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**Abstract:** Existing studies have attempted to explain the transformation of rural China from a single productive or post-productive perspective. However, regarding the two development paradigms as binary opposites brings contradictions: Is China's countryside evolving towards productivism or post-productivism? To answer this question, we transcend the binary opposition and instead propose an analytical framework based on rural value, driving actors, and rural land-use functions. Based on the location quotient analysis method, we measure the functional hybridity of rural areas using 7345 POIs (points of interest) representing the land-use types of productive and post-productive activities. We discuss the formation mechanism of functional hybridity considering two typical spaces: modern agriculture demonstration districts and *"Tesecun"*. We find that the government, the market, and villagers collectively promote the formation of functional hybridity in rural China. The government prefers to strengthen productivity in order to ensure state food security, while villagers prefer to make their villages more multi-functional in order to attract citizens. This study can be seen as a contribution supplementing research issues associated with rural China from the novel dualistic perspective of productivism and post-productivism.

Keywords: post-productive; functional mixture; rural value; urban-rural integration; rural China

# 1. Introduction

The impact of globalization on rural development has been growing, and postproductivism has become a critical theoretical perspective for understanding the transformation of European rural areas in the 1970s [1,2]. With counter-urbanization, urban residents migrate into rural areas, resulting in rural gentrification [3,4]. Instead of the city, the countryside has become the place where the middle class yearns to be. The countryside is, thus, regarded as the center of consumption, rather than the place of production [5]. Rural immigration is creating new rurality and landscapes [6], and so the manner of understanding rural transformation has shifted from productivism to post-productivism [1,2,7]. The former emphasizes the food production function, while the latter emphasizes various consumption functions [1,8]. Rural immigration in developed countries has brought about changes in population structure, industrial structure, social networks, and so on [9]. Similar changes have occurred in developing countries, including rural China [10–12]. There is not only a development trend of productivism, represented by the modern agriculture demonstration district, but also the new trend of post-productivism, represented by consumption centers, such as farmyards, tourist villages, and so on. Previous research has attempted to use the theoretical framework of productivism and post-productivism to discuss the transformation trend of rural China [13–15]. However, there is a gap between China's urbanization level and that of Western countries, and China's background of integration into globalization also differs from that of the West [16]. Rural China's transformation has not occurred in the context of Western counter-urbanization. In the context of rapid urbanization, the special urban-rural relationship significantly affects rural China's functions and



Citation: Huang, Y.; Chen, L.; Li, X. Productivism and Post-Productivism: An Analysis of Functional Mixtures in Rural China. *Land* **2022**, *11*, 1490. https://doi.org/10.3390/ land11091490

Academic Editor: Tao Liu

Received: 14 August 2022 Accepted: 3 September 2022 Published: 5 September 2022

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**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). roles [17]. Does China's rural transformation present with a productive or post-productive paradigm, or both? This is the core research question discussed in this paper.

As two paradigms of rural development, productivism and post-productivism have significant differences [1], including the meaning of rural value [8], the role of multi-actor governance [18], and rural land-use functions [19,20]. In this paper, we take the rural Guangdong Province as the research area and discuss the formation mechanism of rural functional hybridity in China from the three dimensions mentioned above.

To ensure food security, the agricultural space is shaped into a single-function agricultural production space by defining basic farmland and modern agriculture demonstration districts, with the support of the central and local governments [21]. On the other hand, to increase the income of farmers, rural land functions have become more diverse, including farming, leisure consumption, and so on, which is called a post-productive transition [1,2,22]. Through analysis of the rural functions in Guangdong, we find that productivism and post-productivism are not in binary opposition. To the contrary, with the need to ensure national food security and encourage farmers to increase their incomes, productivism and post-productivism may temporally coexist, bringing about the hybridity of rural land functions.

This research contributes a valuable complement to the research issue of rural China. Notably, we analyze the functional mixture of rural China from the perspectives of rural value, multiple driving subjects, and rural land-use functions. Discussing the intertwined relationship between productivism and post-productivism in rural China will help to promote scholarly communication between China and the West.

