A CULTURAL LANDSCAPE APPROACH FOR TOURISM DEVELOPMENT OF A WORLD HERITAGE SITE: CASE STUDY OF THE NAKAHECHI ROUTE IN THE KII MOUNTAIN RANGE, JAPAN

世界遺産地域における観光による発展を視野に入れた文化的景観解析：熊野古道中辺路ルートにおける事例研究

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Abstract:

Keywords: Heritage tourism, pilgrimage route, cultural landscape, World Heritage Site, heritage management, Nakahechi Route

Nakahechi Route is a heritage route that is included in the WHS of "Sacred Sites and Pilgrimage Routes in the Kii Mountain Range" as an important component of its cultural landscape. However, actively used in heritage tourism today, management of the route corridor still lacks understanding for its current tourism use and needs improvements to incorporate the cultural landscape concept to meet both conservational and recreational goals. This thesis examined the tourism development of the Nakahechi Route across a border temporal and spatial scale of its current managed surrounding area and conducted extensive fieldwork on both the current conditions of the route and its current visitors in relation to the physical environment of the route corridor under the context of contemporary heritage tourism. The findings of this research on a Japanese pilgrimage route on how to bridge heritage with tourism can be comparable to other linear route corridors around the world with adjustment of scales and local context.

Through a historic examination, the thesis points out that interpretation of the Nakahechi Route needs to recognize the natural course of change happened on the route corridor through time under the influences from a broader area. Furthermore, it should divert the focus on a point of history of a particular interest on the ancient aristocrats' visits to more profound interactions happened along the route under different temporal context. The physical path is important in a sense that it stores the information about people's relationship with the route in the past. Thus it should be managed under professional guidance and take into consideration the different characteristics of different sections of the route. And its conditions should be monitored in relation to various managerial practices and use-related factors taken into consideration under historic context. Finally, one of the keys to bridge tourism with heritage conservation is to understand visitor use and improving interpretation and presentation of the cultural landscapes for the route corridor through heritage management.

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Chapter 1 Introduction

1.1 Cultural landscape, route and heritage

1.1.1 Background: heritage and cultural landscape

Heritage has become an increasing prominent concept in today's globalized world. The intellectual history of heritage is a history of shifting concepts on a global scale. The World Heritage Convention of the United Nation Educational, Scientific and Cultural Organization (UNESCO) was the first international instrument to encompass both "natural" and "cultural" heritage. However, it did so by drawing a sharp divide between these two categories that reflects the dominant influence of the European traditions for archaeological sites, monuments, and historic town centers as cultural heritage. The concept of 'cultural landscape' was introduced in the UNESCO World Heritage Convention in 1992 to reconcile the traditional gap between nature and culture, introduce the notion of intangible cultural heritage and also to correspond to the shift in the geography of power among experts involved in global heritage governance[1] (Gfeller 2013). By the turn of the millennium, the range of World Heritage cultural categories had widened to include cultural landscapes, canals, and routes, as well as modern, rural, and industrial architecture. The recognition and respect of cultural diversity have opened a path for the assessment of new elements as integral components of the cultural heritage.

The Japan's registered World Heritage Site (WHS in the following text) fall into two categories: 'High' value sites include mainly castles, temples and shrines, and were initially selected by the Agency of Cultural Affairs and the Agency (now Ministry) for the Environment. The second category consists of sites that have been proposed by local movements or governments aiming to protect their heritage or stimulate regional development (Funk & Cooper 2013). With an increasing expectation of the power of the WHS status as a brand name and an initiator of tourism development recognized by regional and local agencies, there has been an increase in the variety of proposals for WHS registration including vernacular heritage and complex sites with

networks of items spread over a wider area. However, concerns have also been rising such as the consideration that WHS label represents a cultural hegemony that entails the marking of a local history into a unified 'national' history (Yasuda 2010).

While heritage tourism under the World Heritage system is becoming a prominent phenomenon, it is necessary to speculate the influences brought upon by tourism will impact the site socio-economically, culturally and influence on the heritage management for the purpose of conservation. Against this background, two practical questions prompted this study at the very beginning and were constantly asked during the whole process:

How to bridge tourism with heritage conservation under the context of WHS?

What to do if the cultural heritage resources is a linear route corridor?

In order to be able to answer the two questions above, this thesis attempts to use a case study to investigate the opportunities and constraints of heritage tourism developed for a linear route under the context of WHS.

1.1.2 Heritage tourism

1.1.2.1 What is heritage tourism

To answer the above two questions, tourism of WHS, especially a cultural type should be understood, starting with the concept of heritage. Graham et al. (2000) differentiate between the terms 'past', 'history' and 'heritage'. The past is concerned with all that has ever happened. Whereas history is the attempts of present-day historians to explain selected aspects of the past, heritage, on the other hand, is essentially the contemporary use of the past, including both its interpretation and representation. By this nature, heritage tourism has been viewed simply as "tourism centered on what we have inherited, which can mean anything from historic buildings, to art works, to beautiful scenery" (Yale 1991:21). Some people define heritage tourism simply as people visiting heritage places or viewing historical resources, while others suggest that a personal connection to the objects or places being viewed is what defines heritage tourism (Timothy 2011:3). The many definitions of heritage tourism all include elements of the human past as resources and entail a variety of motives on the part of the tourists. Timothy (2011) thus defines heritage tourism as it "refers to

travelers seeing or experiencing built heritage, living culture or contemporary arts. It's resources are tangible and intangible and are found in both rural and urban settings. Visits are motivated by a desire to enhance one's own cultural self, to learn something new, to spend time with friends and family, to satisfy one's curiosity or simply to use up excess time. In short, heritage tourism encompasses a multitude of motives, resources and experiences and is different for every individual and every place visited".

