could also be called upon to provide transportation. While they are currently identified with the problems of urban travel across all of Mexico,[33] they could function as smaller units to guarantee the mobility rights of citizens living in areas that are less dense or have a smaller demand as the day progresses. It would require the introduction of modern, clean, and well-maintained units to break with the bad reputation collective taxis hold, but if that can be achieved, their size would prove optimal when seeking to guarantee mobility in colonial neighbourhoods with narrow roads, and also less populated neighbourhoods. In that same vein, taxi-bikes and moto-taxis can also fulfil the role of transportation in smaller communities. Rather than rely on automobility to accomplish this task, local efforts can be drafted to create an integral mobility regime based around autochthonous solutions that benefit each locality.

Efforts such as those discussed in the previous paragraphs would improve urban travel by increasing the quality and supply of transportation. Solutions should fall along the lines of what Rita Segato has termed "responsive anthropology",[34] that is to say, based on the needs and in accordance with desires of those communities. By approaching mobility in such

[33] Priscilla Connolly, *op cit*. p. 146 *et passim.*
[34] Rita Segato, *La crítica de la colonialidad en ocho ensayos*, Buenos Aires, Prometeo, pp. 11 *et passim*.

terms, answers would be the product not of top-down, universalizing principles, but a recognition of diverse mobilities constructed from grass-roots efforts that aim to better every inhabitant's right to the city. In other words, better travel will not result by merely incorporating more buses, but rather from collective struggles to dislodge negative imaginaries of public transportation produced by classist and racist structures birthed from colonial legacies, towards the co-creation of intermodal inclusive mobility.

In practice, the implementation of this project would inevitably challenge the current automobility regime. Since space is, by its very nature, monopolistic, streets would become a contested arena. At a larger scale, the infrastructure necessary for BRT and trams would partially or totally limit space for private vehicles. This clash would extend to buses and smaller microbus units, which (when possible) would be granted exclusive lanes, further restricting the occupancy and speed that cars enjoy. This clash would trickle down to the expansion of micromobility services in and around the many neighbourhoods which would come to define this new urbanity. In upending entrenched mobility, the efforts would inevitably tackle automobility, and in so doing invite the ire of those who have grown accustomed to the privileges conferred to them by the regime.

This is not to argue, however, that cars have no place in future urban configuration of the Yucatan Peninsula. Beyond the self-evident cases of emergency or government vehicles, private vehicles have a place within urbanity as a transportation tool that offers a great degree of flexibility. In an ideal scenario, the distribution of cars would obey the law of need, by which people would have access to cars only if they truly require that particular mode of transportation, having credibly exhausted all other alternative. Since this is practically impossible to implement (in the Peninsula, Mexico, or the broader world), the solution would be the creation of spaces where the speed of cars is reduced,[35] such that other forms of transportation become both viable and attractive. Additionally, the implementation of car-sharing would detach the notion of "auto" from the automobility regime. In such a configuration, cars would be understood as a communal good, one which can be used by a larger group, if the need should arise for a particular activity that requires the flexibility such a machine affords.

Tackling entrenched mobility by promoting a multi-modal city would constitute a monumental task. While it would require a meaningful investment, it is a project based on

[35] One such example is Barcelona, where the local administration has put forth measures to reduce the speed of cars from 50 to 30 km/h. Ajuntament de Barcelona, "Barcelona Ciudad 30", *Movilidad y Transportes*.

grassroots organizing and cooperation. An undertaking of this scope is not merely focused on the reconfiguration of urbanity for a blanket replacement of infrastructure, it is an effort to reimagine the ability of urbanites to consume the spaces they construct and reproduce. Increasing overall motility is only possible through an acknowledgement of the social, political, and economic forces that have shaped mobility in urban centres. Any successful challenge to entrench mobility is only possible through a study of the systems that perpetuate unequal travel, many of which exist beyond the Yucatan Peninsula.

5.4 Applications beyond the Peninsula

Unequal travel is not the exclusive purview of Mexico or this particular region. Other cities throughout the country suffer to gain equal access to the urban spaces they inhabit, due in no small part to the hierarchies promoted by the automobility regime.[36] While they all distinguish themselves according to the particular dynamics that continue to shape their transportation networks, entrenched mobility is present in them all.

Much like it extends beyond the Yucatan Peninsula, entrenched mobility can be said to be present wherever differences in motility lead to unequal access to urbanity, mostly as an uneven modal split, or as temporal or spatial restrictions. Due to the near ubiquitous presence of automobility throughout world society, changes to our current configuration of travel must also adopt new methodological approaches that go beyond mechanistic understandings of motion, or the drawing and repelling powers of spaces on objects and people. Mobility studies and entrenched mobility can shed light on current challenges of travel –both urban and rural–, to better comprehend the requirements of locals.

An example within the United States would be that concerning the mobility patterns of undocumented migrants. The country is often associated with the regime of automobility that is now ubiquitous the world over. This societal reliance on cars as the main mode of transportation tethers people to this machine, in other words, the country at large is modally entrenched. This reliance is, however, hard to break free from, as many rely on it to access their workplace and to broadly guarantee their right to urbanity. Despite the omnipresence of private vehicles, the ability to commandeer one legally is predicated upon the operator being the holder of a valid driver's licence. For undocumented residents, procuring one might prove impossible depending on the state in which they live. These restrictions impact how they drive, which routes they take, their modal reliance, and the times at which they

[36] Lastra Suárez and Delgado Campos*, op. cit.,* pp. 36-40; 69 *et passim*.

travel, among other constraints imposed on their journey by the mobility field with which they interact.[37] The systems can lead to conditions which modally, spatially, or temporally entrench the person's mobility, restricting their sense of belonging, limiting their opportunities, and denying them access to urbanity.

In the case of Latin America, a focus on movement and gender would shed light on the plight of female travellers. Feminicide in the region is a gruesome barrier that limits the ability of women to partake in some facets of modern society, such as unimpeded travel throughout urbanity. Due to the scourge of violence, female travellers are forced to reimagine mobility as a tactic for their physical and mental safety, beyond the stated purpose any given journey might already hold. The calculations necessary for the mobility of this group are complex, for they rely on an understanding of the dangers posed by certain streets, at certain times, traversed by different means.[38] These circumstances condition movement such that their journey is only possible with a particular means of transportation, during the hours when the sun is out, and on main roads. This, in other words, entrenches their mobility modally, temporally, and spatially. Not only are these physical restrictions of their movement, but they determine how urbanity is experienced, and condition future interactions with the city in which they live.

While the mobility of women in urban settings in Latin America deserves attention, unequal gendered travel is not circumscribed to one region. As Ananya Roy notes, the travel of poor working women in India is a dynamic rife with meaning beyond their working commute. Their mere presence in trains is perceived as a threat by both working and elite men and, also elite women. As Roy argues "such disruptions are especially acute because [their presence renders] unstable not only the public/private binary but also the rural/urban binary".[39] Theirs is not just a travel dynamic experienced as the worker's commute, but a journey beset on all sides by the antagonisms of class, gender, and the urban-rural divide. The challenge of urban mobility in India is not ethe exclusive prerogative of poor women

[37] Ryan Allen and Jueyu Wang, "Immigrant Legal Status and Commute Mode Choice for Hispanics in the United States.", *Journal of the American Planning Association* 86, no. 3, 2020, pp. 284-296; Yuxin Zhang and Dafeng Xu, "Public transit commuting among US immigrants: The role of English skills", *Travel Behaviour and Society* 37, 2024, pp.1-9.

[38] Laura Jaitman, "Public transport from a gender perspective: Insecurity and victimization in latin america. the case of lima and asuncion metropolitan areas", *Journal of Economics, Race, and Policy* 3, no. 1, 2020, pp. 24-40; Amy Dunckel Graglia, "Finding mobility: women negotiating fear and violence in Mexico City's public transit system.", *Gender, Place & Culture* 23, no. 5, 2016, pp. 624-640; Jana Korn, "Riding scared: Sexual violence and women's mobility on public transportation in Santiago, Chile.", *Urban Studies Senior Seminar Papers* 24, 2018, pp. 1-39.

[39] Roy, Ananya, *City requiem, Calcutta: Gender and the politics of poverty*, Minneapolis, University of Minnesota Press, 2003, p. 125.

commuting to larger cities. The educated counterparts are also subjected to violence, the product of social stigmatization that castigates their presence in urban space. In the case of Indian women working in call centres, the perception of frivolous young girls navigating a world full of dangerous lower-class men results in constrained mobility (in the form of legally mandated company transportation).[40] While the gender dynamics are clear for all to see, the degree to which both groups are constrained, the role the State plays in how their mobility is limited, and the infrastructure provided for them to traverse the city differs. The resulting modal, temporal, and spatial entrenchment is more complex than gender and, while noted by the authors, entrenched mobility would improve our knowledge of this multilayered phenomenon, by reframing mobility not as peripheral but central to a woman's right to participate in urbanity.

