From development zones to edge urban areas in China: A case study of Nansha, Guangzhou City

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\textbf{A R T I C L E İ N F O}

Keywords:
Edge urban areas  
(Post)suburbia  
Development zone  
Polycentric  
Nansha

\textbf{A B S T R A C T}

The new millennium signified a new phase in the development zone-oriented suburbanization of China. Spurred by a new round of urban development strategies, development zones in many large cities face a need for enormous transformations and re-development. These areas have often been compared with the Western concept of “edge cities”, although in this paper we argue that this “imported” concept, in practice, bears little resemblance to the actual development tendencies in China. Taking a comparative approach, this paper presents a critical examination of edge urban formations in the Chinese context, and identifies the major differences between the concept in China and the United States. Drawing upon a case study of Nansha in Guangzhou, the unique paths and underlying dynamics driving these transformations are revealed. It is concluded that Chinese edge urban areas are being transformed from mono-function development zones into new fully functional cities. A city in China like Nansha reveals the dynamics of both state interventions and local actions in boosting the polycentric economies of large city regions.

1. Introduction

Despite widespread outward suburbanization, which has been witnessed in many Western countries since the 1960s, another phenomenon has been observed in the form of agglomerations in city regions. With the conversion of city functions and the reorganization of urban space, the urban spatial structure has undergone a gradual change from a monocentric to polycentric form, with new settlements emerging in the suburbs. These settlements with various terms have been taken as one of the definitions or major representations of post-suburbia. Among them, the term edge city “takes its place in a welter of terminology deployed to help chart the complexity of modern forms of urbanization” (Phelps & Parsons, 2003, p. 1726). Garreau (1991) described this as the third phase of American suburban development in the 20th century, and coined the term “Edge City” to describe the phenomenon. Subsequently, and based mainly on Garreau’s definitions, edge cities have been identified in many different county contexts, including Europe, Southeast Asia and South Africa. Although differences exist, it has been argued that edge urban settlements, like American edge cities, have become a part of a polycentric model trying to promote rational expansion within Western metropolitan areas. This phenomenon has even been described as representing the advent of a post-suburban era (Wu & Phelps, 2011). In contrast, studies into suburban settlements of this kind are still in their initial stages in China, with little research having been made to date. Although the terminology has been appropriated and imported (Song & Wang, 2001; Yuan & Wang, 2010; Zhao & Peng, 2000), the characteristics and processes of development have yet to be systematically understood and explored. Recent studies on the development of urban fringe or the peri-urban areas have mainly focused on megacities like Beijing (Huang, Liu, Zhao, & Zhao, 2017; Zhao, 2011; Zhao, 2013; Zhao, 2017) and Shanghai (Tian, Ge, & Li, 2017). This paper therefore presents a critical evaluation of the nature of edge urban areas within the specific context of China, aiming to provide an understanding of whether new types of cities are emerging in the Chinese context, and if so, what are the main characteristics of Chinese edge urban areas. To this end, a case study is made of Nansha in Guangzhou City (another major megacities in China) to examine the growth of one particular example of a city that is emerging in edge urban areas in China.

In China, urban spatial expansion has been mainly the result of specific central planning efforts of the national government. In 1984, 14 national development zones were set up on the periphery of Chinese
coastal cities, stimulating the construction of further large-scale development zones across the country, and this has been one of the primary means of urban and industrial restructuring and economic development. Established as a result of designed industrial relocation to the suburbs, early development zones emerged not only as industrial spaces at the urban-rural fringe of metropolitan areas, but also isolated “islands” with a loose attachment to the central cities. Development zones came to dominate the suburban landscape of Chinese cities in the late 1980s and 1990s, and after more than 20 years, they can today be recognized as the physical manifestation of a process of remarkable economic growth. That said, their futures are perhaps less secure, as they have been heavily dependent on foreign investments, while a slowdown of economic growth has resulted in resource bottlenecks.

More recently, suburbanization development in China has entered into a new era, and development zones are also entering a period of strategic transformation and re-development. The 11th Five-Year Plan of Economic and Social Development of National Economic and Technological Development Zones (Ministry of Commerce and Ministry of Land and Resources, 2006) aims to adjust the position of development zones by transforming them into multi-functional integrated industrial areas. Under the confluence of both the external environment and internal demands, a re-development of development zones has begun with the creation of new types of Chinese cities. This reflects the polycentric development strategies of many Chinese metropolitan areas, in which employment or business centers are promoted in order to help form polycentric structures. Edge urban areas are emerging as new centers, and are becoming a new model for the encouragement of rational urban expansion. This research uncovers some interesting and novel features of the processes by which cities on the edge or periphery of core cities are emerging. It is believed that Chinese edge urban formations can provide a better understanding of this new mode of (post) suburban development, which features strong state interventions and increased local capacity in promoting polycentric urban economies.