## 2. Literature Review

Scholars have theorized the transformation and development of rural areas in Europe and America after World War II as a process of "post-productivism." After years of population decline, rural Europe began to return to steady growth in the 1970s [23]. The central position of agriculture in rural society has weakened, and the importance of "rural capital," represented by rural scenery, has become prominent, bringing about a change in the way of thinking about the rural economy [1]. There has been a growing demand for ecosystem services, amenities, and spatial diversity, as well as the preservation of cultural landscapes in rural areas [6,24]. More people and businesses formerly gathered in small rural areas have centralized into larger communities [20].

It is difficult to explain this phenomenon within the theory of rural productivism. Scholars use the term "post-productivism" to summarize this transformation process of rural Europe from an agriculturally oriented economic development model to a servicecentered model [2,25–27]. Through this perspective, people can rediscover multiple rural values [8,28]. Post-productivism emphasizes a consumption-oriented ideology for rural transformation [15,26]. The post-productive shift predicts the coming of a consumerled era, with rural areas becoming more popular as leisure destinations. On the one hand, agriculture is embedded into urban life as a landscape; on the other hand, urban migrants may flood into the countryside, creating different consumption and demand patterns for the countryside [9]. Due to changes in the rural population structure, the countryside is seen to become a center of consumption, rather than a place of production [5]. The land-use transition from farming production to leisure consumption also reflects the changing nature of urban-rural relationship [15,29]. However, post-productivism is a theoretical perspective of British-based rural transformation, making it a concept that has been controversial since its inception. A review of the literature suggests that there exist significant differences in rural values and driving actors between productivism and post-productivism [18–20,30]. Scholars have presented various different viewpoints when arguing about the characteristics of China's rural transformation. Some scholars insist that the current industrial and spatial structure of China's rural areas reflect the productive paradigm [31]. In terms of rural value, this school emphasizes that the countryside plays an essential function in food production. Over the past 20 years, China has stressed the

importance of agricultural output to national security, consistent with the "modernization" of "national farms" [26]. The development of rural areas is highly dependent on the role of the government, which has increased agricultural output through agricultural tax reform, financial support, agricultural subsidies, and so on, promoting the intensification and scale of agricultural production. In this context, rural functions can be defined through "productive agricultural activities" [1].

Another view is that the productive regime, with its intensified and industrialized agriculture, has produced negative environmental externalities, in response to which a post-productive trend has emerged in rural China [31,32]. Scholars have provided empirical evidence of post-productive transformation through case studies and have pointed out that villages have agricultural value and ecological benefits, along with critical cultural functions [13]. As a second home, the countryside has attracted more urban residents due to its amenities, pastoral scenery, and so on [33]. Some scholars have shown that, in the new agricultural movement dominated by returning laborers, the meaning of farmers and farming has changed, and so the agricultural system has changed from productivism to post-productivism [22]. The rural post-productive development paradigm pays more attention to the driving role of the market and villagers rather than the government [34].

These two viewpoints are partially explanatory in describing the characteristics of China's rural transformation. However, viewing the two development paradigms as binary opposites can lead to contradictions. For example, is China's countryside evolving towards productivism or post-productivism? Existing studies have discussed the differences in rural values and driving actors, but have neglected discussion of land-use functions. Rural value and landscapes are the result of a dynamic process driven by multiple actors [35,36]. The transformations of spatial patterns and rural functions over time are the best reflections of the rural development paradigm [37]. By analyzing rural land-use functions, we can better answer the "productive or post-productive" puzzle in China's rural paradigm.

### 3. Research Framework and Methods

#### 3.1. Research Framework

We summarize the differences between productivism and post-productivism into three dimensions: rural value, driving actors, and rural land-use functions. Through the above dimensions, we show how Chinese rural areas respond to the needs of ensuring national food security and increasing the income of farmers under the context of globalization.

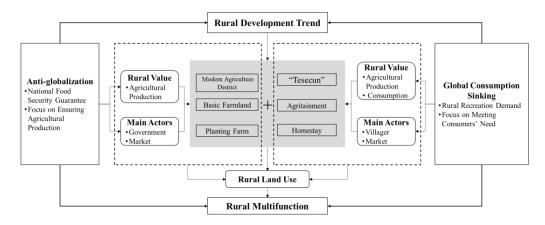
First, in the dimension of rural value, the connotation of rural value differs under different paradigms. In the productive paradigm, the value of the countryside is equal to agriculture. Productivism prefers transforming small-scale farms into modern national farms, thus shaping the countryside into a single agricultural production space. Meanwhile, postproductivism emphasizes the rediscovery of multiple rural values. Agriculture is closely related to rural affairs, and reflects environmental and social values. Post-productivism emphasizes the process of de-agriculturalization, and pays more attention to the environmental and social value of agricultural production. The countryside, therefore, becomes an important consumption place, instead of a production space [23].

