Man is a creature of communication. From ancient times, that has been an often-told truth about mankind. As a matter of fact, human beings have been communicating with one another much more frequently, with much deeper and more complicated contents, over much longer distances, with many more partners, and in much greater volume than any other creatures have. How could man enrich communication to such an extent? The keys to man’s success are doubtlessly language and communication technology. The history of mankind is, in a sense and from a technical point of view, the history of the development of communication systems.

Transportation was the only means of remote communication until telecommunication systems were developed and took the major role of conveying information. Transport is still the only means for the physical movement of passengers and goods. Such an important phenomenon as communication enabled mankind to develop a significantly peculiar economic system of exchange and trade. This brought specialization and division in production, and then economies of scale and agglomeration. Communication also stimulated the creation and innovation of culture and technology and then accelerated their propagation. Travel, a type of communication, has always been encouraged by almost all religions and philosophies as one of the best means of education to personally develop the human capacity in the long history of mankind.

Such development of communication, especially of transport services for passengers and goods, has at the same time made some places more and more connected to other places, and spatial structure has been brought about both in cities and in systems of cities. Differences between city centers and suburban areas clearly appeared, and working places and dwelling places became more separated. Some cities grew faster and larger by absorbing the influx of population with the driving force of scale and agglomeration economies: urbanization. Larger and smaller cities in a region became involved in an economically hierarchical system. Neither an efficient urban economy nor a convenient, comfortable urban life could have been realized.
without the development of communication devices. Communication is in this sense one of the creators of contemporary life and society.

**What Is the Downside of the Development of the City and Modern Urban Transport?**

We should not underestimate the fact, however, that transport in urban regions brings various negative effects simultaneously with the above-mentioned positive features.

Transport and urban systems are often accompanied by so-called externalities in various ways such as effects on the environment and safety, congestion, and agglomeration, all of which are factors that are not fully reflected in the behavior of actors in the market. Users of private automobiles are hardly aware of their environmental burden, and as a result, they discharge about one-third of the entire emission of CO$_2$ (in Japan’s case). For example, the optimal situation for transport systems cannot be automatically achieved through market mechanisms if those systems are not suitably controlled. The extent of the effect of these externalities increases due to the advancement and development of transport and urban systems. Large, car-dependent American cities which sometimes require, ridiculously, around 70% of urban land for roads and parking are the result of such externalities. Consequently, there is too much dependence on fossil energy and too much discharge of greenhouse gases from cars.

The increasing economic relationship between different places often brings the destruction of traditional local industries, pushed out by stronger competitors, and industry and culture often lose diversity and become more homogeneous. It is often observed that so many well-known stores without individuality are located along newly built convenient roads. A growing economy accelerates the spatial competition and speeds up the changes in who the winners and losers are. Nowadays, urban systems can hardly be said to be stable enough.

Advancement or improvement of systems sometimes spoils the toughness or the robustness of systems. For example, motorization, which provides an extremely individual free hand in a spatial and chronological sense, and obviously improves the utility and comfort of people’s mobility, might have, however, caused a deterioration in people’s capacity for walking as well as insensitivity to others and to nature. Convenient “direct-through operation” of commuter trains over different railway lines reduces transfer times and travel time. However, the system might become less robust: a
delay in train services easily spreads, is often amplified, and returns to normal once a disturbance incidentally occurs somewhere in the network.

Therefore, the major target of urban transport research now becomes not just constructing efficient and useful (fast, cheap, safe, convenient) systems but developing and setting up much wiser means to minimize these negative effects in design, construction, and management of the system of transport and the city to the maximum extent. This target and the approach can be called *sustainable urban transport* with multifarious meanings in the technical, environmental, economic, financial, cultural, social, and political senses. It is obvious that every country and city, every researcher and practitioner, must tackle this urgent but truly difficult issue.

### What Is Happening in Asian Cities?

Three of the world’s four large civilizations developed in Asia in ancient times, and Asia maintained its leading status in civilization and culture up to the eighteenth century based on many premodern and autocratic dynasties in the region. However, Asia lost its predominant position in the nineteenth and twentieth centuries due to the rapid industrial development in Western countries and their economic and political invasion into Asia. Its comparative share of the world income dropped from around 40% to 20% in the 1940s, while it continued to be home to approximately 40% of the world’s population. However, Asia gradually has been restored after World War II and is expected to recover its appropriate role in the 2020s. Asia accounts for more than half of world trade and is recording a significantly high economic growth rate.

