**Transport/Tourism Strategies for Accessibility Management in Tourist Cities**

1. **Introduction**
2. **The Relationship between Tourism and Transportation - Theoretical Overview**

There are only a few interdisciplinary studies examining tourism and transportation together, as each is considered a separate discipline. Consequently, the relationships between transportation and tourism have yet to be deeply investigated (Gross and Grimm, 2018; La Rocca, 2015). Although transportation has been acknowledged as one of the most significant factors affecting the development of international and domestic tourism (Page, 1999), the importance of tourism-related mobility has never been thoroughly researched in mobility studies (Chew,1987; Gunn,1994; Hall,1991; Inskeep,1991; Page,1994,1999). This lack of theoretical grounding is striking given that, in decent decades, tourism has developed into one of the most significant forms of mobility. Only lately has there been any impetus to address this dearth of theoretical resources in academic studies (Gronau, 2017).

The main reason for this lacuna in the scholarship stems from the fact that most conventional transportation research has focused on systematic demand trips (such as commuting), have only one origin and one destination. It is clear that insights gained from studies on regular systematic mobility cannot easily be applied to non-regular tourism and/or leisure trips, given their considerable innate differences. It is far more difficult to describe and explain multi-destination, infrequent travel where, in contrast to utilitarian commuting, the trip is considered an end in itself.

As mentioned above, existing studies have tended to ignore the problematic nature of tourism-oriented transportation, resulting in a conspicuous lack of research on mobility, accessibility, and transportation management strategies for constrained urban settings in the context of leisure travel.

Most studies of transportation in relation to tourism have been descriptive in nature and have focused on modes of transportation used by tourists to travel from their points of origin to their destinations and back (Hodgson, 1988; Page, 1994; Prideaux, 1993). Other studies, also of a descriptive nature, have recognized the role of transportation systems as an essential component of successful tourism development (Gronau, 2017; Hall et al., 2017; Kaul, 1985; Khadaroo and Seetanah, 2008; Masson and Petiot, 2009; Papaix and Coca-Stefaniak, 2020; Wheatcroft, 1994).

The confluence between the irregular demand created by tourists, and the systematic demand of commuters, in the same space and using the same infrastructure, has the effects mentioned above. Some studies analyze these effects, but very seldomly do they offer comprehensive solutions (Gronan and Kagemeier, 2007; Hall, 1993, 1999; Halsall, 1998; Page, 1995; Prideaux, 2000; Schiefelbusch et al., 2007).

Many studies have focused on travel behavior and travel patterns to urban tourist destinations. Some of these have considered general modes (Halsall, 1998; Scuttari et al., 2011) while others have examined specific modes, such as dockless bike sharing (Yang et al., 2019), public transportation (Miravet et al., 2021), and pedestrian behavior (Asriana, 2021). While several studies seeking to forecast the demand for tourism in relation to transportation infrastructures and modes have produced data and parameters that can influence the demand, they have not suggested any tools for improving accessibility (i.e., Okuyama, 2011; Perez-Olhoyoi et al., 2017; Tsukai et al., 2010; Yang et al., 2021). Transportation planning models are most frequently used for analyzing of travel patterns (Cohen and Harris,1998; Mason and Petiot, 2009; Mortazavi and Nerhagen,1998; Tot and David, 2010; Tsukai et al., 2010) and a number of studies have focused on investigating the spatial distribution of tourism flows and their implications for planning for different transportation modes, such as taxis (Bing et al., 2021), public transportation (Domenech and Gutierez, 2017), sightseeing buses (Farias, 2010), and more general transportation modes (Gao et al., 2021; McKercher and Lew, 2004).

Other studies have focused on measuring the appeal of destinations to tourists. Tol and David (2010) explore the possible link between accommodation receipts and accessible public roads, while Kahtani et al. (2009) identify suitable methods for measuring accessibility to tourist attractions using a gravity model. Several studies have evaluated the appeal of destinations in relation to different accessibility parameters, mainly in terms of tourist behavior (Khadaroo and Seetanah, 2007, 2008; Masson and Petiot, 2009).

