



GEOGRAPHY AND DEMOGRAPHY

Demography

Global Settlement Dynamics

How People Inhabit the World

**Coordinated by
Yoann Doignon
Sébastien Oliveau**

ISTE

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Global Settlement Dynamics

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Geography and Demography, Field Director – Denise Pumain

Demography, Subject Head – Brigitte Baccaïni

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Introduction

Sébastien OLIVEAU¹ and Yoann DOIGNON^{2,3}

¹ *Mesopolhis, UMR 7064, CNRS, Université d'Aix-Marseille, France*

² *IDEES, UMR 6266, CNRS, Rouen, France*

³ *Center for Demographic Research, UCLouvain, Belgium*

The distribution of human populations across the surface of the planet is not random. Some areas are nearly uninhabited, while others contain a significant portion of humanity. The study of this distribution occurs at various scales, ranging from global to very local, but it is primarily the disparities in population density that leave a lasting impression. Indeed, densities vary significantly across different spaces, with the least populated rural areas sometimes dropping below three inhabitants per square kilometer (hbts/km²), while certain urban zones may exceed 30,000 hbts/km². These disparities are evident universally and at all scales: between continents, countries, regions within a country, urban and rural areas, as well as between city centers and peripheries. For instance, we can think of the stark contrast between the Egyptian desert and the capital city (Oliveau et al. 2020). However, marked disparities are also observed elsewhere globally. In France, rural densities can fall below 15 hbts/km², whereas Paris boasts more than 20,000. In India, the Kashmir region has a density of 22 hbts/km², contrasting sharply with Mumbai, which is 1,000 times more densely populated, etc.

These disparities in population distribution, referred to as settlement, constitute a crucial aspect of societal functioning. However, settlement goes beyond mere density inequalities, encompassing various forms of population

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distribution. Populations can be dispersed or concentrated across territories, and this dynamic operates at different scales. One region may be distinguished by a scattering of sparsely populated yet dense villages, while another region may exhibit medium density but dispersed habitation. Conversely, in certain instances, metropolises are situated amidst human deserts, as exemplified by Brasília with its 3 million inhabitants in the heart of the Amazon.

The settlement, as we understand it, stands as a significant challenge in the planning of societies' territories, meaning their organization and future development. Settlement is a complex subject, arising from demographic dynamics encompassing factors – fertility, mortality and migration – and geographical constraints that have either facilitated or hindered population accumulation (including factors like accessibility of locations, available resources, and environmental quality, etc.); it is shaped by the social and spatial processes involved in its assessment and utilization, processes that have undergone substantial variations throughout historical periods.

At the intersection of geography and demography, the study of settlement is crucial for a thorough understanding of societies and their challenges. The issue of mobility is a pervasive theme in our analysis, examined from various angles, including its impact on population distribution, contemporary dynamics and associated challenges. Mobility influences settlement patterns on all scales: within territories, bridging rural and urban areas, within cities, and between regions and countries, tracing back to the dawn of humanity. Population aging also emerges as a significant factor in population change, influencing both the composition of places, exemplified by the evolution of certain urban districts, and the dynamics of regions experiencing depopulation. The question of the sustainability of settlement in specific territories is then raised. Lastly, climate change raises questions, acknowledging its anticipated impact on population distribution, albeit with challenges in accurate assessments. In conclusion, while acknowledging the need for caution in interpreting projections, the exercise of prospective analysis remains intellectually invigorating for contemplating the future of territories. Consequently, it is apt that we conclude our reflection by attempting to project ourselves into the conclusion of this century.

It is within this framework that we have orchestrated this book, with the aim of providing a comprehensive synthesis on the subject of settlement. The book is dedicated to presenting a global perspective on settlement, employing multiscale analyses to underscore both the commonalities and the

unique characteristics within the observed configurations. The overall progression of the book explores how contemporary human societies populate Earth.

Therefore, it is only logical that Pierre-Jean Thumerelle elucidates how humans left their African origins to eventually inhabit the entire planet in Chapter 1. The temporal dynamics of these movements initially underscore the significant inertia characterizing global-scale settlement, and this stands as a key takeaway from the book: current observed population concentrations typically result from ancient accumulations of populations (see Chapters 3 and 6). Nevertheless, the modern era introduces striking bifurcations in specific locations. Geopolitical and economic forces have the potential to induce rapid and substantial changes. The colonization of the American continent, pioneer frontiers in tropical regions, mining activities, and more recently, the concentration of capital in metropolises are all factors that have disrupted population distribution at global, regional and local scales.