Second, we may consider three main actors: the government, the market, and villagers. These actors promote the transformation and development of villages through the coupling of exogenous driving and endogenous response [38]. Out of consideration for national food security, the productive paradigm emphasizes the role of government intervention, while post-productivism emphasizes the role of the market and villagers in rural transformation. High-intensity production patterns prioritizing food production are waning as awareness of sustainability grows [9,39]. Driven by the market and villagers, the development paradigm of rural post-productivism can be derived.

Third, in the dimension of rural land-use, during the transition from productivism to post-productivism, the rural construction land and farmland landscape will change [19]. Productive rural landscapes focus on the high-intensity production of a relatively small range of primary commodities. In contrast, the post-productive land-use landscape has

shifted from a single agricultural function to a more diverse range of functions [40]. The rural landscape can record the results of social and economic effects, and so by assessing land-use changes, we can understand the social and economic changes that have occurred [41]. In urban fringe areas, urban demand and rural supply are combined in a closer spatial context, where the rural land provides food supply, agricultural landscape, environmental aesthetics, and eco-leisure functions for the city [42].

The current globalization and market-oriented economy have significantly impacted traditional villages, bringing about the hybridity of rural land-use functions. The transformation of urban society has made rural areas an essential place for urban residents to experience leisure. In this process, modern agriculture demonstration districts and specialized *Tesecun*<sup>1</sup> are new functional spaces emerging in China's rural development. The modern agricultural park is a new functional form, arising under the national demand to ensure food security. Specialized agricultural production and large-scale production have strengthened the productivity in rural areas. With the advantages of rural resources, specialized *Tesecun* are qualified villages that provide urban residents with diversified functions, such as accommodation, catering, and leisure experiences (see Figure 1).



#### Figure 1. Analysis framework.

### 3.2. Study Area

We selected the rural areas of Guangdong Province as the research region. In 1982, the urbanization rate of Guangdong Province was only 17.94%. The countryside is a traditional agricultural society. After the reform and opening, Guangdong Province, at the forefront of the country, through the rapid development of globalization and the market economy, has changed the development pattern of traditional rural areas. Guangdong Province is a typical region exemplifying China's rural transformation history. After rapid urbanization, the rural functions of different areas have differentiated. An in-depth discussion of the formation process of modern agricultural parks and specialized characteristic villages in Guangdong helps to explain the functional hybridity of Chinese villages.

### 3.3. Methods and Data

We used POI data from Guangdong Province in 2021 in order to measure the mixture of land-use functions in rural areas. As a new spatial data source, POI data can be regarded as a reflection of land-use functions. In traditional rural areas, land-use is dominated by agricultural production, and the POI types are simple. In areas dominated by post-productivism, consumption functions have emerged, and the POI types are diverse. Therefore, the transformation of rural land functions can be better reflected through POI data.

We assumed that the 22,314 villages in Guangdong Province are all traditional agricultural villages. If there are large farms, modern agriculture demonstration districts, and/or other types of POIs in the villages, it was considered that the rural function of productivity has been strengthened. If new POIs, such as catering and accommodation appear in the village, it was regarded as an indicator of post-productive transformation in the village. We extracted three POI categories closely related to rural development: 426 modern agricultural POIs (extracted according to the keywords "agricultural farm," "planting base," etc.), relating to 395 villages; 4905 farmhouse POIs (extracted according to the keywords "farmhouse," etc.), relating to 2799 villages; and 2015 B&B POIs (extracted according to the keyword "homestay"), relating to 747 villages. We then used the location quotient method to analyze the importance of these three economic activities in the countryside, and calculated the location quotient of the towns according to the following formula:

$$LQ_{ij} = \frac{L_{ij} / \sum_{j=1}^{m} L_{ij}}{\sum_{i=1}^{n} L_{ij} / \sum_{i=1}^{n} \sum_{j=1}^{m} L_{ij}},$$
(1)

where  $LQ_{ij}$  is the location quotient of town *j*,  $L_{ij}$  represents the number of productive or post-productive functional types in town *j*, *i* represents the functional type, and *j* indexes the specific township.

