The Evolutionary Process and Mechanism of Cultural Landscapes: An Integrated Perspective of Landscape Ecology and Evolutionary Economic Geography

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Abstract: Cultural landscapes are joint masterpieces of man and nature with outstanding universal value. Adequate knowledge of their evolutionary process and mechanism is crucial to their development, protection, and management. However, theoretical understanding about such has been limited as existing studies tend to focus on the descriptive and interpretative analysis of the evolutionary process and pay less attention to the underlying mechanism of the process. Integrating the traditional perspective of landscape ecology in cultural landscape research and theories of path dependence and path creation in evolutionary economic geography, this paper constructs a triple-layered integrated analytical framework of cultural landscape evolution and applies the framework to empirically examine the cultural landscape evolution of Mount Lushan. To grasp an accurate and full picture of the process, field observation and historical data collection were carried out, and a combination of thematic analysis and chronological organization was conducted. The research finds that the cultural landscape evolution of Mount Lushan has experienced three stages, i.e., coexistence and mutual influence of multiple cultures, conflict and integration of Chinese and Western cultures, as well as landscape transformation, revival, and expansion. Such evolution is a non-linear, dynamic, and complex process across which the elements, functions, and patterns of landscapes were constantly constructed and reconstructed. Fundamentally, it is the result of the synergistic effect of path dependence and path creation, and is driven by the interplay of the behavior of associated actors and the change of contextuality. The findings of this study can provide some strategic references for the management practice of cultural landscape heritage sites.

Keywords: cultural landscapes; landscape ecology; evolutionary economic geography; spatiotemporal evolution; Mount Lushan

1. Introduction

As a joint masterpiece of man and nature with outstanding universal value, cultural landscapes mingle stunning natural landscapes and unique cultural connotations [1]. In 1992, the 16th General Assembly of the World Heritage Committee formally introduced “cultural landscape heritage” and included it as a subcategory of cultural heritage. This initiative has further stimulated scholars in fields including geography, history, anthropology, and sociology to pay increasing attention to the nomination, development, conservation, and management of cultural landscapes. The utilization of cultural landscape heritage resources, such as the development of heritage tourism, is a necessary means to make their outstanding and unique value known to the public and to protect them sustainably. However, in many heritage sites, development actions failed to adequately acknowledge the uniqueness of cultural landscapes such that irreversible damage to the associated cultural landscapes [2], and issues of fragmentation, isolation, artificialization, and over-commercialization was induced [3–5].
An adequate ontological understanding of cultural landscapes is a prerequisite for their effective conservation and sustainable development [6]. Cultural landscapes do not emerge from a vacuum, but are evolved through a dynamic, complex, and multifaceted historical process [7]. The systematic analysis of the historical evolution of cultural landscapes, the changes in the forms, elements, structures, and values of the landscapes through the evolutionary process, as well as the driving mechanism and influencing factors of the evolution, can provide strategic reference for the development, conservation, and management of respective cultural landscapes in terms of identifying heritage values and functions, establishing heritage development directions and methods, and formulating adaptive management tools [8]. However, the existing studies and management practices of cultural landscapes are mostly based on the status quo of particular heritage sites, imperfectly mapping the dynamic nature of the cultural landscapes and offering insufficient knowledge about their value identification, conservation, and management [9].

Landscape ecology, especially the landscape ecosystem theory, is the mainstream and traditional perspective of cultural landscape research [10–13]. From a holistic and integrated standpoint, it regards human activities and their surrounding natural environment as a whole, while emphasizing the subjectivity of humans [14,15]. It goes beyond the dualistic view of nature and humanity and offers a panoramic, multi-dimensional, and multi-scale perspective toward the evolution of cultural landscapes. The key notions of landscape ecology, such as pattern, function, elements, and process, provide a comprehensive analytical framework for explaining the spatial and temporal evolution of cultural landscapes. Regarding the driving mechanisms of cultural landscape evolution, landscape ecology highlights the joint impacts of economic, social, political, and technological factors [14,15]. Overall, it considers the influence of the exogenous contextual factors on landscape evolution, but pays little attention to the impacts of the intrinsic factors, such as heritage site resources and historical evolutionary paths, as well as the associated agents, such as governments, tourists, and heritage site residents, and their actions. As a result, more theoretical attempts have been investigated by cultural landscape researchers in order to reveal the underlying mechanism of cultural landscape evolution [16,17].

Path dependence and path creation, as the two major theories of economic geography to examine the spatio-temporal evolution of economic landscapes, may provide further inspirations in that regard. Path dependence theory considers economic landscapes as an open, non-unitary equilibrium system. It emphasizes the important role of time and history in analyzing the evolution of economic landscapes, taking it as a process governed by the past development paths of landscapes [18–20]. Path creation theory, on the other hand, focuses on the creativity and novelty in the evolution of economic landscapes and emphasizes the important role of the dynamic actions of relative agents through the evolutionary process [21]. Their emphasis on the historicity and subjectivity of the evolution of economic landscapes and their attention to the synergistic interaction of endogenous and exogenous factors through the spatio-temporal process provide a comprehensive analytical framework for understanding the deep underlying mechanisms of cultural landscape evolution [22–25]. In view of the above background, based on the notions of pattern, function, elements, and process in landscape ecology, and drawing inspirations from path dependence theory and path creation theory, this paper constructs an analytical framework for the evolution process and mechanism of cultural landscapes. It further takes the world cultural landscape heritage of Mount Lushan in China as an example to conduct an in-depth analysis on the process and mechanism of the spatio-temporal evolution of its elements, pattern, and function. The purpose of such is to enrich the theoretical understanding of cultural landscape evolution and to provide strategic reference for the conservation, development, and management of cultural landscapes.