1.1.2.2 Managing heritage tourism

Heritage sector represents a highly significant component of tourism in many developed economies (Garrod & Fyall 2000; Poria et al. 2003). It has long been recognized that the ideological and institutional context of heritage tourism is fundamentally different from that of general tourism (Garrod & Fyall 2000). The conventional "curatorial approach" still pervades that a heritage mission is to care for the property and maintain it in as pristine a state as possible, with issues of controlling visitor flows and managing visitor experiences treated with a purpose of mitigating the negative effects and providing educational experiences. However, the evolvement of the scope of cultural heritage from the monuments, groups of buildings and sites set out in the World Heritage Convention by UNESCO in 1972 to now include cultural landscape, cultural routes and other types of heritage compound have caused some fundamental changes to very essence of heritage tourism. Unlike objects displayed in museum, landscapes change with along the meanings perceived by people. There is an increasing awareness of the resource value of place distinctiveness which coincides with concern that tourism can erode the special qualities that attract them to particular destinations in the first place (O'Hare 1997). On the other hand, such changes are also difficult to identify and further to imply management. More fundamental and inherent contradictions between conservation and change associated with the process of heritage tourism development is due to the fact that viable cultures evolve through time (Swain 1990). In fact, the issues of conservation versus change associated with heritage tourism manifest a paramount problem for the development (Li 2003). Thus, there is a need for some practical and explorative researches to investigate on such ground issues raised in incorporating tourism as an inevitable and neutral force in cultural heritage management. Considering the vast varieties of

heritage sites, this thesis will focus on an innovative field of heritage tourism that features a ancient pilgrimage route, in an attempt to identify and evaluate the influences brought upon to the heritage site by its contemporary tourism use, not only to its physical properties, but also to the more profound cultural and heritage values of the assets.

1.1.3 Route and heritage tourism

1.1.3.1 An innovative field in heritage tourism

The human travel history is closely associated with routes, land or maritime, migration or hunting, pilgrimage or recreation. Considering the profound and comprehensive perspectives of human history with route, it could be considered a rather recent phenomenon of actively incorporating route and granting it a pivoting role in tourism development. In Europe, thematic routes, cultural itineraries that transcends geographical diversity and distance to provide a spatially expansive but integrative marketable theme have long been realized as important elements of cultural tourism. An idea of rediscovering common heritage through traveling, exchange of people and ideas, intercultural and interreligious dialogue, protection of landscape was formed in the 1970s during the debate about the opportunity of creating a framework for cultural cooperation along the route (Berti 2013). The extension of the idea led to the launch of the programme of Cultural Routes by the Council of Europe in 1987. The two first cultural routes certificated are Rural habitat and Saint-James Ways (the pilgrim's route to Santiago de Compostela). In 2006, the Council of Europe further developed a 'Cultural Corridor' scheme, moving beyond physical routes to create networks linking cultural sites to include the full range of creative assets in a region (Majdoub 2010). Such so-called 'multiple-destination itineraries' emphasized the co-created experience as the very basic value, which was defined as "engaging customers as active participants in the consumption experience, with the various points of interaction being the locus of co-creation of value"(Pralahad & Ramaswamy 2004:16). Under this context, suitable routes were developed according to touristic and educational needs. Perceived by many authors as representing an indicator of a new kind of tourism, little attention has been given to the impacts of such tourism activities on the heritage value of the cultural properties, from the perspective of heritage protection. It was pointed out by Zabbini (2012) that

"the real economic, social or cultural impact of cultural routes on the territories needs further analysis and specific research. In fact, there seems to be no univocal methodological direction in this specifical field of study at the moment."

Similar movements of tourism development centering historic and cultural routes can be also seen in other developed countries such as United States, Canada and Australia, for which the 'trails model' has been developed based on high-ways, rail-lines and other kinds of transportation modes. Examples include the Route 66 that connects between Chicago and Los Angles, elevated to the status of 'National Historic Corridor' in the United States (Caton & Santos 2007). Route-based tourism was considered offering promise to rural communities in Manitoba, Canada where a Heritage Discovery Center was initiated to include the development of a number of theme-based trips, or tours, designed for particular market segments such as seniors, school trips, and casual tourists. The concept of routeway is normally based on a mix of aboriginal and pioneer trails with contemporary roads and railways. Similarly, the Queensland Heritage Trails Network was initiated in 2000 with the objective to 'revitalize rural and regional Queensland economies through the creation of jobs and a sustainable tourism infrastructure'. World-widely, routes, trails and other forms of linear path have been welcomed as an innovative tool to develop tourism, while a considerably smaller body of researches has examined the actual on-site tourism use and the subsequent conflicts of interest or benefits to both heritage conservation and tourism development. And although being highly appraised as "represent(ing) a new approach involving the cultural heritage and offer(ing) new perspectives and tools for the heritage protection" (Zabbini 2012), little evidence have been scientifically collected on the ground to verify this statement and even less can be found out outside the western countries.