When i = 1,  $L_{1j}$  represents the number of all types of productive activities in town j. We assume that each village has an essential productive function, and the added agricultural farms will strengthen the productive function of the administrative village. Therefore,  $L_{1j}$  needs to count the number of all villages in town j (essential production functions) and the number of agricultural farm POIs (enhanced productivity function).

When i = 2,  $L_{2j}$  represents the number of all types of post-productive activities in town j. Suppose there are new, non-agricultural production functions, such as accommodation, catering, and so on. In that case, the village will be regarded as being in the transition to post-productivism. Therefore,  $L_{2j}$  needs to count the number of farmhouse and agritainment POIs in each town.

This paper focuses on whether the value of the location quotient  $LQ_{2j}$  under the post-productivism type is greater than one or not. When it is greater than one, it means that the post-productive function has a dominant advantage in the region, and the villages of this town are more post-productive than those of other towns.

### 4. Interpretation of Functional Mixture in Rural Areas of China

## 4.1. Measurement of the Functional Mixture in Rural Areas

The results of the post-productivism location quotient are shown in Figure 2. The post-productivism trend presents an unbalanced spatial development pattern, leading to three main conclusions.

First, towns with an  $LQ_{2j}$  value greater than one were highly concentrated around large cities, showing a circular layout. Among the 1198 towns in Guangdong Province, 324 had a post-productive location quotient greater than one, accounting for 27%. On the edge of the megacities of Guangzhou and Shenzhen, farmers can obtain more income from commercial and tourist activities than from traditional agricultural cultivation due to the higher land value, so it is easier to extend new functions to meet the needs of urban residents. There is a close functional complementarity between urban and rural areas in these places.

The second conclusion is that towns whose  $LQ_{2j}$  values are greater than one were mainly located radially along high-level traffic lines, such as national roads, provincial roads, and expressways. The improvement of transportation convenience plays a vital role in the transformation of rural development. First, it helps to attract urban consumers and shorten their travel time. Second, it is helpful to improve the competitiveness of rural products.

The third conclusion is that in the peripheral areas far from the big cities, towns with an  $LQ_{2j}$  value greater than one presented a point-like distribution and were close to the county seat. Far from the metropolitan areas, rural areas remain highly productive. Combining agricultural planting with specific geographical and ecological environments, farming has become an important activity for creating rural vitality.

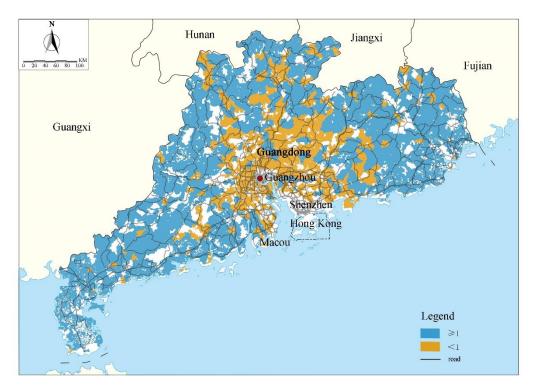


Figure 2. Post-productivism location quotient in Guangdong Province, China (by authors).

### 4.2. Modern Agriculture Demonstration District: A Spatial Product under Productivism

Under the influence of rapid urbanization, China has gradually formed a productive agricultural system over the past 30 years in order to avoid the erosion of agriculture by urban development and the threat to China's food security. To improve the grain self-sufficiency rate, the state has encouraged provinces to build modern agriculture demonstration districts since 2017. This is considered a meaningful way to realize agricultural modernization.

### 4.2.1. Rural Value

Since the founding of the People's Republic of China, production value has played an important role in rural Guangdong Province. By encouraging rural areas to expand the cultivated land area, Guangdong Province has ensured the country's industrial construction by giving full play to the value of rural production.