Much like their Indian counterparts, the journeys of women and girls in Sub-Saharan Africa are profoundly constrained by forms of discrimination that flow from existing societal structures. For women, mobility is inextricably tied to their economic livelihoods, particularly for those engaged in subsistence agriculture who depend on access to markets to sell their produce.[41] However, inadequate road infrastructure, exacerbated by seasonal rains, frequently renders rural routes impassable. Compounding this is the unreliability of transportation networks, which often results in delayed or missed market opportunities, directly diminishing women's economic agency. These structural limitations intersect with patriarchal norms, which stigmatize women who travel frequently by associating such mobility with promiscuity. Consequently, women's spatial autonomy is further curtailed, as they are expected to prioritize domestic responsibilities and return home promptly, reinforcing a cycle of limited access to economic opportunities.[42] These context-specific infrastructural, socio-political, and economic constraints thus result in modal, temporal, and spatial entrenchment that curtail their livelihood and quality of life.

Similarly, girls encounter profound mobility-related barriers that impede their access to education. Prior to embarking on their often-lengthy journeys to school, many are required to complete domestic chores, which delay their departure and increase the risk of late

[40] Aparna Parikh, "Politics of presence: women's safety and respectability at night in Mumbai, India", *Gender, Place & Culture* 25, no. 5 (2018): 695-710.

[41] Gina Porter, "Transport, (Im) Mobility, and Spatial Poverty Traps: Issues for Rural Women and Girl Children in Sub-Saharan Africa.", *International Workshop "Understanding and addressing spatial poverty traps: an international workshop*, vol. 29. 2007.

[42] Gina Porter, "I Think a Woman Who Travels a Lot Is Befriending Other Men and That's Why She Travels': Mobility Constraints and Their Implications for Rural Women and Girls in Sub-Saharan Africa.", *Gender, Place & Culture*, vol. 18, no. 1, 2011, pp. 65-81.

arrivals, often leading to exclusion from class. These commutes are marked by arduous conditions, including poorly maintained roads and hazardous terrains, compounded by pervasive threats to their safety.[43] Environmental dangers, such as encounters with snakes and wild animals, are coupled with the omnipresent risk of gender-based violence, including rape and murder. For these girls, the daily journey to school transcends the pursuit of education, becoming a fraught endeavour shaped by systemic inequalities and marked by the constant negotiation of personal safety. For both women and girls in the region, their capacity to appropriate the totality of the mobility field is often curtailed, leading to them being modally, temporally, or spatially entrenched.

The examples discussed above illustrate how mobility is shaped by the intersection of various social dimensions, including race, class, gender, age, and legal status, each of which significantly influences the capacity to travel. These examples reveal that mobility is not merely a matter of physical movement but is deeply embedded within broader socio-spatial structures that determine who can move, when, and under what conditions. The concept of entrenched mobility offers a critical analytical lens to uncover and interrogate the structural and systemic factors that curtail motility, transforming what might appear as individualized barriers into collectively experienced constraints. By identifying the mechanisms that produce restricted mobility or outright immobility, this framework provides the means to critically assess the interplay between social inequities and spatial access.

Moreover, entrenched mobility underscores the necessity of spatially representing these constraints to trace their material and geographical impacts. For instance, mapping the limited access to driver's licenses for undocumented residents in the United States, the gendered tactics of mobility in Latin America, or the infrastructural and societal barriers faced by women and girls in Sub-Saharan Africa reveal how social inequalities are spatially manifested. These representations allow for a nuanced understanding of how disparities are not only perpetuated but also reinforced and reproduced across physical and social landscapes. In doing so, this approach highlights how the restrictions imposed on mobility are both a consequence and a driver of entrenched social hierarchies, perpetuating cycles of exclusion and inequality. By emphasizing this dialectical relationship, entrenched mobility

[43] "Issues for Rural Women and Girl Children", art. cit., pp. 2-5. Claire Elisabeth Dungey, Hadiza Ahmad, Joseph Mshelia Yahaya, Fatima Adamu, Plangsat Bitrus Dayil, Ariane De Lannoy, and Gina Porter, "Dangers in the Third Place: Walking, Public Transport and the Experiences of Young Girls in Cape Town and Abuja", in Moody Z, Berchtold-Sedooka, A, Camponovo S, Jaffé PD, Darbellay F, (eds.), *School Journey as a Third Place: Theories, Methods and Experiences around the World*, Anthem Press, 2023, pp. 57-78.

enables a deeper interrogation of the spatialization of power and the embodied realities of movement –or its absence– within a global context.

5.5 Final remarks

From the outset, this chapter focused on bringing together the cases of Campeche and Merida. First, the text expands on the corporeal experience of travel in the Peninsula. As detailed above, commuters in the region are subjected to harsh travel conditions that make public transportation an unappealing choice. Afterwards, the text focused on the systemic limitations faced by urban travellers, to show that entrenched mobility is not merely and abstraction, but an analytical tool that furthers our understanding of accessibility and motion in the cities of Campeche and Merida. This latter point fed into a discussion of potential solutions to this inequity, ideas that are only possible if mobility is conceived as central and not incidental. Lastly, the chapter dealt with the need to expand beyond the Peninsula (and Mexico), and study unequal travel in other regions through the lens of entrenched mobility. This approach can help better comprehend the retractions faced by local commuters and open up horizons to imagine solutions that account for their experiences as travellers.

By naming this phenomenon, we provide a framework for addressing the mobility challenges of marginalized groups. Entrenched mobility offers more than a lens for diagnosing the structural inequalities that constrain movement; it opens the door to broader, more global reflections on movement and access. While its roots may lie in addressing unequal mobility in the Yucatan Peninsula, its branches extend far beyond, offering a distinct epistemological approach that can help untangle the knots of inequality woven into the fabric of mobility worldwide. In short, entrenched mobility is not merely another concept to chuck in the toolkit; it's an invitation to redraw the map of mobility, one route, one roadblock, and one overlooked journey at a time. Whether in Latin American public transport, the streets of India, or the rural roads of Sub-Saharan Africa, the concept compels us to confront how power, privilege, and oppression condition travel, and forces us to ask who is left behind as a result.

Conclusion

From the outset, this thesis set out to answer how systemic forces produce and perpetuate patterns of unequal mobility. In essence, this question meant to study the consequences that infrastructural, socio-political, and economic factors have on the lived experiences of people as they travel. The ambition, from the beginning, was to move beyond the technicalities of transportation geography and to situate mobility as a central axis in the production and reproduction of social inequality, urban experience, and everyday life.

The journey from the initial formulation of the research question to the final synthesis of findings has been shaped by the evolving landscape of mobility studies and the complexities of urban environments. Above all, this work concerned itself with the lived realities of those for whom movement is fraught with risk, and limitations, and sought to research the strategies they implement to negotiate their daily travel. In emphasizing the value of mobility studies, the thesis has foregrounded the need to treat movement not as a neutral or purely technical phenomenon but as a deeply social, political, and embodied process.

By developing and applying the concept of entrenched mobility, this research has illuminated how systemic forces conspire to routinize and restrict the movement of certain groups, embedding inequality not only in the built environment but in the rhythms and routines of daily life. Crucially, entrenched mobility does not signify mere stagnation or absence of movement. Instead, it names a condition where movement persists –but unequally, inequitably, and inertially. Mobility is not necessarily denied; it is structured in such a way that some groups are afforded movement within some geographies and with the use of certain infrastructures, but at the expense of others. The Yucatan Peninsula's peripheral neighbourhoods, its informal workers, its limited transit system, and its episodic investment all point to urban spaces that move—but do so in ways that reproduce social and spatial inequality.

While by no means groundbreaking, the thesis' first chapter critically engages with the intellectual history of mobility research. In particular, the study of the transition from transportation geography to mobility studies. The effort, in essence, was a restatement of the critique authors such as Sheller, Cresswell, Urry, and Henderson had made of the apolitical nature of previous studies of motion. Transportation geography, while foundational, often

treated movement as a technical problem to be solved: a matter of optimizing flows, reducing friction, and expanding access. Its primary concern was with the mechanics of movement, privileging quantifiable metrics and often assuming that an increase in motion was both inherently beneficial and desirable.

Mobility studies, by contrast, interrogate the meaning of movement, its social and political consequences, and its role in the production (and reproduction) of social hierarchies. This thesis has shown that the field of mobility studies provides a richer and more nuanced framework for understanding the complexities of movement. By foregrounding concepts such as automobility, motility, and hypermobility, this text reveals that movement is always embedded within networks of power.

The core contribution of my work, found in the second chapter, is the development of the concept that has been discussed above: entrenched mobility. This theoretical innovation details a phenomenon that points to the patterns of limited or routinized movement that emerge as individuals or groups respond to systemic forces, such as infrastructural neglect, socio-political violence, or economic exclusion. Unlike temporary or episodic restrictions, entrenched mobility becomes embedded in the routines of daily life, shaping how people navigate the city, interact with others, and access resources and opportunities.

As noted throughout, this thesis has demonstrated that entrenched mobility is produced through the interaction of multiple systemic forces. Infrastructure, referring here to the built environment, often reflects and reinforces existing inequalities. Its uneven distribution benefits forms of movement considered favoured by the mobility regime in question, which grants advantages to certain groups, at the expense of those whose mobility it limits.

A second factor that contributes to the entrenched mobility of many urbanites are socio-political forces. Discriminatory policies, social norms, and cultural narratives whose violence –be it non-verbal, verbal or physical– shape who is seen as a legitimate user of space. Marginalized groups, who often fear for their well-being, adopt restrictive travel patterns for their safety or survival. The ‘othering’ to which they are subjected thus playing an important role in rendering them immobile and invisible.