1.1.3.2 The case of Japan

In Japan, the symbolism of human development associated with travel is most strongly suggested by the idea of roads. The character of road, *michi*, in Japanese is often included in traditional forms of self-development by which individuals could enhance themselves through a form of discipline, usually read in combination with other characters as *do*. Given the profound cultural meanings associated with roads, it

is not surprised to find out a great utilization of roads as resources in cultural and heritage tourism.

The '*Rekishi Kaido*' (History Highway) travel campaign, officially launched in 1991 is a good illustration of a deeper connection between Japanese identity and *kaido*, implying that through a route, one could travel through space and time to recapture something lost by directly experiencing Japanese identity (Creighton 1997). The route consists of a 300-kilometer route that includes Kobe, Osaka, Kyoto, Nara, Asuka, Ise and eight theme routes associated with specific local histories. While directed at recognizing the rich historical heritage of Japan in general, the campaign was designed to boost tourism to Kansai, which was divided into five historical classifications, called zones, according to the actual historical periods each zone was associated with. Along with history, tradition is emphasized by this campaign that are meant to "touch the spirit of Japan" (as advertised in the promotional video) and reveals an aspect of Japanese diversity and persisting regional rivalries.

Japanese traveler's fondness of roads can also be expressed from their favor towards the forms of roads themselves, the immediate corridor environment and the cultural and historic meanings they are associated with. Across the country, 104 roads were selected as 100 Roads of Japan by then Ministry of Construction based on criteria of their historicity (*rekishi-se*i) and affections they received from the local residents (*shin'ai-sei*) in 1986; aesthetic properties (*bikan-sei*), harmonious relationships with the surroundings and functionality (*kido-sei*) in 1987 (official website of The Way in Japan). It is rather interesting to notice that besides much welcomed in the tourism practices as a tool for adding values for places of different scales, roads have rarely shown faces in the academic literature, particularly outside the discipline of history, archaeology, folklore, engineering history and religious studies. Thus, this thesis will explore the tourism perspective of routes in Japan, integrating multidisciplinary methods into empirical studies particular regarding a World Heritage case where the routes were considered an integral component of the surrounding landscape. Before raising the research questions, the following section will introduce routes of World Heritage cases in avoidance of conceptual and terminological confusions.

1.1.3.3 World heritage routes

There are two cases that a route can be incorporated into a WHS. One is through the designation under the category of Heritage Routes, which represents one of the four existing categories of the World Cultural Heritage recognized in the Operational Guidelines for the Implementation of the World Heritage Convention of UNESCO (2005: Annex 3)[2]. Confusions could be generated since as a different category from the 'cultural landscape', there are fundamental differences between the two categories (as summarized in .....) while on the other hand the specificity of the heritage routes is also recognized in paragraph 24 (iii): " A heritage route may be considered as specific, dynamic type of cultural landscape, just as recent debates have led to their acceptance within the Operational Guidelines"(2005).

Another case for the incorporation of routes in heritage cases is through the designation as cultural landscape. When describing the characteristics for inscription of a Cultural Landscape on the World Heritage List, the Operational Guidelines (2005: Annex 3: Paragraph 11) says: "The possibility of designating long linear areas which represent culturally significant transport and communication networks should not be excluded". This statement recognized other systems and specific ways of communication like 'cultural corridor', 'historic roads' and other kind of thematically related elements along a path. Considering such circumstances that some routes were inscribed as cultural properties of World Heritage site but not under the category of Cultural Route, these routes were referred to as world heritage route, such as Nakahechi Route used as case study material in this thesis.

In practices, the above two cases share more similarities than differences while the Cultural Routes can often be more complex in systems that involves broader geographic scales. Considering the great variety regarding cases that incorporating routes in heritage tourism besides the certificated Cultural Routes, this thesis has no intention to focus on the conceptual dispute on the definition of heritage routes but rather adopting a comprehensive route corridor concept that refers to the physical path and a dense fabric of elements associated with the function of the route together has a great role in dissemination or succession of culture, religion, materials, artistic properties, folk culture etc. that exist beyond the boundary of the route corridor. The

promotion of such route corridor in heritage tourism require understanding of their complexity through a multidisciplinary and holistic perspective no matter on what scales these routes operate. A landscape approach is thus considered appropriate for addressing the research questions of this thesis.

1.2 A cultural landscape approach

As briefly mentioned in section i.i.i, long before the incorporation of "Cultural Landscape" concept in the UNESCO World Heritage Convention in 1992, its theories have been developed in several disciplinary areas including geography, anthropology and design field of urban planning, architecture etc. The term of landscape, firstly recorded in 1598, was borrowed as a painters' term from the Dutch during the 16th century. The original Dutch word landscape simply meant 'region, tract of land' (Akagawa & Sirisrisak 2008). The German counterpart *landschaft*, which, unlike word of an English one, has two meanings. First is 'a restricted piece of land', and the second is 'appearance of a land as we perceive.' The word of landscape itself contains a strong cultural dimension in terms of human agency and interpretation. J.B. Jackson (1984), founder of Landscape magazine, described it as a composition of man-made spaces to serve as infrastructure or background for our collective existence. The term 'cultural landscape' was firstly used by Schluter as the basis of his morphogenetic theory in the 1890s (O'Hare 1997). Every since the origination of this concept from settlement morphology (the study of settlement form), it has been continuously used to interpret the evolving humanized environment. Beginning in the 1950s, and more forcefully by the 1970s, cultural geographers such as Pierce Lewis and the writer J.B. Jackson began to insist that all landscapes were inherently cultural. The term 'cultural landscape' is thus somewhat tautological and those that agree with them started using the single word landscape to replace the phrase cultural landscape. O'Hare (1997) reviewed the process of development of the theory of cultural landscape against its inter-disciplinary background and suggested "the adjective 'cultural' nevertheless serves to emphasize the role of human agency in the creation and perception of landscapes. To omit the philosophically redundant adjective, 'cultural' is to risk a reduction in the understanding of landscape. The use of the term 'cultural landscape' reminds us that landscape are dynamic rather than static, active rather than passive,