2. Literature Review and Conceptual Framework

The concept of “cultural landscape” emerged with the rise of human geography. In the second half of the 19th century, German scholar F. Ratzel first proposed the concept of “cul-
ultural landscape”, and O. Schluter (1906) further proposed the “cultural landscape theory”, which clarified the important relevance of landscape to human society [26]. Thereafter, American scholar Carl. O. Sauer (1927) [26] founded the landscape school, and German scholar C. Troll (1939) founded landscape ecology, indicating an increasing academic focus on the landscape patterns and processes under human actions. The increasing academic research has promoted the currency and acceptance of the concept of cultural landscape, marked by that world cultural landscape heritage became a subcategory of world heritage in December 1992. Since then, a growing number of studies have been conducted surrounding different types of cultural landscapes, such as industrial landscapes [27], agricultural landscapes [28,29], landscapes of traditional villages [16], historic towns [30], and linear landscapes [11], and on diverse topics such as value identification, conservation of the authenticity and integrity [31], sustainable development (of heritage tourism) [32], adaptive management [33], the impacts of world heritage inscription on heritage conservation and management [34], and so forth. Overall, the existing research of cultural landscapes predominantly focus on the question of “what cultural landscapes should be?”, while there is less concern about “why cultural landscapes have evolved into what they are” [6].

Landscape ecology, especially the landscape ecosystem theory, is the mainstream and traditional perspective of cultural landscape research. As a comprehensive interdisciplinary subject, landscape ecology concerns the interplay between a landscape’s biophysical and socio-economic components across spatial and temporal scales, emphasizing the heterogeneity of patterns throughout the process [35]. The major research object of landscape ecology is the landscape ecosystems, i.e., inherently complex systems of landscapes and the ecological processes they support. Generally, landscape ecosystem studies insist a holistic analysis of the pattern, function and dynamics of landscapes and the agency of humans [13–15]. As complex human–earth systems, cultural landscapes are landscape ecosystems with specific patterns, functions, and dynamics at scales of interest, the evolution of which is influenced by the interaction between nature and humans [36]. In recent years, many scholars have introduced the notions of pattern, function, process, mechanism, and scale from landscape ecosystem theory into cultural landscape studies, analyzing the elements, functions, and characteristics of cultural landscapes, and exploring the evolutionary processes, patterns, and mechanisms of the spatio-temporal evolution of cultural landscapes [37,38]. Pattern means the spatio-temporal arrangement of landscape elements of different sizes and shapes. Function represents the interaction between landscape structures and ecological processes, or the interaction between landscape structural units. Process refers to the evolution of landscape structure and function over time. Mechanism explains the way different factors, such as the economic, political, social, cultural, and technological ones, drive the evolution of landscape elements, structure, and function. Scale refers to the size of the area of the studied ecosystem (spatial scale) or the time interval of its dynamic changes (temporal scale). Many scholars have pointed out that a solid understanding of the evolutionary process and mechanism of cultural landscapes requires an in-depth examination of the interaction of human and ecological components across the landscape evolution process [39,40].

In that regard, landscape ecosystem theory offers a comprehensive, multidimensional, and multi-scale analytical framework which integrates human and natural elements such as economic, social, geographic, and ecological factors into the analysis of the complex evolution processes of cultural landscapes. However, the driving factors of cultural landscape evolution do not act independently; rather, they interact with one another, jointly influencing the evolution of cultural landscapes [41]. The existing studies on the evolution of cultural landscapes focus on the process and pattern of the spatio-temporal evolution, noticing that the functions of the landscapes coevolve through the process [42], and that the process is driven by different influencing factors [43,44]. Nevertheless, the deep mechanism of how different factors individually and jointly drive the evolution of cultural landscapes, and how the functions and the patterns of the landscape ecosystems coevolve through the process, is less addressed. In this aspect, the studies of the cultural landscape evolution are
probably still in need of complementary theories in addition to the landscape ecosystem theory to develop a more systematic theoretical framework.

Regarding that, path dependence theory, which is commonly used to examine causal processes, and path creation theory, which emphasizes the role of human actors, may provide supplementary inspirations on the evolutionary process and mechanism of cultural landscapes in addition to the landscape ecosystem theory. Path dependence and path creation are two different perspectives in evolutionary economic geography for analyzing the evolution of regional economic landscapes. In the 1980s, path dependence theory was first introduced into the field of economics from biological research by American economic historian Paul A. David (1985) [45], and gradually became an important theoretical tool for studying the laws of economic and social evolution [20]. Path dependence theory emphasizes the importance of time and history, focusing on the dependence of system development on its own historical path and the resources, institutions, knowledge, technology, etc., inherited from the path [19]. The common result of path dependence is lock-in, i.e., once a system enters a certain development path (whether a good or bad one), it will continuously reinforce and gradually lock-in to that particular path under the effect of inertia until an “external shock” occurs to unlock it [46]. However, the path dependence theory does not involve the discussion of whether and how the locked path can be transformed, nor does it explain whether and how a new alternative path can be generated while the economic landscape is locked to a development path [47]. In this aspect, path creation theory provides an effective supplementary angle. The path creation theory originated from economist Schumpeter’s theoretical research on creative destruction, that is, the entrepreneur’s willpower plays a decisive role in the creation of new development paths. Garud and Karne (2001) explicitly introduced the notion of “path creation”, highlighting economic actors’ behavior of “conscious deviation” from the existing path [48]. Generally, path creation theory focuses on the dynamic role of the actors and their actions, which are embedded in economic, social, and cultural contexts across scales, in the reconstruction of economic landscapes [49]. It rejects the historical deterministic view of landscape evolution and regards path locking as a controllable and temporary conditional equilibrium state [50]. With the joint impacts of actors’ conscious deviation behavior and the shock brought by the change of external economic, social, and cultural contexts, economic landscapes may break out the state of lock-in to make their development paths deviate from the existing ones and open new rounds of evolution [51]. Nevertheless, new paths are not created out of a vacuum [48]. There must be a certain basis on which path creation may be developed. Path dependence and path creation are relations of the unity of opposites in the evolution of economic landscapes. Thus, the two theories are complementary to one another in explaining the evolutionary process and mechanism of cultural landscapes.

