

# Unlocking the Nexus of Mobility

Introducing the Vast Ecosystem of Mobility

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## INTRODUCTION

Movement. Motion. It's [literally](#) a law of physics, yet we intuitively know that all movement is not created equal. After all, running in place and completing a marathon are both technically motion, but one is more productive than the other. We also intuitively know that mobility is more than physical. In fact, [economic and social mobility are at the heart of the American dream \(and economy\)](#).

Advances in mobility technology have revolutionized our lives, from transportation to communication. With the convenience and efficiency that mobility advancement has brought to our lives, we can do more than ever in less time than ever. Mobility has become an essential part of our modern lives. In the world of ridesharing and private jet rentals, physically getting from point A to point B has never been easier.

And it's not just physical mobility, either. Social and economic mobility has also become an essential staple of our society. We have seen the rise of remote work, the gig economy, and other trends that transform people's lives and work. The power of mobility has enabled us to break out of traditional economic and social structures and create new opportunities for ourselves and our society.

Here we'll define mobility, both in the traditional sense, and what we mean when we use the term at Orange Sparkle Ball. We'll explore mobility as a concept in physical, social, and economic spaces. We'll discuss the components and importance of the mobility ecosystem. This is followed by a quick look into the basics of networks and network theory. Finally, we'll examine how all of these concepts, ideas, and components interplay to form the world of mobility today.

## THE EXPANSIVE WORLD OF MOBILITY

As mentioned, mobility is a multifaceted concept. While typically thought of in terms of physical movement, social dynamics, and economic mobility are also important ideas. According to [the Brookings Institute](#), mobility "is a complex, multidimensional issue, related to policies in education and training, housing markets, safety net efficacy, family stability, the labor market and much more." Despite its complicated nature, we'll define several basic terms below.

Physical mobility is an object's ability to move.

Economic mobility is the "ability to move up or down the economic ladder within a lifetime or from one generation to the next" (Pew Charitable Trusts).

Social mobility is the ability of people to move across social classes. There are two types of social mobility: horizontal and vertical mobility. Horizontal mobility does not change class. All movement is lateral. Vertical mobility, instead, represents a change in social or economic class

([Encyclopaedia Britannica](#)). For example, a change in horizontal mobility could be represented by a change in occupation (e.g. a middle-class baker becoming a middle-class teacher). Vertical mobility might involve an entry-level worker working their way up to become a C-suite executive (middle-class to upper-class).

Orange Sparkle Ball takes a more expansive approach to mobility. In our world, mobility is defined as a force that catalyzes the breakdown of social, economic, and physical barriers, and allows individuals and communities to transcend boundaries in pursuit of opportunity. By constantly moving initiatives forward, we enable people to make meaningful contributions to their communities and workplaces while reaching their full potential.

## WHY MOBILITY MATTERS

Mobility, however, conceptualized, has a profound impact on individuals, communities, and economies. Research has found that [a person's](#) self-perception about their mobility has real-world consequences about their ability to upwardly climb (Gugushvili, 2022). Harvard economist Raj Chetty recently found economic mobility and social mobility are more than related, they're intertwined. While geography, public policy, and a myriad of other factors contribute to a person's economic and social mobility, the most influential factor is unexpected: friends.

Based on a massive social network dataset, Chetty and his team studied social networks and their impact on mobility. They found that there was "an almost linear relationship between the SES (Socio-Economic Status) of an individual and the average SES of their friends" ([Chetty, 2022](#)). More crucially, they also found that the only form of social capital that actually increases economic mobility is economic connectedness which is based on the friendships people have across class lines. Long story short, even economic mobility, which is typically conceived as an individual effort, has a lot to do with friends, social mobility, and social networks.

## UNVEILING THE MOBILITY ECOSYSTEM

Regardless of the type of mobility in question, there are various components that make up the ecosystem. They can be tangible or intangible. There are different components of the mobility ecosystem, such as infrastructure, technology, policies, and user behaviors.