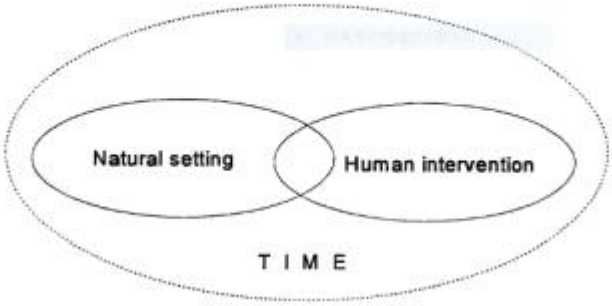


Figure 1.1 The cultural landscape: a dialectic between the natural landscape setting and human modification, continually evolving over time. Picture borrowed from O'Hare (1997: 30 Figure 2.2)

living rather than relict, inhabited rather than devoid of human intervention." He also addressed the time dimension in this concept that process of the dynamic interaction between human action and the natural landscape involves the interaction between contemporary interventions and the existing cultural landscape as modified by previous interventions (Figure1.1). The cultural landscape approach provides a philosophic framework within which to formulate a methodology specific to the need to highlight the fact that cultural reality is multi-faceted evidence, which requires a multi-disciplinary approach. Berti (2013) addressed the complexity of cultural route that should be understood and studied by assimilating articulated cultural goods to 'systems of systems', by understanding their complexity through a multidisciplinary and holistic perspective. However, there is often a lack of consistency in cultural landscape studies and reviews of the cultural landscape literature found out that methodology are frequently implied rather than explicit (O'Hara 1997). Nevertheless, the particular value of the cultural landscape perspective is that it enables tourism to be seen as part of the cultural landscape. Although there is no fixed cultural landscape methodology, useful method components can be drawn from somewhat disparate fields of architecture, urban planning, design, leisure science, environment assessment, anthropology, historic and sociological studies etc. And the cultural landscape approach can be a means of reuniting fragmented approaches to valuing and constructing the environments we inhabit, a means of overcoming distinctions between heritage and new development, nature and culture, monuments and vernacular elements, built fabric and context.

1.3 Research questions

With the utilization of routes in heritage tourism becoming a popular movement which is socially inclusive and universal, there is a urgent need for on the ground interrogative examination of tourism perspective of these routes in order to incorporate it into heritage conservation and eventually framework of local and regional development. At the same time, the UNESCO World Heritage status for some routes raised considerations regarding protecting the integrity of heritage places and their continuing authenticity.

In order to answer the two practical questions raised at the beginning of this chapter, this research addresses the tourism from multiple aspects, embracing the comprehensive idea of cultural landscape that sees tourism as an inevitable forces in management of the heritage routes. The specific research questions regarding the Nakahechi Route are listed as below:

Research question 1: How does the Nakahechi Route play a changing role in heritage tourism of the Kumano area?

Research question 2: What is the state of conservation for the physical path of the Nakahechi Route under its world heritage route context?

Research question 3: How could enhancing the contemporary visitors' interaction with the Nakahechi Route contribute to the conservation of its heritage value? (This question will be answered from two aspects of visitor flow and visitor experience.)

1.4 Structure of the thesis

This thesis is structured in three parts in order to answer research questions listed above (Figure1.2).

Part One consists of the first two chapters.

Chapter 1 places the research objectives in the global context of the emergent issue of tourism development revolves around heritage routes, particularly addressing the needs for studies in Japan. Definitions are provided for key concepts: heritage tourism, Cultural Routes, cultural routes and cultural landscape. The research questions are stated and the thesis structure is outlined.

Chapter 2 introduces the multi-method case study strategy for this thesis developed under the framework of cultural landscape. The reason for choosing Nakahechi Route as a case study is explained through an understanding of the route as a type of cultural landscape from the standpoint of UNESCO World Heritage Site criteria and rising issues in its current heritage management.

Part Two, consisting of Chapter 3, 4, 5 and 6 explores the case study from various perspectives of tourism. In Chapter 3, the heritage tourism development of the Nakahechi Route is put into context of the broader region of the Kumano area and is studied through its media representation from the *Tabi* magazine. The convergences and divergences between the media representations and historic meanings of the route are discussed in order to answer Research Question 1. In Chapter 4, the physical characteristics and conditions of the route are presented with potential influential managerial factors identified. This chapter illustrates the management of the physical path of the heritage route particularly discussed in relation to its World Heritage Site status, responding to Research Question 2. Chapter 5 and Chapter 6 explores experiential perspective of contemporary tourism based on the heritage route. Chapter 5 answers Research Question 3 from the aspect of tourist use and visitor flow. Chapter 6 answers Research Question 3 from the aspect of landscape experiences.