Cultural landscapes are inherently complex landscape ecosystems with heterogeneous historical legacies [52]. The evolution of cultural landscapes is not only a cultural phenomenon, but also a socio-economic process. It is embedded in multi-scale economics, social and cultural contexts, and driven by the behaviors and interactions of actors from the local, regional, national, and even international spheres [53]. For the evolution of cultural landscapes, it is not sufficient to examine only their geographical rootedness and temporal historicity, and neither the dynamic behaviors of associated actors [54,55]. In these regards, path dependence theory and path creation theory are complementary to each other in explaining the evolutionary process of cultural landscape heritage and its inner driving mechanisms. The “historicity” of path dependence theory and the “subjectivity” of path creation theory jointly offer an integrated approach to systematically expound the interplay of endogenous and exogenous forces in the spatio-temporal evolution of cultural landscapes, uncovering the laws and mechanisms behind the evolution process [56]. In recent years, some scholars have noted the phenomenon of path dependence in cultural landscape evolution [57–59], while few scholars have explored the phenomenon of path creation in the field of cultural landscapes. Therefore, how path dependence theory and path creation theory could jointly provide a comprehensive
analytical framework for the analysis of the evolution of cultural landscapes remains in need of thorough academic examination.

Under the above theoretical background, this paper constructs a triple-level analytical framework of cultural landscape evolution on the basis of landscape ecosystem theory and with reference to theoretical propositions of path dependence theory and path creation theory (Figure 1). Following the research philosophy of critical realism, the framework highlights a stratified ontology of cultural landscape evolution that expounds the evolution from three layers, i.e., the layer of landscape, the layer of mechanism, and the layer of dynamics. First, the layer of landscape refers to the surface evolution of landscape patterns, elements, and functions that happened but were not necessarily experienced or observed by humans. Second, the layer of mechanism explores the generative mechanisms that produce the empirical changes at the landscape layer. In this paper, the generative mechanisms include the path-dependent mechanism and the path-creating mechanisms which influence and co-evolve with each other and have different effects on the landscape evolution. Third, the layer of dynamics examines the driving forces of the behaviors of actors and the changes of contextuality that enable the path-dependent mechanism and the path-creating mechanisms to take effects such that the surface evolution of cultural landscapes happens. On the one hand, the active behavior of actors is the primary driving force for the continuous evolution of cultural landscapes. The impacts of actors’ behavior on the evolution of cultural landscapes may be positive or negative. The behavior that aligns with the historical development path will strengthen such a path, while the behavior that deviates from the existing evolutionary path makes the transformation of the path possible. On the other hand, the evolution of cultural landscapes and the behavior of associated actors are embedded in particular economic, social, and cultural contexts at local, regional, national, and even international scales. The change of contextuality across scales produces a supportive or restrictive environment for the evolution of cultural landscapes and the behavior of associated actors, which drives the cultural landscapes to evolve according to the existing path or in a new direction.

![Figure 1. The Analytical Framework of Cultural Landscape Evolution from an Integrated Perspective of Landscape Ecology and Evolutionary Economic Geography (Source: The Authors).](image)

3. Methods

3.1. Case Selection

This study takes Mount Lushan of China as an example. Mount Lushan is located in Jiujiang City, Jiangxi Province, China. It is the first World Cultural Landscape Heritage
of China, listed by the United Nations Educational, Scientific and Cultural Organization in 1996. Bounded to the south by Poyang Lake and to the north by the Yangtze River, Mount Lushan displays an integrated panorama of hills, lakes, and rivers (Figure 2). It is a well-known beautiful scenic area with sheer precipices and peaks, changeable fogs and clouds, flying waterfalls and silver springs, as well as secluded forests and deep valleys (Figure 3). The beauty of this scene has been attracting religious, artistic, and intellectual figures for over two millennia. Mount Lushan is home to over two hundred antique buildings, the majority of which are prayer hall complexes that have been renovated and expanded throughout the centuries to serve as a dynamic hub for learning and worship. Among these are the complex of Buddhist East Grove Temple and West Grove Pagoda built in late 4th century, the Taoist Temple of Simplicity and Tranquility constructed in AD 461, and the Confucius Academy of White Deer Cave founded in AD 940. Up to the 19th century, a great number of libraries, temples, and study halls were added to this extensive complex, which continued to be destructed, restored, reopened, and extended many times. The stone single-span Guan Ying Bridge of AD 1015 and over 900 inscriptions on stone tablets and cliffs further make this area significant. In addition, around 600 villas were constructed in the area by Chinese visitors and international migrants between 1896 and 1935 during which Mount Lushan was developed into a famous resort and served as the Summer Capital of the Republic of China for a period. The villas, built in a variety of architectural styles, were set out in the landscape using then-conventional Western planning ideas.

Overall, through a long history of evolution, Mount Lushan has become a leading example of Chinese landscape culture, a unique model of Chinese academy-based education, and an outstanding representative of the successful fusion of Chinese and Western cultural traditions. Mount Lushan’s natural beauty and historic architecture and features complement each other beautifully, resulting in a cultural landscape that is truly one-of-a-kind, and whose exceptional aesthetic worth is strongly identified with the spiritual and
cultural life of China. Throughout its evolutionary history, Mount Lushan experienced the transformation of path several times, making it a good example for examining the evolutionary process and mechanism of cultural landscapes.

![Main Natural Sceneries of Mount Lushan](http://www.china-tour.cn/jiujiang/lushan-mountain-map.htm)

**Figure 3.** Main Natural Sceneries of Mount Lushan (Source: http://www.china-tour.cn/jiujiang/lushan-mountain-map.htm (accessed on 24 October 2022)).