After the reform and opening, the state implemented the household contract responsibility system in rural areas in order to increase agricultural production output by improving the enthusiasm for family agricultural production. At this time, the market reform released the diversified value of rural land, which had been weakened in the early stage. Then, the commercialization of agricultural land realized the rapid growth of agricultural output value. Farmer incomes increased significantly from CNY 134 in 1978 to CNY 398 in 1985 (see Table 1).

At present, the large-scale and specialized productive mode of agriculture represented by the agriculture demonstration district has further strengthened the production value of agriculture. Establishing a provincial modern agriculture demonstration district emphasizes the vital position of agricultural production in the country, and attempts to improve market operation. Guangdong Province has further enhanced the value of agricultural output through large-scale and market-oriented agricultural production. Agricultural production value holds an important position for national food security. Thus, rural land is embedded in the development pattern of the country through agricultural production.

Year	1978	1980	1985	1990	1995	2000	2005	2010	2015	2020
Per capita disposable income of rural residents (CNY)	134	191	398	686	1578	2282	3370	6272	11,422	17,132
Grain output (ten thousand tons)	30,477	32,056	37,911	44,624	46,662	46,218	48,402	54,648	66,060	66,949

Table 1. Rural resident income and grain output since the reform and opening.

Data Source: China Statistical Yearbook.

### 4.2.2. Driving Actors

The government is a vital driving actor in promoting modern agriculture demonstration districts. The government has encouraged people to construct modern agriculture demonstration districts through policy support and financial subsidies. As early as 1993, Guangdong promulgated Regulations on the Management of Basic Farmland Reserves in Guangdong Province, making it one of the first provinces in China to implement regulations on farmland protection. By 2020, Guangdong had 2.6 million hectares of farmland, of which 1.89 million hectares of farmland will be designated as permanent basic farmland, such that the land functions will be locked down through institutional means. The government restrains the land-use function by delimiting the boundaries of basic farmland, thus meeting the basic demand for large-scale agricultural production.

By taking advantage of its developed market economy, Guangdong Province has introduced enterprise entities to transform traditional farmland into specialized production spaces in modern agriculture demonstration districts. The unit scale of a modern agriculture demonstration district is generally more than 50 acres, much larger than the unit scale of a family in the planned economy period. The larger scale can guarantee agricultural production and increase agricultural output. By 2005, Guangdong had built 22 demonstration zones for agricultural modernization. In 2018 and 2019, Guangdong Province allocated CNY 5 billion of financial funds to build 100 provincial modern agriculture demonstration districts in Guangdong's eastern and northwestern regions. According to Ministry of Agriculture and Rural Affairs statistics, 16 national-level and 235 provincial-level modern agriculture demonstration districts will be created in Guangdong Province by 2022. Most counties that focus on agricultural production have one or more provincial-level modern agriculture demonstration districts. This can be considered the spatial product of the interaction between the government and the market, and is one of the critical methods by which the country guarantees its food security.

## 4.2.3. Rural Land-Use Functions

The modern agriculture demonstration districts emphasize agriculture's high-density and high-intensity development; therefore, their land types are mainly agriculture-related, and their functions are relatively singular. Modern agriculture demonstration districts require the transformation of land into contiguous agricultural land. At the same time, attention is paid to investment into agricultural infrastructure, including vegetable greenhouses and sprinkler irrigation facilities. With the state's support, the modern agriculture demonstration districts are typical products of modern agricultural production regime, shaping the agricultural space into a single-function agricultural production space [41]. High-density industrialized large-scale agricultural production has been realized through agricultural districts in order to ensure food security.

### 4.3. Specialized Tesecun: Spatial Products under Post-Productivism

The country has reduced agricultural taxes and carried out many agricultural subsidies in order to increase the income of farmers. Agriculture demonstration districts have realized rural agriculture's large-scale operation and modern production. However, due to the crowding-out effect of social capital's profit-seeking behavior on small farmers, farmer incomes did not increase in the process of agricultural production. Learning from the experiences of Japan, South Korea, and other countries, China proposed the idea of constructing villages with specialized *Tesecun*, aiming to improve the income of villagers. The specialized *Tesecun* is a new rural development mode. First, it comprises a new aspect in the relationship between urban and rural areas. Second, it is a new understanding of rurality, which views the rural landscape as an important asset.