Part Three consists of Chapter 7, which presents some general discussions and conclusions of this thesis. As the final part the thesis, Chapter 7 discussed theoretical understanding and practical issues regarding the dimensions of time and people identified through previous chapters for linking heritage conservation with tourism, reflecting the critical issues raised in Chapter 1. Interpretation of the heritage route is discussed in relation to the cultural landscape concepts. Management implications for a world heritage route are drawn in particularly paying attention to the integrity and authenticity issues. And the case study of the Nakahechi Route is related to broader

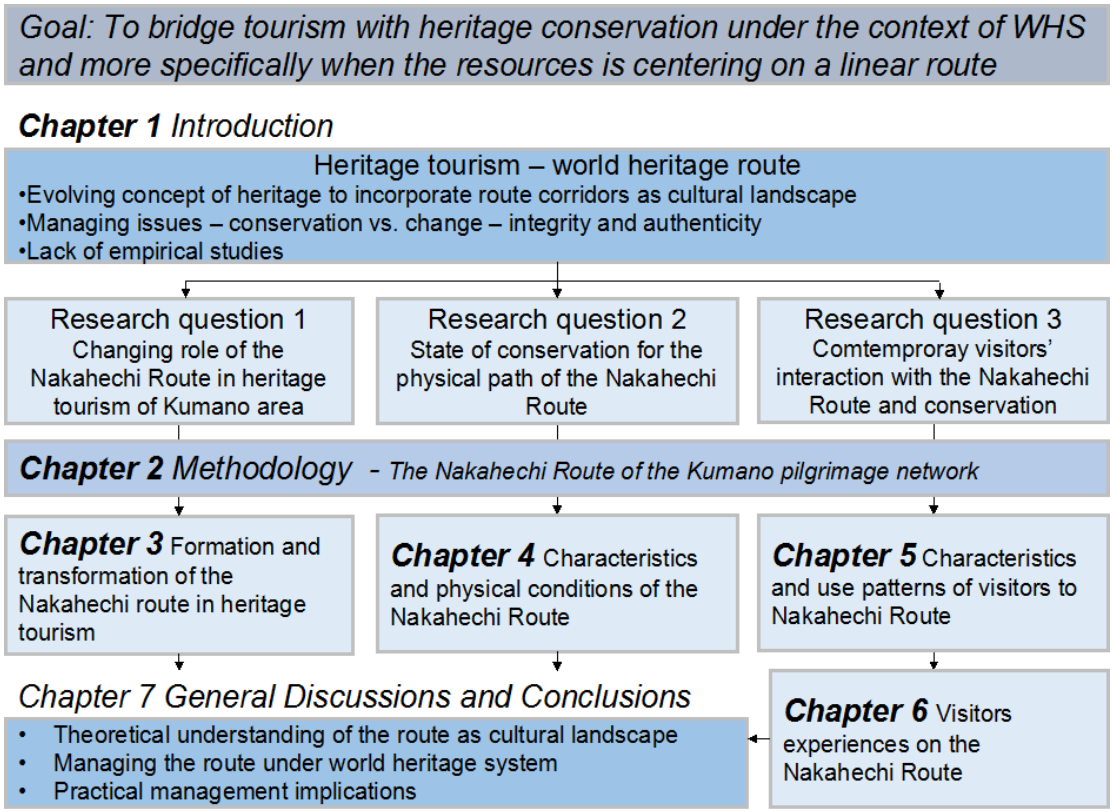


Figure 1.2 Structure of this thesis.

questions of incorporating route-based tourism in heritage conservation and local/regional development. Overall conclusions and direction for future studies are stated at the end of this chapter.

Chapter 2 Methodology

2.1 A strategy of multi-method case study

This chapter establishes a case study strategy for examining heritage tourism based on the Nakahechi Route with an intervention of the cultural landscape concept. Using a combination of multiple methods to compare different aspects of the cultural landscape of a single study site has already been used in O'Hare (1997)'s study in interpreting an evolving tourism landscape. This method has been proved useful in enabling a wider variety of empirical materials to be combined - and compared and cross-examined - than might be available in a less detailed multiple case study (O'Hare 1997). As the concept of space and time are crucial to the understanding of a heritage route as a linear type of cultural landscape, this strategy allows research methods being drawn from multiple disciplines from archival researches to empirical investigation based on fieldwork in a search for convergences and divergences among the historic meanings of the route, its evolving media representation and contemporary tourism use. The detailed examination of this 'famous' heritage route will have value in considering landscape approach for understanding and resolving issues raised from tourism development of other linear type of path, such as historic roads, and tourism routes. More specific information of the Nakahechi Route are provided in the following section.