### 3.2. Data Collection and Analysis

Researchers of this study are all highly familiar with Mount Lushan with the first author having conducted research surrounding the regional history of Mount Lushan for nearly 15 years, the second author being a local of Jiujiang city where Mount Lushan locates, and other authors having visited Mount Lushan a number of times. Moreover, in order to grasp the evolution history of Mount Lushan accurately and fully, this study employed the mixed method of field observation and historical data collection. First, researchers conducted three field trips to Mount Lushan between 2020 and 2022, with a total stay of seven days. During the field trips, researchers visited, observed, and photographed key sceneries of Mount Lushan, and drew basic information such as the locations, structures, construction years, and associated historical figures and events of the sceneries from the interpretation system of Mount Lushan. Second, researchers collected rich historical data regarding the evolution history of the cultural landscape of Mount Lushan from different secondary sources, for example, the Chronicle of Mount Lushan, the contemporary journal articles and monographs that focus on the history of Mount Lushan, and the literature relevant to Mount Lushan that were produced in different historical periods. Through field observation and collection of historical data, a repository of notes, transcripts, photos, and videos with respect to the functions, tangible and intangible elements, spatial and temporal patterns, as well as associated figures and events of the cultural landscape of Mount Lushan and its evolution was built.

Afterwards, the combination of thematic analysis and chronological organization was adopted to analyze the data generated from field observation and historical sources. A thematic analysis was carried out in order to discover, investigate, and report on recurring themes and patterns found within the data. At the horizontal level, thematic analysis makes it possible to describe and organize the data collected [60]. Chronological organization means that the earliest occurrences are listed first, while the most recent events are included last. It is the process of organizing and rearranging previously gathered information into a
coherent, meaningful, and clear-eyed storyline [61]. Specifically, in this study, five steps of data analysis were performed. First, all of the materials that had been gathered were carefully examined, and each individual piece of data was initially coded and assigned a theme and a time mark. Second, the connections between the themes that were produced in the previous step were examined and then grouped into sub-categories and categories. Third, additional research was carried out to determine how the themes, sub-categories, and categories were related to one another. This was achieved through a mix of deductive and inductive reasoning, and the results were compiled into a narrative that discussed the elements and dimensions of the evolution of the cultural landscapes of Mount Lushan. Fourth, the codes, themes, categories, and sub-categories were reorganized chronologically; periodization analysis of the evolutionary process of the cultural landscapes of Mount Lushan was performed. Fifth, by incorporating the narrative that was generated in the third step, an integrated historical storyline regarding the evolution of the cultural landscapes of Mount Lushan was produced. To ensure the rigorousness of the data analysis process and the trustworthiness of the research findings, the triangulation of investigators as suggested by Denzin and Lincoln (2011) [62] was employed, with two different researchers performing data analysis individually and then comparing with each other their report of findings.

4. The Cultural Landscape Evolution of Mount Lushan

As with common cases, the cultural landscape of Mount Lushan is a combined work of men and nature. Its evolution is based on and shaped by its unique multi-genetic complex natural landmarks. Mount Lushan features typical quaternary glaciations, horst fault-blocking, metamorphic core complex structures, and water erosion landforms (Figure 4). First, during the Jurassic to Early Tertiary Period, when strong tectonic movements were observed, Lushan had formed a fault block landscape after the late Himalayan movement 20 million years ago. In response to the movement of the Pacific plate, Mount Lushan was uplifted in the Miocene due to crustal compression deformation. Consequently, cliffs (e.g., the Longshou Cliff), peaks (e.g., Wulaofeng Peak), and canyons (e.g., the Jinxiu Valley) were formed along the fault weak lines. Lakes (e.g., the Ruqin Lake and the Lulin lake), rivers, slopes and rock formations were created by elevation and subsidence in the strenuous fault-block movement. Second, the glacial motions during the Quaternary Period enriched the natural landscape of Mount Lushan with rich glacial remnants such as U-shaped valleys, ice tables, glacier horns, and ridges that record the process of glacial evolution and palaeoclimatic change. Third, with a large amount of rainfall, different kinds of hydraulic actions including abrasion and chemical weathering caused large amounts of erosion, forming the landforms of waterfalls (e.g., Sandie Waterfall) and natural caves (e.g., Fairy Cave). The many grotesque rocks, towering peaks and cascading waterfalls constitute a spectacular natural landscape, which provide a good environmental base for and shape the process of the cultural landscape of Mount Lushan.

Figure 4. Examples of natural landforms in Mount Lushan; an example of glacial remnants (Lushan Flyover) in the left, an example of tectonic landforms (Longshou Cliff) in the middle, and an example of water erosion landforms (Sandie Waterfall) in the right (Source: https://travel.qunar.com/p-cs298166-lushanshi-jingdian (accessed on 24 October 2022)).
Jointly shaped by the actions of humans who came to live in the region and the pre-formed unique natural landscape, Mount Lushan gradually experienced a dynamic complex process of cultural landscape evolution, which can be divided into three stages (Figure 5).

Figure 5. The Evolutionary Process of the Cultural Landscape of Mount Lushan (Source: The Authors).

4.1. From the Pre-Qin and Han Dynasties to the Ming and Qing Dynasties (Pre–1895): The Coexistence of Diverse Cultures and Their Mutual Impact

4.1.1. A Landscape Centered upon a Hermitic Culture

The arrival of human activities are the key factor that drove the preliminary changes of the original landscape spaces at Mount Lushan. From the perspective of landscape function, Mount Lushan gradually evolved from a natural landscape to a cultural one. Its natural material base and rich cultural heritage laid the possibility and the conditions for the development of a hermitic culture at Mount Lushan.

As a fault-block mountain, namely, one that stands by itself and does not form part of a mountain range, Mount Lushan is located in the Middle-Lower Yangtze Plain, next to Poyang Lake. Apart from its excellent geographic location, Mount Lushan has significant vertical differentiation in terms of its geology, landforms, hydrology, and climate, endowing it with outstanding natural landscape. In the early days, the majestic and lofty Mount Lushan received deep reverence and sincere worship from nearby people who were in short of scientific knowledge and production capacity. They produced many myths and legends that were associated with Mount Lushan and paved the way for the development of a hermitic culture at Mount Lushan.