### 4.3.1. Rural Value

Specialized *Tesecun* not only have traditional production value, but also enhance the consumption value of the village. Agricultural production value is still an important function of specialized *Tesecun*, significantly differing from the post-productivism transition in European villages. The development of specialized *Tesecun* has not seen the de-agriculturalization process of rural areas experienced in developed Western countries. To the contrary, agriculture has become an important experiential object for urban consumption.

Relying on the unique pastoral landscape and local cuisine, the countryside provides homestays and other services for urban tourists. It satisfies the consumption demand of rural space with the rise of consumerism, which involves rediscovery of the value of rural areas. In particular, the versatility of the countryside has been fully recognized in the peri-metropolitan areas [42]. As such, rural agricultural development no longer pursues a single output target; instead, rural agriculture has become an important asset, which is regarded as an important resource to promote the sustainable development of urban and rural areas. Rural consumption has become an important aspect to promote the increase in farmer incomes and the realization of rural development. Through the rediscovery of the value of rural areas, these places meet the needs of urban residents in terms of rural space consumption.

## 4.3.2. Driving Actors

Local villagers are the main actors in the transformation of specialized *Tesecun*. The rapid development of urbanization has attracted a large number of people from villages to cities, resulting in the hollowing out of the countryside. Due to the lack of residents in rural areas, it has become difficult to convert abundant rural resources into competitive products. Therefore, local village sages with local knowledge and a strong social network are necessary to form a specialized *Tesecun*. These village sages can organize the local farmers to make full use of the village's resources and local knowledge, to create organic agricultural products, and to provide homestays and farmhouse stays. Through these methods, the value of the village can be increased, and the economic income of the villagers can be increased. Compared with relying on external investment, the construction of specialized *Tesecun* is a process in which villagers are the main actors. Thus, villagers return to the central position of rural development [41].

Specialized *Tesecun* have also been encouraged and supported by the government. In 2019, the State Council implemented the "Guiding Opinions on Promoting the Revitalization of Rural Industries", and encouraged villages to develop "one village, one product." With the support of the government, villages adjacent to cities have become important places to attract urban consumption, giving full play to the ecological advantages of the villages. In 2019, Guangdong released a list of 1323 specialized *Tesecun* (one village, one product), with an average of six specialized villages for every 100 villages. By giving a village the title of "one village, one product", the government re-embeds the village into the local geographical environment in order to highlight its regional characteristics within the context of global market competition.

### 4.3.3. Rural Land-Use Functions

Different from the large-scale operation of modern agriculture demonstration districts, specialized *Tesecun* are relatively small in scale. A specialized *Tesecun* takes the village as the basic unit, and the land-use functions are generally more mixed, including residential land, agricultural production land, and ecological land. The specialized *Tesecun* emphasizes

the consumption use of rural land [29], and the relationship between village needs and village resources can be reflected through changes in land-use functions [43].

Specialized *Tesecun* show the characteristics of post-productivism through two landuse types: the first involves the functional reconstruction of agricultural production space. In terms of agricultural production space reconstruction, specialized *Tesecun* often give full play to the advantages of the agricultural landscape, making fine use of traditionally cultivated land and developing agricultural activities such as experiential picking. Second is the functional reconstruction of construction land. Through the multi-functional use of residential land, functions such as accommodation and offices can be added.

### 5. Discussion

### 5.1. Future Rural Development Trends

Agriculture plays a vital part in the economic and social structure in rural Europe, but its role has significantly weakened over the past few decades [44]. However, we insist that further mixing of functions in rural areas will be the future trend of rural development. The theory of productivism and post-productivism can explain part of the new characteristics of rural China [22,31]; however, due to the exceptional nature of China, we question the idea that the transformation from productivism to post-productivism will occur in the form of a linear transition, different from the West [1,27]. In China, post-productivism has not replaced productivism as the mainstream development direction of the countryside; in contrast, the two spatially coexist. With the decrease in global consumption, villages have attracted the attention of more consumers through relying on rural landscapes and organic products. The consideration of rural development must attend to the ways in which new rural land-uses interact with pre-existing socio-economic structures [45]. This has brought about the transformation towards post-production in some rural areas, especially those on the fringes of big cities. This provides an important development opportunity for the villages; however, the value of the village is comprehensive, including the value judgments by the government, the market, and villagers. An overly one-sided emphasis on the single value of the countryside can be misleading for land-use policy. More attention should be paid to caring for the future livelihoods of farmers in the process of rural transformation [46], but overemphasis of the consumer value of the countryside may lead to its de-agriculturalization, which poses a huge challenge to national food security. Discussions on the evolution of rural China need to be placed under the background of deglobalization. Ensuring national food security has become an important issue, and grain production has an important function in rural China. The state has reinforced the agricultural production function of rural areas through policies and financial support, bringing about a productive agricultural production system.