The last factor identified by this theory are the economic constraints placed on travel. The cost of transportation is easily identified as a direct consequence of limits to mobility. Modal choice, when conditioned by income, becomes a barrier that determines the radius to which people have access when traversing urbanity. While not necessarily restrained, the tacit restrictions placed on movement by the lack of available options reduced overall motility, perpetuating unequal travel in the spaces they produce and reproduce.

The factors described above both cause and help to perpetuate unequal mobility. But to state that so broadly distracts from the nuanced ways in which they limit the capacity of people to travel; it fails to capture the complexity of the phenomenon. When faced with the inability to choose your preferred mode of transportation, different peoples might point to a large number of causes. One reason could be an inability to pay, another the lack of adequate infrastructure, while yet another might stem from fear of social or political ramifications (in the form of judicial or extrajudicial violence). These examples point to the modal entrenchment of people's mobility, on infrastructural, economic, or socio-political grounds. When the limitations to travel appear as an inability to transit through space –due to infrastructure, monetary cost, or societal ramifications– we speak of spatially entrenched mobility. If the limitations occurred along the lines previously described but restrict time, then we speak of temporally entrenched mobility.

It is not enough to describe the three factors –infrastructural, socio-political, and economic– and discuss how these contribute to different manifestations of entrenchment – be it modal, spatial, or temporal. The goal is to hold these in relational tension, as evidenced in table 1. Although ideal types are likely to exist, entrenched mobility is often found at the intersections between them. When held in constant tension, entrenched mobility provides a framework for understanding how inequality is produced and reproduced not only through the distribution of infrastructure or resources, but through the everyday practices and routines that shape how people move. It challenges the assumption that increased mobility is always desirable or empowering, and instead draws attention to the ways in which movement can be a site of risk, exclusion, and struggle.

While it is necessary to acknowledge the degree to which peoples are subjected to practices that curb their movement, marginalized groups are not passive victims of systemic forces. Throughout the course of their life, they develop sophisticated strategies for navigating, negotiating, and sometimes resisting the barriers they encounter. These strategies, ranging from route selection and time management to collective action and advocacy, are transmitted within communities as forms of practical knowledge.

It is paramount that we emphasize, however, that while these forms of knowledge are adaptive, they might be pernicious. On the one hand, they enable individuals to survive and sometimes thrive in hostile environments. On the other, they can reinforce the very patterns of restriction they seek to overcome, as routinized responses become entrenched and normalized. This dynamic underscores the need for both critical analysis and transformative action.

As was presented in the fourth chapter, the history of racial segregation and discrimination in the cities of Campeche and Merida perpetuated structures that impoverished the Maya population. In parallel, the open disdain for locals –born out of racist perceptions of superiority– coupled with the classist disregard for adequate infrastructure in poor neighbourhoods, translated into inadequate, unsustainable mobility practices, which furthered unequal travel opportunities.

In both cases, those living in peri-urban housing developments were statically more likely to be among the lowest earners in Campeche and Merida. This group tended to be overrepresented among users of public transportation (as was noted in the data provided throughout the chapter). Taken together, these factors played into each other, conditioning their movement, and subsequently restricting their routes. Herein lies the relevance of cartographical representations. While the chapter can avail itself of data as proof of the conditions of inequality, it is only through the maps that we can identify the pernicious character of these limitations. These representations allow us to comprehend that entrenched mobility is not merely a set of numbers, but a still shot of how people participate in society. The way they consume urbanity cannot be fully captured by statistics, it must be represented spatially and understood through the interactions with the urban environment they both produce and consume.

The importance of lived experience and how it is embodied –present in the discussion of knowledge production– is also manifest in the heterogenous morphology of space and time as the body traverses the city. Not being a uniform or static phenomenon, entrenched mobility varies in the forms and effects it has on people as they travel. The degree of entrenchment, as argued throughout, can shift over the course of a day, across different neighbourhoods, and in response to changing social dynamics.

The nuance offered by entrenched mobility serves as a tool that extends the analytical reach of mobility studies as a whole. By situating mobility at the intersection of power, identity, and justice, the thesis contributes to broader debates in geography and the social sciences more broadly. It argues that mobility is not merely a means to an end but, as evidenced by the cases of Campeche and Merida, a central terrain on which social hierarchies are enacted and contested. This concept thus enables a more critical and politically engaged analysis of urban life, one that is attentive to the ways in which movement is regulated, policed, and resisted.

While this thesis has made significant inroads into the way unequal travel is both conceptualised and analysed, the last chapter argues for new paths for inquiry. First and

foremost, entrenched mobility's focus on temporal dynamics could provide valuable insight into the persistence and transformation of mobility constraints. Longitudinal studies that focus on patterns of restriction and adaptation, and how these evolve, could deepen our insight into existing barriers, strategies of resistance, and the conditions of the mobility regime.

This approach requires that future research comprehend that mobility and identity are inseparably interwoven. Studies that place due emphasis on categories such as age, gender, health, and class (among others) as factors that dictate one's capacity to move, can help shed light on their impact on travel. Simultaneously, the inextricable link with geography will necessitate those studies of entrenched mobility be understood at scale. The changing perception of travel that responds to a person's transition from the neighbourhood to the district, to the city-wide level can broaden our understanding of urban mobility.

The findings of this thesis have important implications, beyond the theory's academic potential. Addressing the ramifications of entrenched mobility necessitates the move beyond solely technical solutions or infrastructural investments. It demands a holistic approach that recognizes the context and interplay from which the existing hierarchies of social, economic, and political power emerge. Such an approach requires that urban planners and policy makers prioritize the needs and experiences of those whose mobility is most constrained. This means designing infrastructure that is accessible, inclusive, and responsive to the diverse ways in which people move. Adopting such an approach would, in essence, produce policies aimed at reducing harassment, violence, and discrimination in public space, which are essential for enabling safe and equitable mobility. These actions cannot limit themselves to legal protections, for they require that we move beyond the confines of vehicles and into the public sphere, where we must shape education and the public discourse.

Addressing barriers to mobility also necessitates tackling the material conditions that impede travel. This means thinking about the economic circumstances that can further a person's ability to move freely, through mechanisms such as subsidies, affordable transit, and spatial redistribution of jobs and services. Their implementation can help reduce the undue burden placed upon marginalized groups, and in so doing, alleviate the conditions that entrench their mobility. These decisions must, however, involve the communities most affected by the current regime and the proposed solutions. By consulting with them during the planning and decision-making process, interventions can be both effective in their outcome, while also being held as organic and legitimate. These solutions can help uncover

invisibilized forms of entrenchment and co-create solutions that reflect the needs of lived realities.

Throughout this, the role of state institutions is clear, but beyond formal policy the research highlights the importance of grassroots activism and community-based strategies for challenging entrenched mobility. The knowledge and strategies developed within marginalized communities are valuable resources for both research and practice. Collective action is, above all, a powerful force for lasting change.

This thesis has argued that mobility is not merely a technical or logistical matter but a key site where power, identity, and inequality are enacted and contested. By developing and applying the concept of entrenched mobility, it has illuminated the hidden trenches that structure urban life and challenged both scholars and policymakers to imagine and work toward cities where mobility is not a privilege but a right shared by all.

The broader significance of this research lies in its potential to reframe debates about urban justice, inclusion, and mobility as a prerequisite for urban living. By centring the experiences of those whose mobility is most constrained, the thesis calls attention to the ways in which inequality is produced not only through the distribution of resources but through the regulation of movement itself. It invites a reimagining of urban life that is attentive to the needs, aspirations, and agency of all residents.

The field of mobility studies is still evolving, and this thesis has sought to contribute to its development by offering new concepts, empirical insights, and critical perspectives. The transformative potential of mobility studies lies in its ability to bridge disciplinary boundaries, to connect theory and practice, and to foreground the lived realities of those who are too often rendered invisible. By insisting on the relational, contextual, and dynamic nature of mobility, the thesis challenges static or universalizing models and calls for a more nuanced understanding of how movement is produced, experienced, and valued. It argues that the study of mobility is not only an academic exercise but a catalyst for more equitable and inclusive urban futures.

I have endeavoured to show that the study of entrenched mobility is both urgent and necessary. The trenches that structure urban life are not natural or inevitable; they are the product of choices, policies, and power relations that can be challenged and changed. By bringing to light the mechanisms and consequences of entrenched mobility, the research has sought to empower both scholars and practitioners to imagine and build cities in which mobility is a right, not a privilege.

Bibliography

Abbiasov, T., C. Heine, S. Sabouri, et al., "The 15-minute city quantified using human mobility data" *Nat Hum Behav* 8, no. 3, 2024, pp. 445–455.

Acevedo, Elda Moreno, "De la independencia a la Constitución El tránsito de Yucatán de provincia a entidad federativa (1821–1825)", *Jahrbuch für Geschichte Lateinamerikas* 43, no. 1, 2006, pp. 351-370.

Adey, Peter, David Bissell, Kevin Hannam, Peter Merriman, and Mimi Sheller (eds.), *The Routledge Handbook of Mobilities*, London-New York, Routledge, 2017.

Agence France-Presse in Kabul, "Taliban ban women from parks and funfairs in Afghan capital", *The Guardian*, 10 November 2022, in https:// www.theguardian.com/world/2022/nov/10/taliban-ban-women-from-parks-and-funfairs-in-afghanistan-capital, accessed 10 November 2022.