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Under the influences of that hermitic culture, Mount Lushan, with its advantage in terms of being away from cities but with good accessibility as well as having vast lands, high mountains, and dense forest, unsurprisingly became an ideal place where the literati could find refuge and indulge themselves in nature. As a result, a large number of learned men visited Mount Lushan and lived there in seclusion, thus adding a humanistic touch to the landscape evolution of Mount Lushan. Among them, Tao Yuanming, in particular, has had the greatest influence on later generations. At the beginning of the Yi Xi Era during the Jin dynasty (405 AD), Tao Yuanming started his life in seclusion in his hometown near Mount Yujing towards the southern foothills of Mount Lushan, due to his “reluctance to bow to nasty persons in the village merely for the sake of earning five buckets of rice”. Focusing on the landscape of Mount Lushan, Tao Yuanming produced lots of poems which have been recognized as the first of its kind in Chinese landscape poems. Those poems, to a great extent, eulogized and promoted Mount Lushan. In the later era, numerous poets and intellectuals such as Li Bai, Zhou Dunyi, Zhu Xi, and many others chose to spend time in seclusion at Mount Lushan. Inspired by the mountain’s beautiful natural sceneries, they produced countless literary works, which promoted Mount Lushan to become the birthplace of Shanshui poetry and Shanshui painting. In that regard, Mount Lushan became increasingly famous among those who wished to seek a life of seclusion, with the hermitic culture being further enriched and developed in the region.

During this stage, the contextuality of social upheaval and the behaviors of the literati hermits jointly provoked the birth and development of hermitic culture at Mount Lushan. The emergence of this culture, in turn, also contributed, as a decisive factor, to the formation of Mount Lushan’s first cultural landscapes. Subsequently, the interplay of the literati’s behavior and the dynamic contexts at the period redefined the mountain’s landscape function. The landscape spaces demonstrated a dynamic pattern that moved in general from the range extension towards the mountain mass, with the landscape elements largely distributed in clusters at the southeastern foothills of the mountain. Being a major part of the spiritual culture of Mount Lushan, the hermitic culture prompted the formation of the evolutionary path of the cultural landscape of Mount Lushan. Additionally, as the cradle and bedrock of the cultural landscape of Mount Lushan, the hermitic culture was a culture of rootedness, and laid a strong foundation for the subsequent cultural landscape evolution of the mountain.

4.1.2. A Landscape Centered upon a Religious Culture

The settlement and prosperity of Buddhism and Daoism caused the cultural landscape of Mount Lushan to evolve from one centered on hermitic culture to one focused on religious culture. Due to the effects of path dependence, the natural resources, the landscape features, and the cultural foundation developed at Mount Lushan during the previous stage, offered a solid material and spiritual basis for the formation and development of the evolutionary path of a landscape that centered upon a religious culture. During the Wei, Jin, and Southern-Northern dynasties, the social upheavals and the poverty and hardship people experienced, to a great extent, became a hotbed for the development of a religious culture. Indeed, the Buddhist and the Daoist cultures largely satisfied the spiritual needs of ordinary people, as the former promoted the idea that “those chanting the Buddha will go to the Western Pure Land of Ultimate Bliss”, while the latter emphasized the possibility of “becoming immortal through cultivation”. Moreover, during the Qin and Han dynasties, the emperors’ offerings of official sacrifices and rites to pay homage to mountains, rivers, heaven and earth, processes that were themselves characterized by strong religious and political overtones, also accelerated the popularization of a religious culture among ordinary people, turning religion into a dominant part of social life.

Notably, both Buddhism and Daoism tend to emphasize the importance of seeking a pure and unadulterated natural environment, for the purpose of cultivation. In this regard, with great height and steepness, vast lands and rich resources, Mount Lushan, the “cottage of the immortals”, offered an ideal environment where monks and Daoist priests, namely,
the key driving actors of Cultural Landscape Evolution in Mount Lushan at this stage, could preach, teach, and work on the translation and interpretation of scriptures. During the Eastern Jin dynasty, Huiyuan, a senior monk, arrived at Mount Lushan to build the Donglin Temple and to establish Pure Land Buddhism by combining and fusing foreign Buddhist thought with the dominant doctrines of Confucianism and Daoism. Through Huiyuan’s work, Mount Lushan became the center and icon of Southern China Buddhism. Then, in the Southern dynasty, Lu Jingxiu, a Daoist priest, arrived at Mount Lushan to practice cultivation. He also built the Jianji Temple. Then, he systemized the Daoist scriptures by summarizing and categorizing all the available scriptures he had found and built the largest depository of Daoist texts at that time, thus turning the Jianji Temple on Mount Lushan into a research center for studying Daoism. During the Tang and Song dynasties, Mount Lushan’s religious culture further consolidated, based on its previous path development. This period saw a significant increase in numbers of both Buddhist and Daoist temples. Additionally, the frequent communication between the literati and the Buddhist monks and Daoist priests elevated the status and fame of Mount Lushan as a religious center. Subsequently, Mount Lushan attracted the attention and even won the support of the ruling class. Prompted by the historical contextuality at the period and favored by those in power, Mount Lushan’s religious culture thus entered a stage of prosperity. Regarding the development of the Buddhist culture, this period saw the appearance of “three hundred guesthouses to accommodate the monks visiting Mount Lushan” and “three hundred and sixty temples in the Song dynasty”. Regarding Daoist culture, Guangfu Temple, Taiping Palace, Baihe Temple, and Qizhen Temple were successively built, contributing to “gorgeous palaces and Daoist temples with magnificent views”.

In summary, it was the support of political forces, the spiritual needs of the ordinary people, and the promotion work done by both the Buddhist and Daoist religionists that jointly drove the cultural landscape evolution of Mount Lushan to deviate from its original development path of that centered upon a hermitic culture and follow a new path that centered upon a religious culture. During this stage, with the appearance of new landscape elements such as Buddhist and Daoist temples, the cultural landscape of Mount Lushan acquired multiple functions, in contrast with its single function during the previous stage. Overall, the landscape elements tended to concentrate at the southern and the northern foothills of the mountain. As the material carrier of the religious landscape, the Buddhist and Daoist temples, along with their distribution and evolutionary process, were thus the spatial expression of the evolution of the religious cultural landscape at Mount Lushan. The dynamic evolution of the Buddhist temples should also be understood as a localized construct in the process of the localization and Sinicization of Buddhism in China. Consequently, Mount Lushan’s increasing fame as a religious center and the intermingling and flourishing of Confucianism, Buddhism and Daoism, each being a self-contained system, contributed to the prosperity of the cultural landscape of Mount Lushan.