China has conducted the third national land survey, which strictly requires control of the cultivated land area. At the same time, current policies encourage the integrated development of primary, secondary, and tertiary industries in rural areas. These two parallel lines also allow localities to explore more active land-use methods.

For example, large-scale planting is a basic function in modern agriculture demonstration districts. In addition, to further improve the efficiency and enrich the land-use functions, modern agriculture demonstration districts may provide activities such as rural tourism and leisure, urban picking experiences, and so on. If a specialized *Tesecun* has sufficient organizational capacity, they may successfully integrate the resources of surrounding villages. In this way, the continuous utilization of land can be promoted by means of land circulation, thus increasing grain production and ensuring food security.

In this paper, we argue that the future development trend of rural China should be viewed beyond a binary perspective, as it is neither purely productive nor post-productive. Under the dual effects of deglobalization and sinking consumption, in order to meet rural agricultural production needs and ensure national food security, the future of rural China is expected to be a more mixed and diversified land-use pattern.

# 5.2. Differences between Chinese and Western Rural Development Paradigms

There are significant differences between China and the West, in terms of rural value judgments and driving actors of the countryside, which also bring about differences in rural land-use functions. Rural value has undergone a shift from focusing on agricultural production to urban consumer needs in Western countries [20]. The countryside, instead of the city, has become an important unit of living and employment. After World War II, the function of rural food production in European countries was primary. However, with the signing of a series of food free-trade agreements between countries, the function of the countryside in securing food production gradually weakened.

In the context of globalization, the countryside and the city are closely linked, with convenient commuting and frequent leisure activities. The pursuit of rural amenities has driven the transformation of rural areas from providing production functions to consumption functions. The desire for rural idylls has driven a new class of residents to the countryside [25]. Therefore, new profit-driven land-uses beyond agriculture are being created in rural areas [47].

China has undergone a dramatic transition regarding urbanization and economic growth since 1978 [17]. The stage of urbanization in China is different from that in the West; that is, the anti-urbanization phenomenon of the West has not yet occurred in China. Over forty years of rapid urbanization, agricultural production in rural China has become an important foundation for guaranteeing national food security. The value of agricultural production has always been an indispensable aspect of China's rural areas. Therefore, China has not experienced the process of de-agriculturalization that has occurred in developed Western countries.

Western academics have emphasized the roles that the market and immigration play both in the rural transformation and new rural diversity [48]. In an era of counter-urbanization, rural areas have become popular as leisure destinations in developed countries. Cloke and Goodwin have categorized this phenomenon as "service-class in-migration" [23]. The countryside has become an important second home and workplace for residents fleeing the city [28]. The embedding of gentrification groups and foreign immigrants has brought about the re-increase in rural population, narrowing the gap between the countryside and the city.

However, the role of the government and villagers in rural development has received more attention in China. Through the implementation of the rural revitalization strategy, central and local governments coordinate with each other to increase the income of farmers, improve their lives, and reduce the gap between urban and rural areas in China [49]. At the same time, the government continues to strengthen agricultural production by supporting modern agriculture demonstration districts and reducing agricultural taxes. The rise of agrarian capitalism with Chinese characteristics has brought about agricultural modernization and agribusiness [50]. China encourages qualified villages to embed themselves in urban development through post-productive transformations. In particular, those villages located near metropolitan areas can enrich their values by providing high-quality agricultural products and comfortable experience environments. The combination of urban demand and rural supply in a tighter spatial context emphasizes the spatial and temporal interaction of land-use, strengthening rural functional hybridity [23].