Catherine Linard and Florence de Longueville demonstrate how humanity currently occupies the planet in Chapter 2. Following the definition of the ecumene's extent, they provide a measurement. The complexity of the sources required for this endeavor is outlined, allowing us to visualize its scope. However, human occupation is dynamic, and they help in raising awareness of the ongoing dynamics, encompassing not only nocturnal and seasonal aspects but also those of longer duration.

The distribution of humans on a global scale is initially marked by significant heterogeneity but is also characterized by immense diversity. While rural housing exhibits a variety of forms (Lebeau 1969), urban housing, having become predominant in recent decades, introduces new complexities. François Moriconi-Ebrard and Joan Perez concentrate on this specific settlement pattern to underscore its intricate nature in Chapter 3. The definition stage remains challenging but indispensable. The authors guide us in distinguishing cities from urban areas, articulating the implications of conceptualizing in terms of agglomerations, metropolization, etc. They emphasize the impact of varying definitions (across authors and countries) on the perception and understanding of the phenomenon. The adoption of standardized definitions and databases becomes imperative, facilitating effective international comparisons. Nevertheless, despite cities currently constituting the predominant habitat globally, they exhibit substantial diversity, both in terms of physical attributes (morphology) and demographic

trajectories, as eloquently illustrated in this chapter. The chapter concludes by examining the manifestations of demographic and/or spatial decline in certain cities, a phenomenon that prompts reflection in the context of demographic and spatial growth that appeared boundless in the 20th century.

One of the questions addressed in Chapter 3 pertains to the depopulation of specific cities. In Chapter 4, Yoann Doignon extends this inquiry to encompass all spaces (both urban and rural) on a global scale: How does depopulation manifest? What roles do different components of the demographic equation (fertility, mortality, migration) play? Which regions of the world experience depopulation, and to what extent? By presenting a granular perspective at the subnational level through a 15–20 km tile map, the chapter underscores that depopulation can occur even in countries with population growth. Is it conceivable that the ecumene is receding?

Subsequently, the book delves into population movements within spaces, reshaping the distribution of settlement. Chapter 5 specifically explores the intricacies of population mobility at the most granular level – residential movements of households. Frédéric Audard and Samuel Carpentier-Postel revisit the concepts used to characterize this phenomenon, providing a global overview that contemplates the diversity of situations. These situations underscore, on the one hand, the influence of the individual life cycle, highlighting that relocation patterns vary with age. On the other hand, they underscore that the economic conditions of households are also a crucial factor for understanding these patterns. Presently, it is observed that, for over half a century, there has been significant diversification in personal, family and professional trajectories. This diversification leads to distinct settlement methods and prompts reflection on our ability to define it in a world where phenomena such as multi-residence or teleworking complicate its understanding.

In Chapter 6, Philippe Venier and Sébastien Oliveau present a quantitative synthesis of global migrations to facilitate our comprehension of their impacts on settlement patterns. What is the scale of these migrations? Are they reconfiguring major settlement areas worldwide? What are the repercussions of migrations on a more localized level? These are challenging questions to address, given the diversity of sources and the interpretative nature of the data. Nevertheless, a geography of migrations is taking shape, shedding light on anticipated transformations.

One of the most significant anticipated human upheavals is undoubtedly climate change, whose reality becomes more pronounced each year (IPCC 2023). Marion Borderon endeavors to examine its impact on settlement in Chapter 7. The author highlights the complexity of measuring the effects of climate change on societies in a world where the determinants of behaviors, such as migration, are numerous. Following a literature review that elucidates these conceptual challenges, the author presents numerous findings to underscore, in her words, that many pieces of the puzzle are still missing.

While the exercise of foresight is always delicate, it is rich in lessons and aids in envisioning the future. Élise Lévêque, Quentin Godoye and Dieynaba Ndour collectively explore potential futures for global settlement in Chapter 8. Following the presentation of UN projections and the underlying scenarios, they offer a projection of the potential evolution of the world population and, consequently, the changes that global settlement might undergo by the end of the century. Demographic phenomena exhibit significant inertia: fertility generally undergoes changes over multiple decades, and mortality, barring safety or health-related accidents, experiences slow variations. Nonetheless, substantial shifts in trajectories are anticipated, such as the (re)emergence of certain African regions as major global population centers, a reduction in China's demographic weight, etc.

The Conclusion of the book provides a comprehensive overview of all the preceding chapters. In this context, the authors acknowledge the limitations of the book, which omitted local forms of housing, especially in rural areas, as well as more specific settlement patterns such as nomadism. There are, however, interesting aspects to discuss regarding these forms of settlement, both in so-called northern countries (Acker 2021) and in southern countries (Choplin and Lombard 2014). Subsequently, the authors revisit the insights gleaned from the book and discuss what they allow us to contemplate from a prospective standpoint, prompting reflection on the forthcoming challenges in settlement patterns.

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