The urban population in Asia is rapidly increasing, reaching toward 80%, which is more or less a common figure in developed countries; and Asian cities, especially large cities, are now facing very serious problems caused by too rapid urbanization. There are now 27 “megacities” in the world (Th. Brinkhoff: The Principal Agglomerations of the World, 2009), defined as metropolitan regions with a certain density and a population of over 10 million. Actually, 56% of them are located in Asia, namely, Tokyo, Seoul, Mumbai, Delhi, Shanghai, Osaka, Kolkata, Metro Manila, Jakarta, Karachi, Tehran, Beijing, Dhaka, Lahore, and Bangkok, in descending order of population, of which the largest, Tokyo, and the smallest, Bangkok, shoulder populations of 33.6 and 10.1 million, respectively. These megacities rapidly grew by absorbing the influx of population coming from rural areas attracted by the economic outcome of large-scale economic power, although the governments of most of these cities tried to control and downgrade the sprawl
of urbanized regions. Urban problems can never be solved without tackling megacities. Having solutions in Asian megacities will be key to solving the problems of megacities throughout the world. The future of Chinese and Indian megacities especially will be the most significant cases.

The growth rate of urbanization in Asia is said to be almost the same as the growth rate of slum areas. Poverty and the disparity in income distribution, which seemingly resulted from indulgence and insufficiency of social redistribution systems of income, have been and continue to be the most critical issues standing in the way of a prosperous future for Asian cities except in exceptional cases such as Tokyo, Seoul, Singapore, and some others. The problem of poverty is not only socially and politically sensitive but also very complicated. We cannot solve the fundamental problem by taking care of poor people’s living conditions in cities; we also need to seriously tackle the inter-regional disparity problem at the same time. In the transport sector, poor people are not just passengers to be considered; they are also major suppliers of low-wage labor in the transport industry.

**What Is the Role of Asia Then?**

Asia has significantly different characteristics from those of Europe and North America. Some of those characteristics seem more or less suited to the idea of sustainability in cities and in transport. The idea of transmigration in Buddhism and in Daoism seems much more favorable to the concept of sustainability than the world of a one-way time axis beginning in Genesis and ending on Judgment Day in Christianity. The polytheism in Buddhism, Daoism, Hinduism, and Shintoism will be basically adaptive to multiple value judgments, including the idea of sustainability.

Artificial settings in cities and nature are not always clearly separated in cities in Asia. Some parts of open spaces or streets are often traditionally regarded as sacred places where animistic gods are worshiped. Typical examples can be observed in Okinawa, Japan, and Bali, Indonesia. Borders between urbanized areas and rural areas do not look like clear lines. We can easily find nature anywhere in a city and also easily observe urban houses developed in agricultural fields at the same time. This vagueness, which is usually pointed out as a typical example of the weak governance in land-use control in Asia, might now be a favorable factor, appropriate to improve the natural aspect of sustainability in cities. The way of life that compromises with nature in such a way might have been fomented by the natural characteristics of Asia in its meteorology and geology, such as the monsoon climate and natural disasters like earthquakes.
In conclusion, Asian cities are facing a very difficult mission, that is, how to achieve sustainability in a still-growing situation. Transport, which is doubtlessly one of the most important nature, is expected to play a responsible role in accomplishing the mission by taking Asia’s natural and cultural characteristics into consideration. Solving Asia’s problem is not just for the benefit of Asia; it is the responsibility of the whole world.

How Was This Book Written and How Is It Expected to Be Read?

Based on the above-stated understanding, this book was written by international academic authors who are specialists in research and application in transport and city planning in various institutes in Asia. The international team was originally organized as “Mission SUR-Transport” under the umbrella of the study program on “Sustainable Urban Regeneration” (2003–2007) of The University of Tokyo headed by Prof. Shinichiro Ogaki, which is one of the “Center of Excellence” (COE) programs authorized and sponsored by the Japanese government. “Mission SUR-Transport” chaired by Hitoshi Ieda at The University of Tokyo studied the topic of this book from various aspects and published this book as the fruit of the study activities of the team. Readers can find a list of contributors on the following page.

The contents and structure of the book were designed with the expectation that potential readers will be students and researchers in universities and institutes, planners and engineers in practical fields, who would like to know the current status of urban transport in Asia as well as the future orientation and hot topics in the field. The book was edited by Hitoshi Ieda, the representative editor, in cooperation with sub-editors by chapter and with the assistance of Dr. Tetsuo Shimizu at The University of Tokyo, and also with the assistance of staff members of the publisher, Springer Japan.

Following is the structure and rough sketch of the contents of this book:

Part I, “The First Step: An Overview” with three chapters, deals with Asian characteristics from natural, cultural, and economic viewpoints, and then describes how we should grasp the concept of urban sustainability in urban transport in Asia. Readers will understand various aspects of Asia as introductory and preparatory knowledge.
Part II, “Best Practices from Asia with Wisdom: Keys to Success and Facing Limitations” with four chapters, will introduce actual comparatively successful and promising measures tried and realized in Asia. This part covers various cases from passenger transport to freight transport, from transport system design to system management, from engineering measures to people’s participation, from traffic control to land-use control and site development. Readers will find an abundance of information and examples in this main part of the book.

Part III, “Future of Urban Transport in Asia: Rising Asia Proposes to the World,” with four chapters, discusses key issues and hot topics of study on sustainable city and transport for the future: development and management, travel demand management, growth management, site development strategies, and financial and institutional measures.

Now, it’s time to welcome you to the world of urban transport in the Asian context. Enjoy!

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