## 6. Conclusions

Post-productivism has become a new paradigm for understanding rural transformative development. The countryside has replaced the city as a desirable place for the middle class to live and work. Existing studies have attempted to explore the transformation process of rural China from either a single productive perspective or a post-productive perspective. However, the two paradigms in dichotomy cannot explain the Chinese countryside. Is the Chinese countryside evolving toward productivism or post-productivism? Using a perspective that transcends dichotomies, this study argues that productivism and post-productivism are not dichotomous states, and that the coexistence of the two in space and time drives changes in rural land-use functions.

In this paper, we proposed an analytical framework consisting of rural value, driving actors, and rural land-use functions in order to discuss the formation of the hybridity of Chinese rural functions. Taking Guangdong Province as an example, by means of the location quotient analysis method, 7345 POI datapoints representing the types of production and consumption activities were used to measure the functional mixture in rural areas. It was found that Guangdong Province presents a clear trend of post-productive transformation in rural areas close to large cities. However, in the more rural areas, traditional agricultural production is still the dominant function. We discussed the formation mechanism of functional hybridity through the two typical spaces of the modern agriculture demonstration districts and *Tesecun*. Under the country's dual goals of ensuring food security and increasing the income of farmers, the interactions between the government, the market, and villagers have brought about a pattern of coexistence of productivism and post-productivism. This significantly differs from the post-productive transformation of rural areas in developed Western countries. In the West, under the background of counterurbanization, the migration of new classes into the countryside has led to reconstruction of the countryside; however, there is no such new gentrification class in rural China. The development of Chinese villages mainly depends on the role of the state and local villagers.

The productivism–post-productivism perspective is helpful for understanding rural development and is instructive for rural revitalization in developing countries. The productive function of the countryside is an important guarantee for the realization of national food security, which is also a traditional rural value. The post-productive transformation of the countryside does not necessarily entail the dissolution of productive functions, but instead involves the reappearance of multi-functional value. In the context of anti-globalization, in order to ensure its food security, China has strengthened the production value of agriculture by implementing basic farmland legislation and building modern agriculture demonstration districts.

On the other hand, in order to increase the income of farmers, the state has encouraged people to construct *Tesecun* in order to improve the comprehensive utilization of land. By optimizing the land-use function of the village, local villagers can provide more products that meet the city's consumption needs and satisfy the city's imagination of beautiful rural life. When learning from Western theories, it is necessary to consider the national conditions and urbanization level of the country in order to propose more suitable policy goals according to the local conditions.

After re-examining the functional hybridity of China's rural areas, we argue that it is of positive significance to interpret China's rural transformation with the help of foreign theoretical perspectives. However, productivism and post-productivism should not be seen as opposing developmental paradigms. This study can be seen as a contribution to supplement the research issues associated with rural China through the dualistic perspective of productivism and post-productivism, which has been overlooked in existing studies. The discussion of the relationship between productivism and post-productivism helps to enrich the theoretical literature on rural research issues and contributes to communication between China and the West within the same theoretical context.

By analyzing the functional mixture of rural areas, we propose that the coexistence of productivism and post-productivism will remain a long-term state. Therefore, how to realize the sustainable development of rural functions has become an important issue. In this line, it is necessary to research rural development strategies and paths. Due to the length of the article, we did not discuss this aspect in detail. In future research, we will choose typical cases to conduct in-depth analyses, as well as explore how to balance the dual goals of ensuring national food security and increasing the income of farmers in rural areas.

**Author Contributions:** Conceptualization, Y.H. and X.L.; methodology, Y.H.; software, L.C.; validation, L.C. and X.L.; investigation, Y.H.; resources, X.L. writing—original draft preparation, Y.H. and X.L.; writing—review and editing, Y.H.; visualization, L.C.; supervision, X.L.; project administration, X.L.; funding acquisition, X.L. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by the National Social Science Foundation of China (Grant No. 21AZD034), the Fundamental Research Funds for the Central Universities, Sun Yat-sen University (Grant No. 22qntd2001).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are available on request from the author.

**Conflicts of Interest:** The authors declare no conflict of interest.

#### Note

<sup>1</sup> Villages with particular character or function, similar to "One Village, One Product."

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