Agence France-Presse in Paris, "Iranian couple filmed dancing in Tehran are jailed for 10 years", The Guardian, 31 January 2023 in https://www.theguardian.com /world/2023/jan/31/iranian-couple-filmed-dancing-in-tehran-are-jailed-for-10-years, access 31 January 2023.

Agyeman, Julian, and A. Doran, "You want protected bike lanes, I want protected Black children. Let's link": equity, justice, and the barriers to active transportation in North America", *Local Environment* 26, no. 12, 2021, pp. 1480-1497.

Ajuntament de Barcelona, "Barcelona Ciudad 30", Movilidad y Transportes, accessed 26th of July, 2024, https://www.barcelona.cat/mobilitat/es/barcelona-ciudad-30.

Al-Sharif, Manal, *Daring to Drive. A Saudi Woman's Awakening*, Simon & Schuster, 2017.

Alcalá Ferráez, Carlos, "Cambios demográficos en el estado de Campeche (México). Conflictos, desarrollo y economía, 1846-1910", *Revista de Historia Regional y Local* 10, no. 20, 2018, pp. 134-164.

Alfie, Miriam, "Supervía Poniente: conflicto social y visión urbano-ambiental", *Estudios demográficos y urbanos* 28, no. 3, 2013, pp. 735-768.

Allen, Ryan and Jueyu Wang, "Immigrant Legal Status and Commute Mode Choice for Hispanics in the United States", *Journal of the American Planning Association* 86, no. 3, 2020, pp. 284-296.

Almaraz Castañeda, Gabriela, and Itzel Castillo Vázquez, *El entorno social de las mujeres en el transporte público en la Ciudad de México*, Bachelor's tesis, UAM, 2020.

Alvarado Mendoza, Arturo, Emelina Nava García, Jaime Ramírez Muñoz, Raúl Lemus Pérez, Gustavo Adolfo Urbina Cortés, Susana I. Esquivel Cortés, and Serena Chew Plascencia, *La movilidad y la violencia contra las mujeres en los espacios públicos de la Ciudad de México*, El Colegio de Mexico, 2021

Alvarez, Linda, "No Safe Space: Neoliberalism and the Production of Violence in the Lives of Central American Migrants", *The Journal of Race, Ethnicity, and Politics* 5, no. 1, 2019, pp. 1-33.

Amnesty International, "Justice on Trial: Failures in Criminal Investigations of Feminicides Preceded by Disappearance in the State of Mexico", 2021, in https://www.amnesty.org/en/latest/news/2021/09/mexico-failings-investigations-feminicides-state-mexico-violate-womens-rights-life-physical-safety-access-justice/, accessed 19 March 2023.

——, "Israel's Apartheid Against Palestinians: Cruel System of Domination and Crime Against Humanity", 2022 in https://www.amnesty.org/en/latest/news/2022/02/israels-apartheid-against-palestinians-a-cruel-system-of-domination-and-a-crime-against-humanity/, accessed 25 April 2022.

Arellano Ríos, Alberto, "El transporte público en el área metropolitana de Guadalajara: agenda, proyectos y "gatopardismo", *Revista Mexicana de Análisis Político y Administración Pública* 7, no. 1, 2018, pp. 11-32.

Arteaga, Nelson, Evelyn Mejía, Octavio Spindola, Fabián Acuña, and Daniel Mollericona, *La violencia en México. Feminicidios, desapariciones, ejecuciones*, FLACSO, México, 2024.

Bajpai, G. S., and Garima Pal, "Transport and Crime: An Account of Crimes against Women in Cabs in the Delhi/NCR Region", *Indian Journal of Criminology* 49, no. 1, 2021, pp. 1-33.

Barrett, Rusty, Jennifer Cramer, and Kevin B. McGowan, *English with an accent: Language, ideology, and discrimination in the United States*, Taylor & Francis, 2022.

Bautista-Hernández, Dorian Antonio, "Commuting inequality, role of urban structure, and identification of disadvantaged groups in the Mexico City metropolitan area", *Journal of Transport and Land Use* 13, no. 1, 2020, pp. 172-174.

BBC editorial board, "Amazon hopes pandemic habits stick after profits triple", *BBC*, 29 April 2021, in https://www.bbc.com/news/business-56937428, accessed 17 June 2022.

——, "Covid: Supermarkets say shortages are not widespread", *BBC*, 22 July 2021, in https://www.bbc.com/news/uk-57924264, accessed 28 November 2022.

Best, Amy L., Fast Cars, Cool rides. *The accelerating world of youth and their cars*, New York University Press, 2006.

Black, William R., *Transportation: a geographical analysis*, New York, Guilford, 2003.

Bohle, Philip, Michael Quinlan, David Kennedy, and Ann Williamson, "Working hours, work-life conflict and health in precarious and "permanent" employment", *Revista de saúde pública* 38, 2004, pp. 19-25.

Böhm, Steffen, Campbell Jones, Chris Land, and Mat Paterson, "Introduction" in Steffen Böhm, Campbell Jones, Chris Land, and Mat Paterson (eds.), *Against Automobility*, Massachusetts, Blackwell Publishing, 2006.

Bonham, Jennifer, "Transport: disciplining the body that travels", in Steffen Böhm, Campbell Jones, Chris Land, and Mat Paterson (eds.), *Against Automobility*, Massachusetts, Blackwell Publishing, 2006.

Calonge Reillo, Fernando, "Viajando por la periferia del Área Metropolitana de Guadalajara, México. Entre la pasividad y la agencia", *Cuadernos de antropología social* 50, 2019, pp. 67-84.

Canal, Emily, Marguerite Ward, Rebecca Knight, and Shana Lebowitz, "Here's a list of major companies requiring employees to return to the office", *Business Insider Africa*, 19 July 2023, in https://africa.businessinsider.com/careers/heres-a-list-of-major-companies-requiring-employees-to-return-to-the-office/et5j05d, accessed 16 November 2023.

Cárdenas Elizalde, María del Rosario, Fernando Alberto Cortés Cáceres, Agustín Escobar Latapí, Salomón Nahmad Sittón, John Scott Andretta, Graciela María Teruel Belismelis, *Metodología para la medición multidimensional de pobreza en México*, CONEVAL, 3rd edition, 2019.

Castellanos, María Bianet, *A return to servitude: Maya migration and the tourist trade in Cancún*, U of Minnesota Press, 2010.

Ceccato, Vania, and Anastasia Loukaitou-Sideris (eds.), *Transit crime and sexual violence in cities: International evidence and prevention*, New York, Routledge, 2020.

Cerón Grajales, Russell, "Las instituciones jurídicas en la conquista de Yucatán y fundación de Mérida", *Revista de la Facultad de Derecho de México* 64, no. 261, 2017, pp. 219-242.

Cheatham, Amelia, Claire Klobucista, Lindsay Maizland, "The Year the Earth Stood Still", *Council on Foreign Relations*, 2020, in https://www.cfr.org/article/2020-year-earth-stood-still-covid-19, accessed 11 November 2021.

Choudhury, Rizwan, "Elon Musk thinks remote work is a parasite that needs to be eradicated", *Mashable Middle East*, 17 May 2023, in https://me.mashable.com/tech/28232/elon-musk-thinks-remote-work-is-a-parasite-that-needs-to-be-eradicated, accessed 17 May 2023.

Chuck, Elizabeth, "Viral Video Shows Woman's Vitriolic Tirade Against Shoppers," *CNBC News*, 22 December 2016, in https://www.nbcnews.com/news/latino/speak-english-you-re-america-woman-tells-latina-shoppers-rant-n698776, accessed 7 June 2022.

Committee on Oversight and Reform, "Kids in Cages: Inhumane Treatment at the Border", *House of Representatives*, 10 July 2019, in https://www.congress.gov/116/chrg/CHRG-116hhrg37284/CHRG-116hhrg37284.pdf, accessed 19 June 2023.

Condon, Stéphanie, Marylène Lieber, and Florence Maillochon, "Feeling unsafe in public places: Understanding women's fears", *Revue française de sociologie* 48, no. 5, 2007, pp. 101-128.

CONEVAL, "Medición de Pobreza", in https://www.coneval.org.mx/Medicion/Paginas/PobrezaInicio.aspx, accessed, 21 January 2022.

——, “Estadísticas de pobreza en Campeche”, in https://www.coneval.org.mx/coordinacion/entidades/Campeche/Paginas/principal.aspx, accessed, 21 January 2022.

——, “Estadísticas de pobreza en Yucatán”, in https://www.coneval.org.mx/coordinacion/entidades/Yucatan/Paginas/principal.aspx, accessed, 21 January 2022.

Connolly, Priscilla, “Mexico”, in Dorina Pojani and Dominic Stead (eds.)., *The Urban Transport Crisis in Emerging Economies*, Springer, 2017.

Cresswell, Tim, “Black moves: Moments in the history of African-American masculine mobilities”, *Transfers* 6, no. 1, 2016, pp. 12-25.

——, “Mobilities I: catching up”, *Progress in human geography* 35, no. 4, 2011.

——, “Towards a Politics of Mobility”, *Environment and Planning D Society and Space* 28, no. 1, 2010, pp. 17-31.

——, *On the Move. Mobility in the Modern Western World*, New York, Routledge, 2006.