Following this introduction, the paper first reviews relevant literature on edge urban formations in the era of (post)suburbia. It continues with two interconnected sections that present a systematic study of Chinese edge urban areas. The first section discusses different stages of Chinese suburban development and summarizes the main characteristics of Chinese edge urban areas and their transformation using the cases from seven large cities in the Bo Hai Coastal, Yangtze River Delta and Pearl River Delta Regions. The following section presents a detailed case study of Nansha to illustrate the underlying dynamics and development processes behind the transformation from a development zone into a unique Chinese city.

2. Edge urban formations in the era of (post)suburbia

There is an increasing literature that has been studying the new and diverse settlement space which helps shaping and reshaping the traditional suburban areas. The term post-suburbia was proposed to capture this new phenomenon and has gained wider acceptance more recently. It has been reflected in an academic discourse defining it as a new era (Essex & Brown, 1997; Lucy & Philips, 1997; Wu & Phelps, 2011), a new category of settlements (Kling, Olin, & Poster, 1995; Teaford, 1997), and the distinctive urban politics (Phelps & Wood, 2011). In one recent review of post-suburban growth, it was noted that “when the term ‘post-suburbia’ has been used it has been used in rather different ways” (Phelps, Wood, & Valler, 2010, p. 369), which exists as an open question without being fully understood and determined (Nüssli & Schmid, 2016). Various settlement types termed “edge city” (Garreau, 1991), “edgeless city” (Lang, 2003) and “technoburb” (Fishman, 1987) etc., “are taken to signal something different from suburbia” (Phelps & Wood, 2011, p. 2591), and have been used to describe the complex form of urban expansion and changes to traditional suburban elements (Wu & Phelps, 2011). In China, the recent phase of suburban development has included important elements which could be considered as post-suburbia (Wu & Phelps, 2008; Wu & Phelps, 2011), and new settlements are also emerging at the edge of major cities, which share a certain degree of similarity to the US edge cities. However, it should be understood that the concept of an “edge city” was originally proposed based on the development background of US cities, and whether or not it can be applied outside the US context in mixed economy settings such as Western Europe, let alone state-transitional economies such as China, needs further exploration.

The existing literature has pointed out some of the limits in applying the term edge city outside the US (Bontje & Burdack, 2005; Phelps, 1998; Phelps & Parsons, 2003; Phelps, Parsons, Dowling, & Ballas, 2006; Wu & Phelps, 2008). Therefore, in view of the context specific feature of the term edge city, this paper avoids applying the exact term to China. Rather, in light of the new type of urban formations transformed from traditional development zones on the edge or periphery of core cities, and in light of this new type of settlements also represent some elements of post-suburban growth in China, the term edge urban areas is preferred in the paper to distinguish this new type of cities emerging on the edge from the US edge cities. Using edge urban areas emphasizes their two key features, edge (in terms of location) and city (in terms of function), which are also the two defining words of US edge cities, demonstrating the similar outcome of recent (post)suburban development both in China and the US. Although the emerging edge urban areas in China have significant differences specifically in morphological aspects and also some of the functional aspects compared with US edge cities, they conform to some of the defining criteria and in particular both of the settlements are functionally similar in being employment centers at the edge of core cities. As it is observed, “it is the morphology of edge cities, and not Garreau’s (1991) five defining criteria, that most defines these settlements as specific to the US” (Wu & Phelps, 2008, p. 466). The similar outcome and some of the similar functional features between US edge cities and China’s edge urban areas make it appropriate to compare them in other respects, in order to capture some new trends/features in the (post)suburban development of Chinese large cities. As Bontje and Burdack (2005, p. 317) noted in European context that “recent development tendencies in European metropolitan regions bear resemblance to Edge City development in several respects”, but “the European Edge Cities are not mere copies of their American counterparts”. Likewise, edge urban areas in China are also worthy examining more fully. There is thus a need to first review the formation of edge cities in the Western countries during the (post)suburbanization process, and the so-called Chinese edge cities (biwhyuan changshi) which is translated literally, usually meaning cities on the edge before moving on to a comparative analysis later in the paper.

In the United States, following the suburbanization and “mallification” of the country, a large number of jobs in the service sectors moved out to the suburbs, leading to the gradual formation of functional edge cities. The term “edge city” was first coined by Garreau (1991), a Washington Post journalist, to describe the substantial new non-contiguous urban development at the edge of established major cities in the United States, believing that Americans were creating a new future, having changed nearly all the routines associated with living, working, communicating and playing. These new multiple urban centers, or “edge cities”, contain all the functions of a city, but are located far from the old downtown on land that 30 years ago was at the edge of the city, and occupied by villages or farmland.

Following Garreau’s coining of the term “edge cities”, several researchers have adopted the concept and have attempted to conceptualize it more clearly. Byrum (1992), Nelson (1993), and Stern and Marsh (1997) tried to make a more accurate definition of the idea, while Scheer and Petkov (1998), McKee and McKee (2001), and Bingham and Kimble (1995), among others, came up with different typologies in an attempt to classify different types of edge city. Case studies have focused mainly on the United States (Bingham & Kimble, 1995; Dietsch, 2001; Jonas, 1999; McGovern, 1998; Nelson, 1993) and Europe (Begg & Kitson, 1991; Holden & Turner, 1997;
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