2.2 The Nakahechi Route in the Kii mountain range

2.2.1 UNESCO designation

The Nakahechi Route belongs to the network of pilgrimage routes in the Kii mountain range that have developed with distinctive religious and historic backgrounds. Nakahechi Route is one of the sub-routes that traverse the central mountainous area of the Kii Peninsula, running through the urban area to mountainous rural villages in Tanabe city, Wakayama prefecture (Figure2.1). The recent fame of the route in tourism

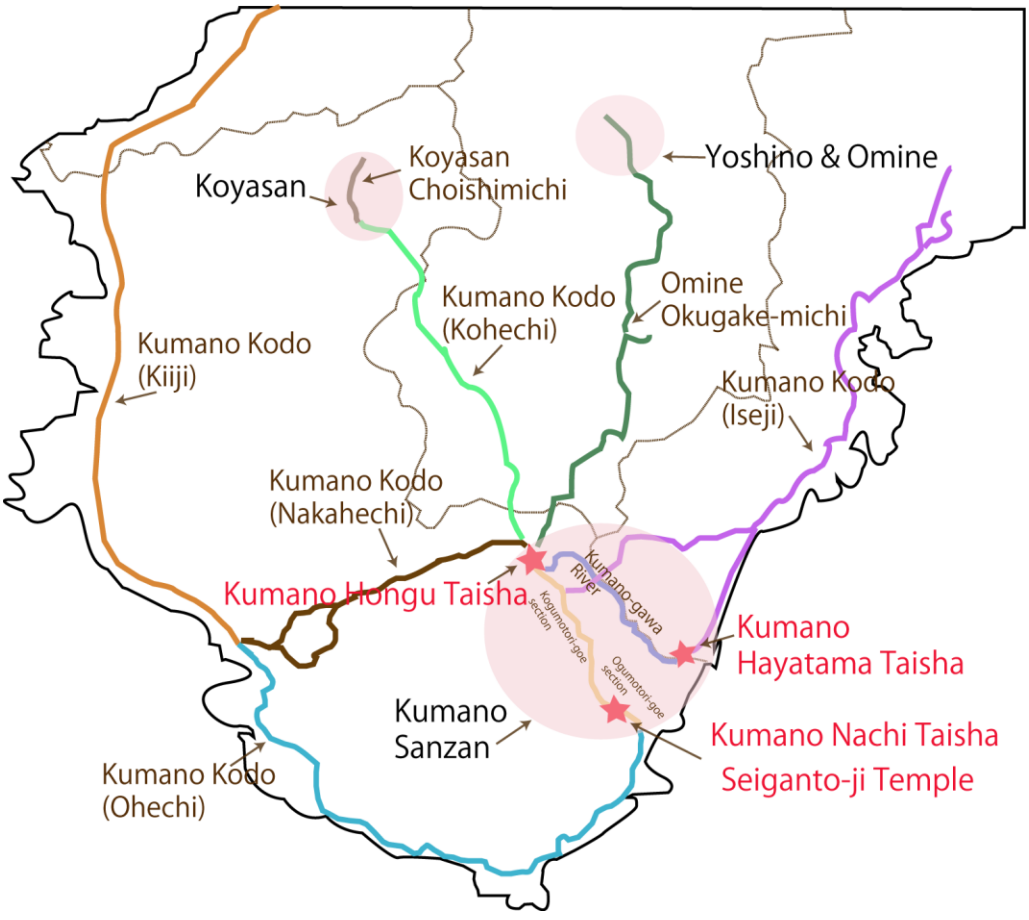


Figure 2.1 Illustration map for the pilgrimage routes connecting Kumano Sanzan and other two sacred sites on the Kii Peninsula, Koyasan and Yoshino & Omine. Names of the route refer to the UNESCO context.

came along with the designation of the 'Sacred Sites and Pilgrimage Routes in the Kii Mountain Range' as a World Heritage site in July, 2004. It is the first site in Japan that was designated under the category of 'cultural landscape'. According to the evaluation of ICOMOS (2004), pilgrimage routes with along other inscribed properties under the setting of forested mountains were selected on the basis of criteria ii, iii, iv and vi:

Criterion (ii): The monuments and sites that form the cultural landscape of the Kii Mountains are a unique fusion between Shintoism and Buddhism that illustrates the interchange and development of religious cultures in East Asia.

Criterion (iii): The Shinto shrines and Buddhist temples in the Kii Mountains, and their associated rituals, bear exceptional testimony to the development of Japan's religious culture over more than a thousand years.

Criterion (iv): The Kii Mountains have become the setting for the creation of unique forms of shrine and temple buildings which have had a profound influence on the building temples and shrines elsewhere in Japan.

Criterion (vi): Together, the sites and the forest landscape of the Kii Mountains reflect a persistent and extraordinarily well-documented tradition of sacred mountains over the past 1200 years.

Among the vast number of inscribed properties, pilgrimage routes were considered an important component, with an area of 293.2ha, counting about 60% of the total area. The routes link three sacred sites (*Yoshino and Omine* (44.8ha), *Kumano Sanzan* (94.2) and *Koyasan* (63.1ha)) on the Kii peninsula and also to other places throughout Japan (Three Prefectures' Council for the World Heritage 2005). Under the UNESCO context, the routes leading to the southernmost sacred site of *Kumano Sanzan* were referred as

Kumano Sankeimichi, *Sankeimichi* means pilgrimage route in Japanese. Generally, they are also referred as *Kumano Kodo*, meaning ancient road of Kumano in Japanese. The *Kumano Sankeimichi* could be geographically divided into three sub-routes. The first one runs on the west coast of the Kii peninsula (*Kiji*), forking into two: the : *Naka-hechi*, which traverses the Kii peninsular over the mountain area, and the *O-hechi*, which continues along the seacoast. The second route is the *Iseji*, which runs on the east coast of the Kii Peninsula; the third is the *Ko-hechi*, which goes through central part of the Kii Peninsular, connecting the two sacred sites of *Koyasan* and *Kumano Sanzan* (Figure 2.1). *Ji* means road. The name *hechi* (辺地), also called *heji* (辺路) was believed to originate from a form of ascetic practice of *Heji Shugyo* (辺路修行) even before the tradition of *Kumano Mode* (pilgrimage to *Kumano Sanzan*, explained in more details in section 3.2.1).