Cretney, Raven, “Resilience for Whom? Emerging Critical Geographies of Socio-ecological Resilience”, *Geography Compass* 8 no. 9, pp. 627-640.

Culver, Gregg, “Automobilities”, in Audrey Kobayashi (ed.), *International Encyclopedia of Human Geography*, 2nd edition, Elsevier Science, 2020.

——, “Death and the Car: On (Auto)Mobility, Violence, and Injustice”, *Acme: An International Journal for Critical Geographies* 17, no. 1, 2018, pp. 147-151.

Curtis, Val, *Women and the Transport of Water*, Practical Action Publishing, 1986.

Cwerner, Saulo B., “Vertical flight and urban mobilities: The promise and reality of helicopter travel”, *Mobilities* 1, no. 2, 2006, pp. 191-215.

De Vynck, Gerrit, “Google say its workers will have to be in the office April 4”, *The Washington Post*, 2 March 2022, in https://www.washingtonpost.com/technology/2022/03/02/google-back-to-work/, accessed 2 March 2022.

Delgado, Javier, Luis Chias, Mauricio Ricardez, Anuar Martínez, and Tonatiuh Suárez, “Vialidad y Vialidades En La Ciudad de México. Un Contexto Para El Segundo Piso.”, *Ciencias UNAM*, no. 070, 2003, pp. 50-64.

Divall, Colin, and George Revill, “Cultures of Transport: Representation, Practice and Technology”, *The Journal of Transport History* 26, no. 1, 2005.

Dogan, Mattei, and Dominique Pélassy, How to Compare Nations: Strategies in Comparative Politics. New Jersey, Chatham House Publishing, 1984.

Dunckel Graglia, Amy, “Finding mobility: women negotiating fear and violence in Mexico City’s public transit system.”, *Gender, Place & Culture* 23, no. 5, 2016, pp. 624-640.

Dungey, Claire Elisabeth, Hadiza Ahmad, Joseph Mshelia Yahaya, Fatima Adamu, Plangsat Bitrus Dayil, Ariane De Lannoy, and Gina Porter, “Dangers in the Third Place: Walking, Public Transport and the Experiences of Young Girls in Cape Town and Abuja”, in Moody Z, Berchtold-Sedooka, A, Camponovo S, Jaffé PD, Darbellay F, (eds.), *School Journey as a Third Place: Theories, Methods and Experiences around the World*, Anthem Press, 2023.

Duranton, Gilles, and Matthew A. Turner, “The Fundamental Law of Road Congestion: Evidence from US Cities”, *American Economic Review*101, no. 6, 2011, pp. 2616-2652.

Dutta, Mondira, “Disappearing Afghan Women From Public Spaces — Collapse of Women’s Rights in Afghanistan”, *Bulletin of the Karaganda University History Philosophy Series* 111, no. 3, 2023, pp. 79–89.

Environmental Justice Foundation, *Deceived, Abused, Forgotten: The Untold Story of Filipino Migrant Workers Exploited at Sea*, 10 December, 2024. https://www.youtube.com/watch?v=Af9RJDIwYBM, accessed 21 December 2024.

Espinosa Ortiz, Fabricio, “Movilidades cotidianas y nuevos modos de habitar: Un análisis en y desde la periferia metropolitana”, *Entorno Geográfico* 18, 2019, pp. 1-21,

Eyerman, Ron and Orvar Löfgren, “Romancing the road: Road movies and images of mobility”, *Theory, Culture & Society* 12, no. 1, 1995, pp. 53-79.

Fabian, Virgil L. (director), “My dinner with Bobo”, *Drake and Josh*, season 4, episode 9, 14 january 2007.

Faheid, Dalia, and Hanna Park, “School District Confirms Bullying Occurred after Investigation Following Texas Girl’s Death by Suicide,” *CNN*, 27 February 2025,

https://edition.cnn.com/2025/02/27/us/jocelynn-rojo-carranza-suicide-texas-investigation/index.html, accessed 27 February 2025.

Ferniza-Quiroz, Sheila, and Karina Soto-Canales. "Imaginarios urbanos y violencia de género en la movilidad cotidiana en transporte público urbano." *Quivera. Revista de Estudios Territoriales* 23, no. 2 (2021): 89-109.

Fitt, Helen, "The status of being or the achievement of becoming? Towards better understandings of cars as status symbols", *Social & Cultural Geography* 24, no. 6, 2023, pp. 968-986.

Francesconi, Sabrina, "Images and writing in tourist brochures", *Journal of Tourism and cultural Change* 9, no. 4, 2011, pp. 341-356.

Francis, Adrianne, "Canberra woman stopped wearing hijab for fear of being attacked", *ABC News*, 3 October 2014, in https://www.abc.net.au/news/2014-10-03/canberra-woman-stopped-wearing-hijab-for-fear-of-being-attacked/5789256, accessed 22 August 2022.

Frankel, Philip, "The Politics of Passes: Control and Change in South Africa", *The Journal of Modern African Studies* 17, no. 2, 1979, pp. 199–217.

Frye, Ann, "Disabled and older persons and sustainable urban mobility", *Thematic study prepared for Global Report on Human Settements*, 2013.

García, Jennifer, "Estos son los únicos vehículos que pueden circular en los carriles centrales de Periférico", *Fuerza Informativa Azteca*, 3 April 2024, in https://www.tvazteca.com/aztecanoticias/cuales-son-unicos-vehiculos-que-pueden-circular-en-carriles-centrales-periferico-cdmx, accessed 4 April 2024.

Gioielli, Robert R., "Pruitt-lgoe in the Suburbs": Connecting White Flight, Sprawl, and Climate Change in Metropolitan America", *Amerikastudien/American Studies* 65, no. 2, 2020, pp. 213-233.

Gobierno de la Ciudad de México, "Mapa Ciclistas CDMX", Secretaría de Movilidad, 2023, in https://www.semovi.cdmx.gob.mx/tramites-y-servicios/mi-bici/mapa-ciclista-cdmx, accessed, 18 October 2023.

Goel, Sharad and Cheryl Phillips, "Police Data Suggests Black and Hispanic Drivers Are Searched More Often Than Whites", *Slate Magazine*, June 19, 2017, https://slate.com/technology/2017/06/statistical-analysis-of-data-from-20-states-

suggests-evidence-of-racially-biased-policing.html, based on data from *The Stanford open Policing Project*, https://openpolicing.stanford.edu/findings/

Goetz, Andrew R., "Transport Geography: Reflecting on a subdiscipline and identifying future research trajectories. The Insularity issue in Transport Geography", *Journal of Transport Geography* 14, no. 3, 2006, pp. 230-231.

Goetz, Andrew R., Timothy M. Vowles, and Sean Tierney, "Bridging the Qualitative-Quantitative Divide in Transport Geography", *The Professional Geographer* 61, no. 3, 2009, pp. 324-330.

Graham, Stephen, "Luxified skies: How vertical urban housing became an elite preserve", *City* 19, no. 5, 2015, pp. 618-645.

Güémez, Braulio, and P. Solís, "Estratificación etnorracial y discriminación percibida en Mérida, Yucatán", Reporte de la Encuesta Proder # 5, México, El Colegio de México, in https://discriminacion.colmex.mx/, accessed 29 January 2022.

Guenot, Marianne, "Hate your commute? It might actually be good for your mental health, scientists say", *Business Insider*, 7 February 2023, in https://www.businessinsider.com/commute-work-good-mental-health-stop-burnout-research-scientists-2023-2, accessed 7 February 2023.

Guillén, Miguel Lisbona, and Ricardo Sánchez Martín, "La ciudad en bicicleta. Ocupación del espacio público e higienización social en Mérida, México", *Disparidades. Revista de Antropología* 76, no. 1, 2021, pp. 1-15.

Hanson, Susan, "Imagine", *Journal of Transport Geography* 14, no. 3, 2006, pp. 232-233

Harvey, David, *Consciousness and the Urban Experience*, Oxford, Johns Hopkins University Press, 1985.

——, *The New Imperialism*, Oxford, Oxford University Press, 2003.

Hassan, Hanita, "The representation of Malaysian cultures in tourism brochures", *Procedia-Social and Behavioral Sciences* 118, 2014, pp. 140-151.

Hassan, Lamia, "Exploring Cairo: Eight Great Parks for an Autumn Picnic." *Ahram Online*, 7 November 2016, in https://english.ahram.org.eg/NewsContentP/8/246451/Travel/-Exploring-Cairo-Eight-great-parks-for-an-autumn-p.aspx, accessed 2 October 2023.

Hidalgo-Solórzano, Elisa, Julio Campuzano-Rincón, Jorge M. Rodríguez-Hernández, Luis Chias-Becerril, Héctor Reséndiz-López, Harvey Sánchez-Restrepo, Bernardo Baranda-Sepúlveda, Claudia Franco-Arias, and Martha Híjar, "Motivos de uso y no uso de puentes peatonales en la Ciudad de México: la perspectiva de los peatones", *Salud pública de México* 52, no. 6, 2010, pp. 502-510.

Hoskins, Peter, "Richard Branson: Virgin Galactic Commercial Space Flights to Start This Month," BBC, June 16, 2023, in https://www.bbc.com/news/business-65924495, accessed, 16 June 2023.