4.1.3. A Landscape Centered upon the Culture of Neo-Confucianism

As time passes and circumstances change, during the process of its development and inheritance, the core of a given culture may give rise to new core values, which can, in turn, cause changes in the evolutionary pathways of a cultural landscape. Thus, with rich culture and beautiful natural environment, as well as prompted by the prevalence of the imperial examination system, the support of governmental policies, and the intellectuals’ efforts to seek official posts by first spending some time in seclusion, Mount Lushan gradually stepped into a path that centered upon the culture of neo-Confucianism.

The rise of the imperial examination system to a great extent facilitated the formation of Mount Lushan’s neo-Confucian culture. Since the Sui dynasty, imperial examination had become an important method for identifying talent in feudal China. During the Song dynasty, the state’s emphasis on culture and education further prompted the intellectuals to view the imperial examination as the key means for achieving personal goals. However, there were numerous intellectuals that failed the imperial examination again and again,
despite their talent and capabilities to run the country well and bring peace and security to its people. With the ruling class tending to favor those intellectuals living in seclusion and treat them with respect and esteem, many learned men thus chose to study while living a secluded life. By doing this, they could, on the one hand, indulge themselves in nature and ease their frustration, while on the other hand, they could also create an elegant image of themselves and, in this way, be better prepared for government recruitment. Consequently, seeking official posts by first spending time in seclusion had thus become a shortcut for many intellectuals to achieve their ambitions.

Against this backdrop, Mount Lushan, with its beautiful natural landscape, its well-developed hermitic culture, and its fame as a religious cultural center, subsequently attracted many intellectuals to study in seclusion, where they could seek knowledge and search for the right path. For example, Li Bo, a Tang Dynasty scholar, studied at Mount Lushan for a long period and was appointed as a government official afterwards. Li discovered and managed the White Deer Grotto, turning this location into a secluded study place. Later, the place gradually became a famous scenic spot among intellectuals. During Southern Tang dynasty, the imperial court established a national academy of Chinese studies at the White Deer Grotto. The academy was a prestigious institute of higher education at that time. The establishment of the academy then paved the way for the later foundation of the White Deer Grotto Academy. After the Song dynasty, the academy of classical learning gradually assumed the responsibility of training and fostering future officials. At the same time, to varying degrees, it also acquired the functions of government-owned schools. During the Northern Song dynasty, under the encouragement of Emperor Taizu of Song, the White Deer Grotto Academy was finally established, soon attracting thousands of students and becoming one of the four most renowned Chinese academies of classical learning, with the other three being the Yuelu Academy, the Songyang Academy, and the Shigu Academy. Zhou Dunyi also created the Lianxi Academy at Lotus Peak of Mount Lushan, where he completed his Diagram of the Supreme Ultimate Explained and Penetrating the Classic of Change, two works that laid the foundation of neo-Confucianism. In addition, he also taught two disciples, Cheng Hao and Cheng Yi, who later both became leading figures in neo-Confucianism. Following Zhou Dunyi and his Lianxi Academy, the spread of neo-Confucian philosophy was accelerated by the rise of school education at the academy of classical learning, which served as a solid base for neo-Confucianism thought to flourish at Mount Lushan. At the beginning of the Southern Song dynasty, Zhu Xi, the preeminent Neo-Confucian master, which is generally ranked as second only to Confucius, was appointed as the governor of Nankang, an upper administrative district of Lushan. Zhu revitalized the academy of classical learning and created new academic rules. Based on the proposals made by Cheng Hao and Cheng Yi, Zhu further contributed to the development of neo-Confucianism and turned it into a mature theoretical system. Thanks to his efforts, the reputation of the White Deer Grotto Academy soared; subsequently, it not only attracted the most famous scholars in Chinese history, such as Lu Jiuyuan, Wang Yangming, and Li Mengyang, to come to teach at the Academy, but also successfully trained tens of thousands of outstanding intellectuals.

During this stage, the interaction between the imperial examination system and the rise of school education at the academy of classical learning, as well as intellectuals’ wish to seek official posts by first living a secluded life, brought changes to Mount Lushan’s cultural landscape. At the same time, these changes introduced new landscape elements such as academies of classical learning, thatched huts, cottages, and pavilions. The distribution of the landscape spaces was also altered, exhibiting a dynamic pattern with the spaces moving from the foothills towards the summit of the mountain. Compared to the previous stage, at this stage of its cultural landscape evolution, Mount Lushan had developed a richer cultural landscape where the connections between the different cultures seemed to be tighter and stronger. In addition, the agglomeration of academies of classical learning, including the White Deer Grotto Academy, the Lianxi Academy, and others, eventually turned Mount Lushan into the cradle of Chinese neo-Confucian philosophy.
4.2. From the End of the Qing Dynasty to the Republic of China (1895–1949): The Conflicts and Integration between Chinese and Western Cultures

For a long time, Chinese traditional culture remained the core of Mount Lushan’s cultural landscape, changing little over time and giving rise to a “locked in” path. However, despite its inheritance of location advantages, great natural environment, and excellent sightseeing resources, at this stage, the heavy blow dealt by Western powers eventually forced Lushan’s cultural landscape to integrate Western cultural elements along its path of evolution.