If this all seems very abstract, I assure you it is not. Let's consider a real-world example: a move across the country. Driver's licenses are required for anyone operating a motor vehicle in the United States. Acquiring and/or renewing a driver's license is a process that occurs in a systemic interaction between the driver and the local government. Roads are also usually government-owned entities, though not always, as some roads. Acquisition of the vehicle itself that will be driven across the country is the result of interactions between car manufacturers and distributors. This move across the country could be for any number of reasons. However, typically these moves are accompanied by greater economic mobility due to higher income and/or status resulting from changing jobs. They could also be due to shifts in social mobility if, for example, drivers are moving to be closer to friends and family (which would represent the

thickening of interpersonal ties that form one aspect of social mobility).

To understand mobility, you could try and understand each individual actor in the scenario above, but that would be foolhardy. These actors do not exist independently of each other. Instead, they exist in an ecosystem: the mobility ecosystem. This ecosystem allows the vast interconnected network of actors, systems, and resources to move people, goods, and information. As mentioned before, our definition of mobility isn't limited to just physical movement. This ecosystem also exists when thinking about the movement of individuals and communities up and down social and economic classes as well.

## **NAVIGATING THE NETWORK: BASIC PRINCIPLES OF NETWORK THEORY**

A network has been defined as “a concrete pattern of relationships among entities in a social space” ([Owen-Smith, 2016](#)). Mobility ecosystems like the one described above, can and should be thought of as a network. Consequently, we can use network theory to provide insights into the structure and dynamics of complex systems, including mobility ecosystems.

There are several standard components in every network visualization. Nodes are just individual units in a network. Typically they represent people or groups, but they can also be physical objects (e.g. literal computers in a computer network). The connections that are made between nodes are called edges. In most depictions of a network, these are represented by lines between nodes. See the picture below for a visual depiction. ([Math Insight](#)).

Networks can be measured across several dimensions. For example, you could measure the size (through the number of nodes or edges). You could also measure how close or far individual nodes are from the center, how spread out the network is, and countless other things. We'll explore this in greater detail in the follow-up post to this blog.

## **THE INTERPLAY OF MOBILITY, ECOSYSTEMS, AND NETWORKS**

There is inherent interconnectedness between mobility, ecosystems, and networks, as they influence and shape one another. Mobility can be seen as an extension of existing networks, connecting people to their environments and creating new opportunities for collaboration and innovation. Ecosystems, on the other hand, provide the necessary resources and support to enable the movement of people and ideas. Together, these elements combine to create a dynamic and interdependent system that influences how we interact with the world.

Network theory can inform strategies for improving mobility, enhancing efficiency, and fostering sustainability. Network theory can also help to understand how different parts of an ecosystem are connected and how to best build bridges between them. It can aid in understanding the complexities of the system and help to identify opportunities for growth and development.

Collaboration, data-driven insights, and holistic approaches are vital to creating resilient and inclusive mobility ecosystems. Network theory can also inform the design of public policies and support the development of integrated solutions. By understanding the complexity of the system, policymakers can create a holistic approach to mobility that is inclusive and resilient.

## **CONCLUSION**

We have embarked on a journey through the expansive realm of mobility and its transformative influence on individuals and societies alike. We uncovered the profound impact of mobility, not just in terms of physical movement but also in fostering social connections, driving economic growth, and shaping the very fabric of our communities.

To truly grasp the potential of mobility, we must recognize the importance of understanding mobility ecosystems and network theory. By comprehending the intricate web of relationships that underpins mobility, we unlock the key to driving innovation and forging the path towards a future of seamless and sustainable mobility.

As we conclude our exploration, let us remember that the world of mobility is not simply a means to get from point A to point B, but a vast and interconnected network of possibilities. It is an invitation to venture into uncharted territories, to dream beyond boundaries, and to imagine a future where mobility transcends limits and enriches our lives in ways yet to be discovered.

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