Hoyle, Brian, and Richards Knowles, "Transport Geography: an Introduction", in B. Hoyle and R. Knowles, *Modern Transport Geography*, London, Belhaven Press, 1992.

Hoyle, Brian, *The seaports of East Africa: a geographical study*, Nairobi, East African Publishing House, 1967.

INEGI, "Población total (Número de habitantes)", Instituto Nacional de Estadística y Geografía, 2020.

——, "Producto Interno Bruto por Entidad Federativa", *INEGI*, in https://www.inegi.org.mx/app/tabulados/default.aspx?pr=39&vr=3&in=2&tp=20&wr=1&cno=2&idrt=12022&opc=, accessed 18 January 2022.

——, *Censo de Población y Vivienda 2020, Manual de cartografía Censo de Población y Vivienda 2020,* Instituto Nacional de Estadística y Geografía, México, 2022.

——, Directorio Estadístico Nacional de Unidades Económicas (DENUE), 2022, in https://www.inegi.org.mx/app/mapa/denue/, accessed 2 July 2022.

——, Encuesta Nacional de Ingresos y Gastos de los Hogares, in https://www.inegi.org.mx/programas/enigh/nc/2022/, accessed, 16 April 2022.

——, Encuesta Nacional sobre Discriminación, in https://www.inegi.org.mx/programas/enadis/2022/, accessed 14 May 2022.

——, *Encuesta Origen Destino en Hogares de la Zona Metropolitana del Valle de México, Presentación de Resultados*, Mexico City, 2017.

Institute for Economics and Peace, “Índice de Paz México, 2019”, Institute for Economics and Peace, 2019, in https://www.economicsandpeace.org/report/indice-de-paz-mexico-2019/, accessed 17 July 2022.

Ip, Janice Yui Ling, “Analyzing tourism discourse: A case study of a Hong Kong travel brochure”, *LCOM papers* 1, 2008, pp. 1-19.

Jackson, Kenneth T., *Crabgrass Frontier. The Suburbanization of the United States*, Oxford University Press, 1985.

Jaitman, Laura, “Public transport from a gender perspective: Insecurity and victimization in latin america. the case of lima and asuncion metropolitan areas”, *Journal of Economics, Race, and Policy* 3, no. 1, 2020, pp. 24-40.

Jakle, John A. and Keith A. Sculle, *Fast Food. Roadside Restaurants in the Automobile Age*, Johns Hopkins University Press, 2002.

Jáuregui Díaz, José Alfredo, María de Jesús Ávila Sánchez, and Rodrigo Tovar Cabañas, “Movilidad cotidiana de la población trabajadora en la Zona Metropolitana de Monterrey, 2015”, *Revista transporte y territorio* 23, 2020, pp. 201-221.

Jirón, Paola, and Pablo Mansilla, “Atravesando la espesura de la ciudad: vida cotidiana y barreras de accesibilidad de los habitantes de la periferia urbana de Santiago de Chile”, *Revista de Geografía Norte Grande* 56, 2013, pp. 53-74.

Jirón, Paola, and Susana Cortés, “Mobile relations, mobile shadows. Understanding contemporary urban daily living through shadowing techniques”, *International Workshop: The Everyday Life of Multi-Local Families. Concepts, Methods and the Example of Post-Separation Families*, 2011.

Jirón, Paola, Carlos Lange, and María Bertrand, “Exclusión y desigualdad espacial: Retrato desde la movilidad cotidiana”, *Revista INVI* 25, no. 68, 2010, pp. 15-57.

Kaufman, Sarah M., Christopher Polack, and Gloria Campbell, “The pink tax on transportation”, *Rudin Center for Transportation*, 2018.

Kaufmann, Vincent and Bertrand Montulet, “Between social and spatial mobilities: The issue of social fluidity”, in Weert Canzler, Vincent Kaufmann and Sven Kesserling, *Tracing Mobilities*, New York, Routledge, 2016.

Keeling, David J., “Transportation geography – new regional mobilities”, *Progress in Human Geography* 32, no. 2, 2008, pp. 275-283.

——, “Transportation geography: new directions on well-worn trails”, *Progress in Human Geography* 31, no. 2, 2007, pp. 218-223.

Keller, Judith, “The slow violence of waiting in the unmaking of public housing”, *Urban Geography* 45, no. 7, 2024, pp. 1256-1266.

Kimble, Megan, *City Limits: Infrastructure, Inequality, and the Future of America’s Highway*, New York, Crown, 2024

Kirkpatrick, Emily, “Drake Explains Why His Private Jet Took a 14-Minute Flight Three Times Last Month”, *Vanity Fair*, 27 July 2022, in https://www.vanityfair.com/style/2022/07/drake-private-jet-flights-carbon-emissions-celebjets-twitter-climate-change, accessed 27 July 2022.

Klippenstein, Ken, “Documents show Amazon is aware drivers pee in bottle and even defecate enroute, despite company denial”, *The Intercept*, 25 March 2021, in https://theintercept.com/2021/03/25/amazon-drivers-pee-bottles-union/, accessed 25 March 2021.

Knowles, Richard, Jon Shaw, and Iain Docherty, “Introducing Transport Geographies”, in, R. Knowles, J. Shaw, and I. Docherty, *Transport Geographies. Mobilities, Flows and Spaces*, Oxford, Blackwell Publishing, 2007.

Korn, Jana, “Riding scared: Sexual violence and women’s mobility on public transportation in Santiago, Chile.”, *Urban Studies Senior Seminar Papers* 24, 2018, pp. 1-39.

Kubba, Sama, “The Saudi Form of Democracy: How Women Got to Drive”, *Gender Policy Journal*, 2023, in https://studentreview.hks.harvard.edu/the-saudi-form-of-democracy-how-women-got-to-drive/, accessed 19 April 2023.

Levinson, David M., “Accessibility and the journey to work”, *Journal of Transport Geography* 6, no. 1, 1998, pp. 11-21.

Lijphart, Arend, “Comparative Politics and the Comparative Method”, *American Political Science Review* 65, no. 3, 1971, pp. 682-693.

Lim, Stanley Frederick W.T., Elliot Rabinovich, Sungho Park, and Minha Hwang, "Shopping activity at warehouse club stores and its competitive and network density implications", *Production and Operations Management* 30, no. 1, 2021, pp. 28-46.

Lizzie Seal, *Gender, Crime and Justice*, Palgrave MacMillan, 2022.

Lundman, Richard J., and Robert L. Kaufman, "Driving while black: Effects of race, ethnicity, and gender on citizen self-reports of traffic stops and police actions", *Criminology* 41, no. 1, 2003, pp. 195-220.

MacDonald, Kenneth, and Margaret Grieco, "Accessibility, Mobility and Connectivity: The Changing Frontiers of Everyday Routine", Mobilities 2, no. 1, p. 1-14.

Macías Richard, Carlos, "El Territorio de Quintana Roo. Tentativas de Colonización y Control Militar En La Selva Maya (1888-1902)", *Historia Mexicana* 49, no. 1, 1999, pp. 5–54.

Maldonado, Daisy, "A map of the amount of private jets leaving the Super Bowl has people fuming", *Indy 100*, 15 February 2022, in https://www.indy100.com/news/map-private-jets-super-bowl, accessed 15 February 2022.

March, Loren, "Queer and trans* geographies of liminality: A literature review", *Progress in Human Geography* 45, no. 3, 2021, pp. 455-471.

Markkula, Johanna, "'We move the world': the mobile labor of Filipino seafarers", *Mobilities* 16, no. 2 2021, pp. 164-177.

Martínez Reséndiz, Juana, "Conflicto urbano en la Ciudad de México: el caso de la Supervía Poniente", en Fernando Carrion y Jaime Erazo (coord.), *El derecho a la ciudad en América Latina. Visiones desde la política*, Mexico, UNAM, 2016.

Martínez-Ortega, Juan Iván, and Armando Hernández-de La Cruz, "Violencia contra las mujeres en el estado de Campeche. Un análisis desde la perspectiva de género", *LiminaR* 14, no. 2, 2016, pp. 28-44.

Marx, Karl, *Wage Labour and Capital. Wages, Price and Profit*, Foreign Language Press, 2020.

Melgoza Delgado, Rocio, "VIDEO: Taxista cambió de ruta y no dejaba bajar a mujeres en calles de la CDMX", El Universal, 7 November 2022, in

https://www.eluniversal.com.mx/metropoli/video-taxista-cambio-de-ruta-y-no-dejaba-bajar-mujeres-en-calles-de-la-cdmx/, accessed 8 November 2022.

Méndez, Gisela, Victor Velazco, Carmen Menéndez, Isabel Alduena, David Escalante, Jéssica Tapia, Erika Adaya, Juan J. Hernández, *Anatomía de la Movilidad en México*, Mexico City, SEDATU, GIZ, BID, 2018.

Mohamed, Riham, "Exploring the Urban Spatial Structuring of New Fourth-generation City Sites for Delta Region Development: New Mansoura City, the Delta Tourism Capital", *International Design* 12, no. 4, 2022, pp. 65–79.

Mohammed, Jahangir, "5 industries benefiting from the connected car", *World Economic Forum*, 9 September 2015, in https://www.weforum.org/stories/2015/09/5-industries-benefitting-from-the-connected-car/, accessed 3 September 2023.

Moreno, Carlos, *The 15-Minute city: a solution to saving our time and our planet*, New Jersey, John Wiley & Sons, 2024.