Towards the end of the Qing dynasty, China suffered from political corruption, a backward defense system, and both internal and external crises. Western powers took advantage of this situation and attempted to exert influences over China. After the Second Opium War, the Qing government entered the Treaty of Tientsin with Western forces, according to which various cities along the Yangtze River, such as Jiu Jiang and Han Kou, were to open to foreign powers as treaty ports. As a result, the Yangtze River Basin was forced open by external powers, subsequently allowing many Westerners to enter port cities along the Yangtze River. The middle and lower reaches of the Yangtze River are located in a subtropical monsoon climate zone, and cities such as Wu Han and Nan Jing are well-known “furnaces”. In summertime, many Westerners living there thus suffered heavily from the hot weather and diseases caused by the weather. It was precisely against this backdrop that the search for a summer resort with beautiful surroundings and a rich culture became a real need for foreign residents.

Driven by all these factors, Mount Lushan, unsurprisingly, attracted the attention of certain foreign envoys, merchants, politicians, and in particular, foreign missionaries, given its location between two large port cities, Han Kou and Nanjing, beautiful scenery, cool climate, and easy access. Towards the end of 1895, the British missionary Li Deli (Edward Selby Little) first obtained permission to build a summer house at Guling Town, Mount Lushan. Following Li, foreign residents from eighteen Western countries, including the United Kingdom, the United States, France, Germany, and Russia, arrived at Mount Lushan successively. After the Northern Expedition, the Nationalist government made Mount Lushan a summer capital. Subsequently, politicians, government officials, warlords, and those from the wealthy class purchased land and built villas at Mount Lushan. Over time, an architectural landscape with buildings of different styles from all over the world and with varied functions including housing, education, and religion, for examples, villas, schools, churches, and hospitals, were built at Mount Lushan, turning the place into a summer resort whose fame not only spread throughout China, but also reached beyond its borders. Due to the invasion of Western cultures, Mount Lushan was no longer suitable for those seeking a life of seclusion, and the literati, monks, Daoist priests, and many others left. Following these people’s evacuation from the area, cultural landscape elements such as the academies of classical learning, religious sites, and thatched huts either gradually decayed or were completely destroyed.

The foreign invasion of China and Westerners’ attempts to purchase lands and build summer resorts subsequently prompted Mount Lushan’s cultural landscape to gradually turn to an evolutionary path that was dominated by Western cultures. During this period, Mount Lushan saw the appearance of many landscape elements that were typical of Western cultures, such as Catholic churches and foreigners’ villas, which tended to concentrate on the summit area of the mountain. With the conflicts, struggles, and integration between Chinese culture and Western culture, Mount Lushan had, eventually, evolved from a renowned center of ancient Chinese culture, where Confucianism, Buddhism, and Daoism coexisted and prospered, to a “capital of various nations” with a strong “Western touch”.

4.3. After the Establishment of the New China (1949–Present): Landscape Transformation, Revitalization, and Expansion

Whether being a coincidence or not, the cultural landscape evolution of Mount Lushan that took place at a previous stage would allow for or create opportunities for new evolution
possibilities at subsequent stages. In this regard, the evolutionary path of Mount Lushan as a “summer resort” that had taken shape previously obviously facilitated the transition of the mountain’s cultural landscape towards one that would highlight the mountain’s status as a “holiday resort”, due to the strong connections, in terms of facilities, resources, and technology, between Mount Lushan’s previous evolutionary path and its current one, i.e., a focus on tourism.

The integration between Chinese and Western cultures and the opening of Guling Town stimulated the development of Mount Lushan’s culture of leisure and recreation. Following the establishment of the New China, as the “summer capital” of the previous Nationalist government, as well as the site where three important conferences of the Central Committee of the Chinese Communist Party were held, Mount Lushan has been widely recognized, both domestically and internationally, as a political center and a great summer resort. In particular, following experts’ findings in 1956 that confirmed the status of Mount Lushan as the best natural sanatorium in an alpine climate in China, the proposal to turn Mount Lushan, which had already developed a healing function, into a large “nursing home” finally took shape. On the basis of this proposal, Mount Lushan soon went through careful planning and development stages, subsequently paving the way for the further evolution of the mountain’s cultural landscape. Since the reform and opening up, social stability and economic development have not only improved people’s living standard, but also changed people’s day-to-day lifestyle in China. People’s growing demands for traveling and visiting different places consequently triggered the development of mass tourism. Under such circumstances, the function of Mount Lushan as a site for healing and official retreats was thus undermined over time.

In 1982, Mount Lushan was among the first Key National Parks of China promoted by the State Council of the People’s Republic of China. Later, in 1996, it was also included in World Heritage List as a “cultural landscape”. In this way, Mount Lushan’s beautiful natural landscape and rich culture thus gained wide recognition. At the beginning of 1980, the screening of the Chinese movie “Romance on Mount Lushan” further increased the mountain’s fame. Against this backdrop, many tourists have visited Mount Lushan to sightsee and participate in excursions and other activities. The local government has set up a special department to facilitate the development and reinforce the management of Mount Lushan. Additionally, tourism businesses have also flocked to Mount Lushan, encouraged by its burgeoning tourism industry. With the influx of tourists and tourism businesses and support from the local government, Mount Lushan has gradually developed a tourism-based industrial structure, which has, in turn, modified the mountain’s previous landscape spaces. The new changes mainly include the appearance of tourism landscape elements such as tourist attractions, retreat facilities, restaurants, and accommodations to address tourists’ varying needs. In this way, Mount Lushan has gradually become a holiday resort where tourists’ demand for leisure and recreation can be met and satisfied.

During this stage, the development of tourism was the dominant factor that drove the evolution of Mount Lushan’s cultural landscape. The activities conducted by tourists, tourism businesses, and the local government also injected new vitality into the cultural landscape evolution of Mount Lushan. As a result, this stage has included the appearance of many landscape elements, such as walking trails and hotels, whose main purpose is to address the needs of tourists, and the distribution of such elements tends to demonstrate an overall spread-out pattern. Thus, in the context of the New Era, the co-evolution of the elements, functions, and patterns of Mount Lushan’s cultural landscape has accelerated the development of a modern tourism industry in the region and brought the cultural landscape evolution of Mount Lushan into a new stage.