Among the complex route network on the Kii peninsular, the Nakahechi Route is considered established in the early 10th century. The earliest written record of this route remained in Zoki Hoshi (monk Zoki)'s travel journals, "*Ihonushi*", during the middle of Heian era (794-1185). In the Middle Ages, the abdicated emperors and their accompanies took a boat ride from the Kumano Hongu Taisha shrine to Shingu and returned from the same way back, following the strict religious meaning of going to the other world, being rejuvenated and then coming back to this world. Thus, this 40km portion of the Kumanogawa River between Kumano Hongu Taisha shrine and Kumano Hayatama Taisha shrine is also included in the nominated properties of the *Kumano Sankeimichi*, Nakahechi Route under the UNESCO context. The most distinct and obvious physical fabric in the route corridor left from active religious use of the route in

Figure 2.2 The plan view of the Nakahechi Route and photos of the landscape elements in the route corridor. (Source: Three Prefectures' Council for the World Heritage, Sacred Sites and Pilgrimage Routes in the Kii Mountain Range 2005)

the middle ages are the subsidiary shrines of the Kumano Hongu Taisha shrine, called *Ōji* that provide spaces for rest and ritual. Apart from the main route of Nakahechi Route, affiliated routes include (a) Ōgumo-tori and Kogumo-tori, which connects Kumano Hongu Taisha shrine and Nachi mountains through a strenuous mountain path; (b) two routes that connect to Yunomine Onsen, a hot spring used for the purification rite: Akagi-goe route that runs from close to Funatama-jinja shrine on the main route and the 1.8km section Dainishi-goe, that runs from Kumano Hongu Taisha shrine; and (c) Shiomi-toge that connects Tanabe and Kurisugawa developed during the early modern times and gradually replaced the older section that passed through Takijiri

(Figure2.2). The rich history of the route with its evolving landscape makes it an appropriate material to study interpretation and representation of a heritage route in modern tourism development under the context of WHS system.

2.2.2 Heritage management of the route

A hierarchical management strategy has been applied to the route network that covers a wide geographic area. For *Kumano Kodo*, the component with substantial value was firstly considered as its physical path, which is the "inscribed zone" or "core zone," as inscribed properties of the WHS (Figure2.3). These inscribed zones were designated as Historic Sites, under the Law for the Protection of Cultural Properties. Any alterations to or activities with adverse effects on the existing condition require prior permission from the Commissioner of the Agency for Cultural Affairs (under Articles 43 and 80 of the Law for the Protection of Cultural Properties). Even small-scale repair or restoration for maintenance purposes also requires prior submission of notification. Material elements such as pavement stones and stone signposts of the routes were repaired and maintained in a way to represent the authenticity of materials. Based on the idea to distinguish these "authentic" sections from those that have already been influenced by modern development. The inscribed routes were thus not continuous, which posed questions in terms of the integrity of the properties when the nomination of this cultural site was evaluated by ICOMOS that "...the pilgrim routes are in some places a series of short stretches. If the discontinuity is to be understood by visitors, then measures need to be put in place to allow an understanding of the links between disconnected pieces of the routes"(ICOMOS 2004).