Moreno, Carlos, Zaheer Allam, Didier Chabaud, Catherine Gall, and Florent Pratlong., "Introducing the "15-Minute City": Sustainability, resilience and place identity in future post-pandemic cities.", *Smart cities* 4, no. 1, 2021, pp. 93-111.

Murray, Adrienne. "Norway on Track to Be First to Go All-electric", BBC, 13 January 2025. https://www.bbc.com/news/articles/cg52543v6rmo, accessed 13 January 2025.

News/Media Release, "Free2move Acquires Share Now.", *Auto Rental News*, May 9, 2022, https://www.autorentalnews.com/10169928/free2move-acquires-share-now, accessed 22 April 2022.

Nohler, Dieter, "El Método Comparativo", in Herminion Sánchez de la Barquera y Arroyo, *Antologías Para El Estudio y La Enseñanza de La Ciencia Política. Volumen III: La Metodología de La Ciencia Política*, Mexico City, Instituto de Investigaciones Jurídicas, UNAM, 2020.

Nourizadeh, Nima (director), *Project X*, Warner Brothers, March 2012.

Nuwer, Rachel, "The Mountains We Have Never Climbed", BBC, 24 February 2014, in https://www.bbc.com/future/article/20140703-the-last-mountains-to-climb, accessed 27 February 2022.

Oketesen, KK, “He served nearly 44 years in solitary confinement. He was innocent of the crime”, *The Washington Post*, 31 March 2020, in https:// www.washingtonpost.com/lifestyle/magazine/he-served-nearly-44-years-in-solitary-confinement-he-was-innocent-of-the-crime/2020/03/31/714b5506-621c-11ea-b3fc-7841686c5c57_story.html, accessed 15 May 2022.

Paniagua Arguedas, Laura, “Moverse en ciudades que arrinconan: las personas con discapacidad frente al urbanismo capacitista de la Ciudad de México”, *Yeiyá, Revista de Estudios Críticos* 3, no. 2, 2022, pp. 273-290.

Papas, Thomas, Socrates Basbas, and Tiziana Campisi, “Urban mobility evolution and the 15-minute city model: from holistic to bottom-up approach”, *Transportation research Procedia* 69, 2023, pp. 544-551.

Paredes-Guerrero, Leticia Janet, Rodrigo Llanes-Salazar, Nayelli Torres-Salas, and Alejandra Pamela España-Paredes, “La violencia de género contra las mujeres en Yucatán”, *LiminaR* 14, no. 2, 2016, pp. 45-56.

Parikh, Aparna, “Politics of presence: women’s safety and respectability at night in Mumbai, India”, Gender, Place & Culture 25, no. 5, 2018, pp. 695-710.

Park, J.H., J.H. Moon, H.J. Kim, M.H. Kong, Y.H. Oh, “Sedentary Lifestyle: Overview of Updated Evidence of Potential Health Risks”, *Korean J Fam Med.* 41, no. 6, 2020, pp. 365-373.

Park, Robert E., Ernest W. Burgess, and Roderick D. McKenzie, *The City*, Chicago, University of Chicago Press, 1925.

Patino, Marie, Leonardo Nicoletti, and Sophie Alexander, “Elon Musk is so busy his private jet is taking 13-minute flights”, *Bloomberg*, 2 March 2023, in https://www.bloomberg.com/graphics/2023-elon-musk-private-jet/, accessed 2 March 2023.

Pereira, Rafael Henrique Moraes, and Tim Schwanen, “Commute time in Brazil (1992-2009): differences between metropolitan areas, by income levels and gender”, *Discussion paper* no. 192, 2015, pp. 1-29.

Pérez López, Ruth, and José Manuel Landin Álvarez, "Movilidad cotidiana, intermodalidad y uso de la bicicleta en dos áreas periféricas de la Zona Metropolitana del Valle de México", *Cybergeo: European Journal of Geography*, 2019.

Perla Fragoso Lugo, "Violencia de género contra mujeres y niñas y feminicidio en Yucatán: apuntes para su investigación", *Península* 16, no. 1, 2021, pp. 191-217.

Piña Chán, Román, "Campeche: Un poco de historia", *Antropología. Revista interdisciplinaria del INAH* 66, 2002, pp. 20-31.

Popan, Cosmin, "Embodied precariat and digital control in the "Gig Economy": The mobile labor of food delivery workers", *Journal of Urban Technology* 31, no. 1, 2021, pp. 109-128.

Porter, Gina, "I Think a Woman Who Travels a Lot Is Befriending Other Men and That's Why She Travels': Mobility Constraints and Their Implications for Rural Women and Girls in Sub-Saharan Africa.", *Gender, Place & Culture* 18, no. 1, 2011, pp. 65-81.

——, "Transport, (Im) Mobility, and Spatial Poverty Traps: Issues for Rural Women and Girl Children in Sub-Saharan Africa.", *"Understanding and addressing spatial poverty traps" an international workshop* 29, 2007.

Porto-Goncalves, Carlos W. and Enrique Leff, "Political Ecology in Latin America. The Social Re-Appropriation of Nature, the Reinvention of Territories and the Construction of an Environmental Rationality", *Desenvolvimento e Medio Ambiente* 35, no. 1, 2015, pp. 65-88.

Press, Alex N., "Gig Labor is impoverishing workers", *Jacobin Magazine*, 15 June 2022 in https://jacobin.com/2022/06/gig-workers-report-economic-precarity-independent-contracting-misclassification#:~:text=A%20new%20survey%20finds%20that,afford%20to%20pay%20basic%20bills, accessed 15 June 2022.

Quart, Alissa, "Teachers are working for Uber just to keep a foothold in the Middle Class", *The Nation*, 7 September 2016, in https://www.thenation.com/article/archive/teachers-are-working-for-uber-just-to-keep-a-foothold-in-the-middle-class/, accessed 11 March 2022.

RAINN, “Campus sexual violence: Statistics”, *Rape, Abuse & Incest National Network*, 2023, in https://rainn.org/statistics/campus-sexual-violence, accessed 11 November 2023.

Randell, Richard, “No paradigm to mobilize: the new mobilities paradigm is not a paradigm”, Applied Mobilities 5, no. 2, 2020, pp. 206-223.

Reynolds, Gretchen, “Are We Wired To Sit?”, *The New York Times*, 26 September 2018, in https://www.nytimes.com/2018/09/26/well/move/are-we-wired-to-sit.html, accessed 12 May 2023.

Rimmer, Peter, “Transport Geography”, *Progress in Human Geography* 9, no. 2, 1985, pp. 271–277.

——, “Transport geography”, *Progress in Human Geography* 12, no. 2, 1988, pp. 271–276.

Roberts, Marion, “Gender, Fear and the Night-time City”, in Inés Sánchez de Madariaga and Marion Roberts, *Fair Shared Cities. The impact of Gender Planning in Europe*, Routledge, 2013.

Rodrigue, Jean-Paul, *The Geography of Transport Systems*, New York, Routledge, 5th edition, 2020.

Roy, Ananya, *City requiem, Calcutta: Gender and the politics of poverty*, Minneapolis, University of Minnesota Press, 2003.

SAGARPA, *Guía para el Buen Gobierno Municipal, vol. 1: Introducción al Gobierno y Administración Municipal*, Mexico City, 2004.

Salazar, Clara, and Valentín Ibarra. "Acceso desigual a la ciudad y movilidad." *Democracia y exclusión. Caminos encontrados en la ciudad de México* (2006): 293-324.

Savage, Michael, “The Imposition of Pass Laws on the African Population in South Africa 1916-1984”, *African Affairs* 85, no. 339, 1986, pp. 181–205.

Schmucki, Barbara, “If I Walked on my Own at Night I Stuck to Well Lit Areas”, Gendered spaces and urban transport in 20th century Britain”, *Research in Transportation Economics* 34, no. 1, 2012, pp. 74-85.

School of Engineering, “Increase in Home Delivery Service Usage During COVID-19 Pandemic Unlikely to Last”, *Rensselaer Polytechnic Institute*, 2 February 2022, in

https://news.rpi.edu/content/2022/02/02/increase-home-delivery-service-usage-during-covid-19-pandemic-unlikely-last, accessed 5 October 2022.

Schwanen, Tim, "Geographies of transport II: Reconciling the general and the particular", Progress in Human Geography 41, no. 3, 2017, pp. 356-358.

Scott A. Cohen, and Stefan Gössling, "A darker side of hypermobility", *Environment and Planning A: Economy and Space* 47, no. 8, 2015, pp. 1661-1679

Secretaría de Economía, "Campeche", Data México, 2020, in https://www.economia.gob.mx/datamexico /es/profile/geo/campeche-cm#population-and-housing, accessed 21 April 2022.

——, "Yucatán", "Campeche", Data México, 2020, in https://www.economia.gob.mx /datamexico/es/profile/geo/yucatan-yu?compare=campeche-cm, accessed 21 April 2022.

Secretary General OECD, "Keeping the Internet up and running in times of crisis", *OECD*, 4 May 2020, in https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/05/keeping-the-internet-up-and-running-in-times-of-crisis_f7ea0978/4017c4c9-en.pdf, accessed 5 December 2021.

Segato, Rita, *La crítica de la colonialidad en ocho ensayos*, Buenos Aires, Prometeo, 2022.