5. Discussion

A systematic examination of the process, mechanism, and influencing factors of the spatiotemporal evolution of cultural landscapes is significant for enhancing the ontological understanding of cultural landscapes and further providing scientific references for the
effective conservation and sustainable development of cultural landscapes. Based on the traditional perspective of landscape ecology in cultural landscape research and synthesizing the mainstream perspectives of economic geography on regional landscape evolution, i.e., path dependence and path creation, this paper constructs a triple-layered integrated analytical framework of cultural landscape evolution. The framework is empirically applied to examine the evolutionary process of Mount Lushan at the layers of the landscape, mechanisms, and dynamics. The major findings of this study include:

First, as Arce-Nazario (2007) discussed in his analysis on the history of the reconstruction of Peruvian Amazon landscape [39] and Nickens (2022) implicated in his study of the evolution of cultural landscapes in North America [42], cultural landscapes are not fixed, static, and inert presentations, but non-linear, dynamic, and complex products of historical and cultural processes. Across the evolutionary process, the elements, functions, and patterns of cultural landscapes are constantly constructed and reconstructed, giving them rich, diversified, and profound historical and cultural values. The cultural landscape of Mount Lushan has gone through three stages of evolution: the coexistence of hermitic, religious, and Confucian culture, the fusion of Chinese and Western culture, and the transformation, revival, and development of landscape under the context of modern tourism development. In this process, Mount Lushan evolves from a simple natural landscape to a mountain that possesses rich cultural elements including temples, study halls, and villas, and further to a scenic area that was developed on the basis of its splendid natural and cultural landscape and equipped with excellent modern tourism facilities. Across the process, the key areas of its landscape changed from the southern foothills to the southern and northern foothills to the mountain tops and to all major areas of the mountain. In addition, its landscape functions became richer and richer with its core value changed from stage to stage.

Second, the evolution of cultural landscapes is the result of the synergistic effect of path dependence and path creation. On the one hand, the cultural landscape evolution of Mount Lushan highlights the effect of the path-dependent mechanism on constraining the evolutionary process. Above all, the geographical location, topography, ecological environment, and other natural factors provide the environmental basis for the cultural landscape evolution of Mount Lushan and play a vital role across the entire evolutionary process. Furthermore, although the evolutionary path of the cultural landscape of Mount Lushan has changed several times, the hermitic culture, religious culture, Confucian culture, and Western culture developed during the process has not been completely abandoned in subsequent evolutionary stages. Many of their associated tangible and intangible elements were preserved and reused such that subsequent and even the current evolutionary process of the cultural landscape of Mount Lushan has been influenced. For example, the temples, study halls, and villas built in the first two stages have become the resource basis for the development of modern tourism in Mount Lushan in the third stage. This is consistent with the argument of Nickens (2022) on the “layering” of past cultural landscapes, which is believed to have considerable impacts on the modern-day heritage management [42]. On the other hand, the cultural landscape evolution of Mount Lushan also highlights the role of the path-creating mechanism in generating a holistic, dynamic, and non-linear evolutionary process, which is reflected in the multiple changes of the evolutionary path and the significant differences among evolutionary stages in terms of landscape elements, functions, and patterns.

Third, existing studies have acknowledged the importance of the behavior of associated actors [54] and the change of contextuality [43] in shaping cultural landscape evolution. Analogously, this article found that the interplay of the behavior of associated actors and the change of contextuality is the fundamental dynamic that drives the evolution of cultural landscapes. In different stages of the cultural landscape evolution of Mount Lushan, litterateurs, monks, Taoists, Christian missionaries and other Westerners, tourists, tourism enterprises, governments, and other actors dynamically adapted to the changes of contextuality such as social unrest, the invasion of foreign powers, as well as modern economic and social development. Their actions, be they in terms of pursuing hermitic life or
constructing temples, study halls, and villas, created new possibilities for further evolution and thus promoted changes of the evolutionary path. After a new evolutionary path was created, the continued aligning and even enhancing behaviors of the associated actors and the continuation of supportive changes of contextuality enabled further development and growth of the path.

6. Conclusions

This paper is only a preliminary attempt to apply the theories of path dependence and path creation into the examination of the evolution of cultural landscapes. It has not explored in depth the boundaries and points for attention while applying the theories in the context of cultural landscapes. Compared with the major applied research target of the theories of path dependence and path creation, i.e., the evolution of regional economic landscapes which generally lasts a few decades, the evolution of cultural landscapes often lasts hundreds or even thousands of years. The evolutionary process of cultural landscapes is therefore rightly more complex, and the factors, elements, and actors involved in the process are also more diverse. In this regard, further empirical studies on other cases of cultural landscapes are called to deepen and improve the application of path dependence and path creation theories in the field of cultural landscape evolution. In addition, due to the difficulties existing regarding the collection of full detailed historical data, the paper may not be specific enough in depicting the evolutionary process of the cultural landscape of Mount Lushan. The findings of this paper may offer some strategic references for heritage sites in monitoring the evolutionary process of cultural landscapes, responding to internal and external contextual changes, managing the behavior of different actors, and introducing proactive development strategies.

Author Contributions: Conceptualization, Z.G. and W.W.; methodology and formal analysis, Z.Z., J.Z. (Jianqin Zhou) and J.Z. (Jiami Zhou); investigation and resources, Z.G., Z.Z., J.Z. (Jianqin Zhou), J.Z. (Jiami Zhou) and W.W.; writing—original draft preparation, Z.Z.; writing—review and editing, Z.G., Z.Z. and W.W.; supervision, project administration, and funding acquisition, Z.G. and W.W. 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 (17BGL115), the Social Science Foundation of Jiangxi Province (21YJ27), the Project of Key Research Institutes of Humanities and Social Sciences at the Universities of Jiangxi Province (JD21013), and the Postgraduate Innovation Special Foundation of Jiangxi Province (YC2021-S063).

Data Availability Statement: Not applicable.

Acknowledgments: We acknowledge all people who contributed to the data collection and processing, as well as the constructive and insightful comments by the editor and anonymous reviewers.

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

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