Only a few studies have examined mobility management issues, and these have tended to be rather narrow in scope, given the complex array of transportation/tourism-related problems in general, and in urban areas in particular. Their conclusions call, for example, for promoting the use of public transport (mainly buses) and limiting car access in urban areas (Albalate and Bel, 2010; Eaton and Holding, 1996; Gronan and Kagemeier, 2007; Halsall, 1998; Holding and Kreutner, 1998; Hospers, 2019; La Rocca, 2015; Miravet et al., 2021). Other studies have focused on identifying the most important factors influencing the use of public transport and the associated level of satisfaction with services based on user profiles (Flows at al., 2019; Guti´errez and Miravet, 2016); Tan and Ismail, 2020; Virkar and Mallya, 2018). In the main, their recommendations have involved increasing the awareness among transportation planners about visitor requirements while moderating the conflict between local residents and tourists using the same transportation infrastructure. Some studies have suggested various strategies, such as the use of Park-and-Ride facilities (Halsall, 1998), integrated transportation systems (Lehrer and Freeman, 1998), integrated tickets (Halsall, 1998; Kraan et al., 1998), public transportation lines with flexible stops oriented to tourist attractions (Ismail et al., 2017), and the use of city tours (Farias, 2010; Rudjanakanoknad and Rattanasuwan, 2011). Many other studies have looked at small-scale transportation means capable of easily diffusing demand. The most popular solutions include bikes of various kinds – personal, rented, with or without docks, etc. (Davies et al., 2010; La Rocca, 2015; Nilsson, 2019; Yang et al., 2021; Yang et al., 2019). Other suggestions include small electrical vehicles for short distances (Davies et al., 2010) and cable cars for destinations with challenging topography (Sahril et al., 2020). An additional strategy for diffusing demand is developing walkable pedestrian routes with easy access to public transport within cities (Asriana, 2021; Hall et al., 2017; Ram and Hall, 2018). Another approach, although not transportation-oriented, was found in a study of overtourism in 13 European cities that indicated the existence of a clear preference for enhancing the tourism industry, mainly the attractions, in order to respond to increasing demand (Koens et al., 2018). However, this approach is sustainable only after solving the basic problems of accessibility.

Only a few studies have considered the simultaneous use of several strategies. Schiefelbusch et al. (2007) suggest a combined strategies method for event destinations and introduce the concept of “travel chains” combining travel and tourism activities. This facilitates the evaluation of the sustainability of transport services and packages by enabling the selection of an appropriate strategy. La Rocca (2015) has identified a comprehensive set of actions, based on best practices, presenting it as a checklist for planners to facilitate the adoption of suitable strategies. Such strategies could be balanced between pull measures (incentives) and push measures (constraints) in order to promote the most sustainable way for visitors to enjoy a city. Pull measures refer to mobility policies for promoting “car-free tourism,” while push measures refer to mobility policies aimed at discouraging car use by imposing restrictions. Each of the these categories of measures is divided into functional measures, concerning primarily the administrative level, and physical measures, concerning primarily the quality of urban spaces. La Rocca’s (2015) approach results in a long and detailed list of potential measures from which planners or decision-makers can customize appropriate strategies, taking into consideration all the noted transportation, administrative, economic, social and urban considerations. A discussion of the selection process of what measures to take and how strategies might be formulated and implemented is beyond the scope of this study. The use of comprehensive sets of strategies, specifically in historical cities, including implementation procedures, is suggested by Israeli and Mansfeld (2003) based on ARTIST (2000). In order to prove relevant and useful, research in this area must be up-to-date and generalizable.

With respect to the above, this paper investigates various aspects of the relationship between urban transportation systems and urban tourism. Based on a large sample of good practices and on empirical case studies from a number of European cities and other cities worldwide, this paper identifies a set of main strategies that offer solutions for managing tourism and visitor mobility. These solutions, arrived at using multi-objective analysis, can maintain the balance between the physical/social environment and the visitor experience, and can contribute to making destinations more sustainable.