Sellers-García, Sylvia, "Walking while Indian, walking while Black: Policing in a colonial city", *The American Historical Review* 126, no. 2, 2021, pp. 455-480.

Shaw, Jon, and James D. Sidaway, "Making links: On (re)engaging with transport and transport geography", *Progress in Human Geography*, 35, no. 4, 2010, pp. 502-520.

Sheller, Mimi, "The new mobilities paradigm for a live sociology", Current sociology 62, no. 6, 2014, pp. 789-811.

——, "Theorising mobility justice", *Tempo Social* 30, no. 2, 2018, pp. 17–34.

——, *Advanced introduction to mobilities*, Edward Elgar Publishing, 2021.

Sheller, Mimi, and John Urry, "Mobile Transformations of 'Public'and 'Private' Life", *Theory, Culture & Society* 20, no. 3, 2003, pp. 107–125.

——, "Mobilizing the new mobilities paradigm", *Applied Mobilities* 1, no. 1, 2016, pp. 1-16.

——, “The City and the Car”, *International Journal of Urban and Regional Research* 24, no. 4, 2000, pp. 737-757.

——, “The new mobilities paradigm”, *Environment and Planning A* 38, no. 2, 2006, pp. 207-226.

Sherman, Alex, “Making sense of why executives are eager to get employees back in the office”, *CNBC*, March 8th, 2022, in https://www.cnbc.com/2022/03/08/return-to-office-why-executives-are-eager-for-workers-to-come-back.html, accessed 15 April 2022.

Solomon, Brian, and John Gruber, *Streetcars of America*, Bloomsbury Publishing, 2014.

Sorin, Gretchen, *Driving while black: African American travel and the road to civil rights*, New York, Liveright Publishing, 2020.

Statista Research Department, “Mexico – Share of people who have access to a car in 2017-2018”, Statista, 2021, in https://www.statista.com/statistics/914955/mexico-access-to-cars/#:~:text=Premium%20statistics-,Mexico%20%2D%20share%20of%20people%20who%20have%20access,a%20car%20in%202017%2D2018&text=This%20statistic%20shows%20the%20results,stated%20they%20owned%20a%20car, accessed 13 March 2022.

——, “Number of travel and tourism jobs worldwide from 2019 to 2022, with a forecast for 2023”, *Statista*, 10 May 2023, https://www.statista. com/statistics/1268465/number-of-travel-and-tourism-jobs-worldwide/, accessed 7 July 2023.

——, “Share of the total gross domestic product (GDP) generated by travel and tourism worldwide from 2000 to 2021”, *Statista*, 20 January 2023, https://www.statista.com/statistics/233223/travel-and-tourism-total-economic-contribution-worldwide/, accessed 20 January 2023.

Steers, Burr (director), *17 Again*, Warner Brothers Pictures, April 17, 2009.

Suárez Lastra, Manuel and Javier Delgado, *Entre Mi Casa y Mi Destino: Movilidad y Transporte En México: Encuesta Nacional de Movilidad y Transporte*, Mexico City, UNAM, 2012.

Suárez Lastra, Manuel, Masanori Murata, and Javier Delgado Campos, "Why do the poor travel less? Urban structure, commuting and economic informality in Mexico City", *Urban studies* 53, no. 12, 2016, pp. 2548-2566.

Taeuber, Karl E., and Alma F. Taeuber, *Residential segregation and neighborhood change*, Transaction Publishers, 2008.

Taylor, Kate, and Avery Hartmans, "Amazon drivers say peeing in bottles is and 'inhumane' yet common part of the job, despite the company denying it happens", *Business Insider*, 25 March 2021, in https://www.businessinsider.com/amazon-drivers-say-peeing-in-bottles-common-despite-company-denials-2021-3, accessed 25 March 2021.

The Prince's Trust, *The Prince's Trust Youth Index 2024*, London, 2024, https://assets.ctfassets.net/qq0roodynp09/1dwzhtDnn0c2fMyH7AGZTC/434c31c34cfd896a735c11261e2c98af/DSN6204_Princes_Trust_Youth_Index_2024.pdf, accessed 29 March 2024.

Thomas, Betty (director), *John Tucker Must Die*, 20th century Fox, July 28, 2006.

Titheridge, Helena, Roger L. Mackett, Nicola Christie, D. Oviedo Hernández, and Runing Ye. "Transport and poverty: a review of the evidence", University College London, 2014.

Torres, Rebecca, and Janet Henshall Momsen, "Gringolandia: Cancún and the American tourist", in Nicholas Dagen Boolm (ed.), Adventures into Mexico: American Tourism Beyond the Border, Rowman & Littlefield, 2006, pp. 56-73.

Tucker, Bronwen, and Kevin Manaugh, "Bicycle equity in Brazil: Access to safe cycling routes across neighborhoods in Rio de Janeiro and Curitiba", *International journal of sustainable transportation* 12, no. 1, 2018, pp. 29-38.

Turner, Jeff, and Margaret Grieco, "Gender and time poverty: the neglected social policy implications of gendered time, transport and travel", *Time & Society* 9, no. 1, 2000, pp. 129-136.

UN Women, "FAQs: Afghan Women Three Years After the Taliban Takeover | UN Women – Headquarters", 12 August 2024, in https://www.unwomen.org/en/articles/faqs/faqs-afghan-women-three-years-after-the-taliban-takeover, accessed 4 Septebmer 2024.

Urry, John, “Inhabiting the Car”, in Steffen Böhms et al. (eds.), Against automobility, Blackwell Publishing, 2006.

——, *Mobilities*, Cambridge, Polity, 2007.

Van Allen, Fox, “Cities with the worst traffic in the world, ranked”, *CBS News*, 22 August 2022, in https://www.cbsnews.com/pictures/worst-traffic-cities-in-the-world/, accessed 3 September 2022.

van Der Bijl, Rob, Niels Van Oort, and Bert Bukman, *Light rail transit systems: 61 lessons in sustainable urban development*, Elsevier, 2018.

Vanier, Camille, and Hugo d’Arbois de Jubainville, “Feeling unsafe in public transportation: A profile analysis of female users in the Parisian region”, *Crime prevention and community safety* 19, no. 3, 2017, pp. 251-263.

Vargas-Silva, Alethia, Tamara Martínez, and Pedro S. Urquijo Torres. "Movilidad infantil, rango espacial y experiencia de lugar (Morelia, México)." *PatryTer* 5, no. 9 (2022): 73-87.

Verlinghieri, Ersiliar, and Tim Schwanen, “Transport and mobility justice: Evolving discussions”, *Journal of Transport Geography* 87, 2020, pp. 1-7.

Villagrán, Paula Soto. "Diferencias de género en la movilidad urbana. Las experiencias de viaje de mujeres en el Metro de la Ciudad de México." *Revista Transporte y Territorio* 16 (2017): 127-146.

Walker, Peter, “Inactivity is an ongoing pandemic’: the life-saving impact of moving your body”, *The Guardian*, 6 February 2021, in https://www.theguardian.com/lifeandstyle/2021/feb/06/inactivity-is-an-ongoing-pandemic-the-life-saving-impact-of-moving-your-body, accessed 6 February 2021.

Waters, Mark (director), *Mean Girls*, Paramount Pictures, April 19, 2004.

Webster, Juliet, “Microworkers of the gig economy: Separate and precarious”, *New labor forum* 25, no. 3, pp. 56-64.

Weintrob, Amos, Luke Hansell, Martin Zebracki, Yvonne Barnard, and Karen Lucas, “Queer mobilities: critical LGBTQ perspectives of public transport spaces”, *Mobilities* 16, no. 5, 2021, pp. 775-791.

Wheeler, Deborah L., “Saudi women driving change? Rebranding, resistance, and the kingdom of change”, *The Journal of the Middle East and Africa* 11, no. 1, 2020, pp. 87-109.

Wolff, Pauline, “From the urban planning discourse to a circulation dispositif. An epistemological approach to the mobility turn”, in Marcel Endres, Katharina Manderscheid, Christophe Mincke (Eds.), *The Mobilities Paradigm. Discourses and Ideologies*, New York, Routledge, 2016.

World Bank, “Sedentary lives, the other global epidemic”, *World Bank*, 15 October 2014, in https://www.worldbank.org/en/news/feature/2014/10/15/vidas-sedentarias-la-otra-epidemia-global, accessed 25 July 2023.

Zamudio, Daniel, and Víctor Alvarado, “Inversión e infraestructura estimada al uso del automóvil particular vs. Inversión en transporte público y movilidad no motorizada”, *El Poder del Consumidor*, Ciudad de México, 2016,

Zamudio, Daniel, and Víctor Alvarado, “Inversión e infraestructura estimada al uso del automóvil particular vs. Inversión en transporte público y movilidad no motorizada”, *El Poder del Consumidor*, Ciudad de México, 2016

Zhang, Yuxin and Dafeng Xu, “Public transit commuting among US immigrants: The role of English skills”, *Travel Behaviour and Society* 37, 2024, pp. 1-9.

Zolnikov, Tara Rava, “My walk to water”, *American journal of public health* 106, no. 4, 2016, p. 623.

Zúñiga Elizalde, Mercedes, “Las mujeres en los espacios públicos: entre la violencia y la búsqueda de libertad”, *Región y sociedad* 26, no. 4, 2014, pp. 78-100.