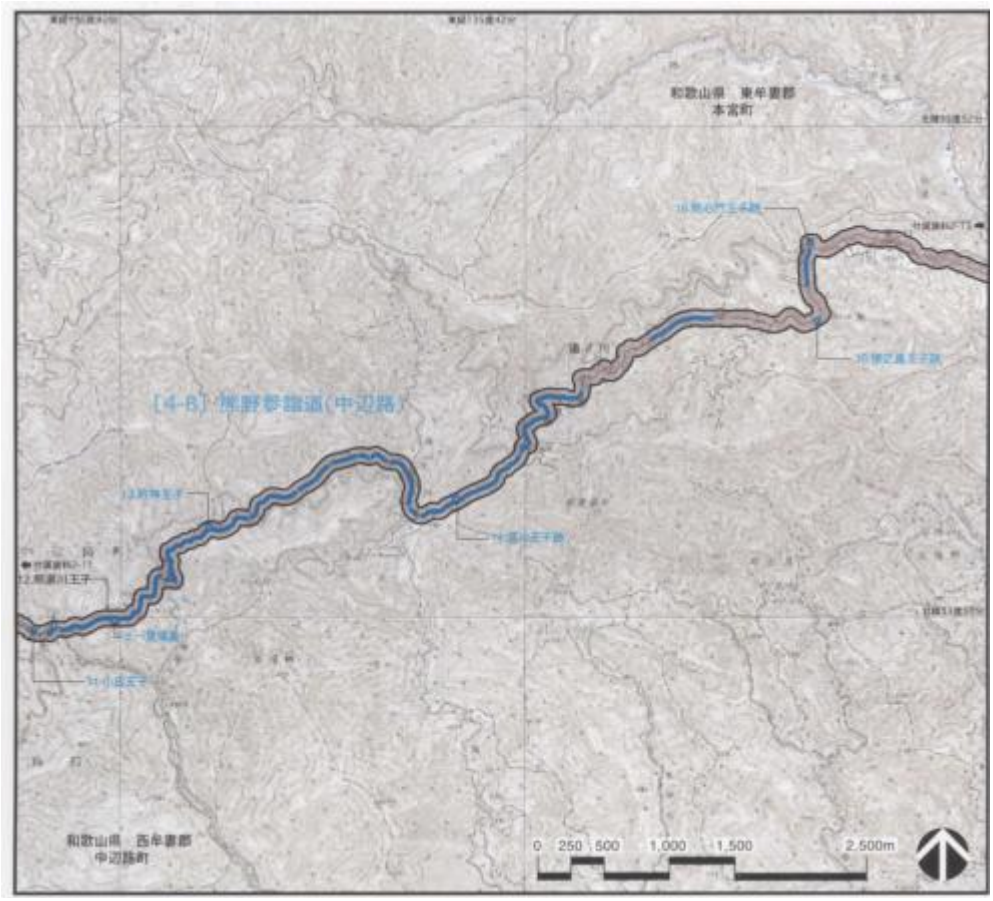


Figure 2.3 An example of the hierarchical management strategy of the Nakahechi Route. Blue lines represent the "inscribed zone" and the area shaded in gray represent the "buffer zone." (Source: Three Prefectures' Council for the World Heritage, Sacred Sites and Pilgrimage Routes in the Kii Mountain Range 2005)

To reconcile with this issues, the buffer zone notion was utilized in a unique way for the pilgrimage routes to ensure the conservation of the integrity (Figure2.3). The total area of the buffer zone for the pilgrimage routes is 9,120 ha, 31.1 times of the inscribed area. The buffer zone of *Kumano Kodo* consists of two types. One type represents those paths that have already received modern influences. By categorizing them into the buffer zone, they can be distinguished from those "original sections." The other type of buffer zone is a linear area of 50m widths adjacent to the route from both sides. The buffer zones are

regulated through various laws (e.g. The Natural Parks Law, the Forest Law etc.) and local governments' ordinances. Thus cutting of trees, alteration to the existing land configuration, the height, design and color of buildings, etc. are controlled. Teranishi (2005) pointed out that although the total area of buffer zone for the pilgrimage routs is large, it was mainly due to the oversize of certain area instead of a careful examination to determine the boundary, rather that the area was established in a rather cursory or arbitrary fashion. Fujishiro & Matsushita (2012) also pointed out that by identifying the a uniform area along the route as a buffer zone, it failed to recognize the diverse factors that form the cultural landscape and the importance of forest as an essential component. Also the vast area of inscribed and buffer zones posed great difficulty for a standardized forest management.

2.2.3 A cultural landscape understanding

In addition, the vast geographic span and diverse locality of the inscribed area result in different understanding towards the "cultural" meaning of the pilgrimage routes and thus complex and multilayered understanding towards the concept of "cultural landscape." Discussions were raised about the notion of "cultural landscape" and whether the cultural and spiritual value of the pilgrimage route still exists with its current status. Yasuda (2010) argued that the inscription of the site as World Heritage which emphasize globalization is cultural hegemony that the local authorities relied on "the global," the World Heritage defined by UNESCO, for their sites to be guaranteed as authentic landscapes. For the Nakahehci Route, doubts remained for some of the places as whether or not they were where the original route was (Yamamoto 2010). And

the inscription of the routes as World Heritage Site that brought mass tourism boom also raised criticism in terms of their traveling style (Nakai 2011). The intricate relationships that have happened along the *Kumano Kodo* over a long historic span, and the high profile status as a World Heritage makes it a good case study to demonstrate the appropriateness of a cultural landscape understanding on this heritage route for its management that should be placed on scientific grounds.

2.3 An interdisciplinary research method

A cultural landscape approach provides a double point of view: the inner point of view, the landscape element including the physical path of the route and the point of view from the route to the context, provides a chance to understand each time fragilities and opportunities offered by the route. McCann (1992:135) pointed out that the complexity of any cultural landscape and the range of interpretations potentially available require a number of research methods combined to contribute to its understanding. Mixed methods integrating qualitative and quantitative data are chosen, in line with theoretical and methodological reviews. Literature reviews from various materials, field work on both the physical route and its visitors were majorly conducted throughout a time span of 3 years in order to obtain a deep understanding of the route corridor along both the horizontal and vertical axises.

2.3.1 Formal literature review

Formal literature review on written resources such as mythological and historical chronicles, legal documents, travel diaries, poetry anthologies, hagiographies, tale literature etc. can provide clues to the kinds of interactions that people had with the land that route is built on at various times in the past. This type of information is mainly gathered for revealing the history, character, development, planning, management and politics of the route.

2.3.2 Popular literature review

Popular literature review is mainly conducted for examining the images and media representations of the route in modern heritage tourism. The main resource used is the *Tabi* magazine. Beginning in 1924, the travel magazine *Tabi*, was published as an official journal of the Japan Travel and Cultural Society. Although established as a public organization that had a close tie with the then Ministry of Railways, the Japan Travel and Cultural Society was also considered representing the private sector as it originally evolved from a private group, Tokyo Arukou Group. Later on, the Japan Travel and Cultural Society merged with the Japan Tourist Bureau (Currently modern day JTB group), which was also founded as mixed joint-stock company. The *Tabi* magazine continuously published (except for three years during war time) articles, which combined both the public and private viewpoints, and covered a diverse range of science, policy, information and discussion revolving tourism, which makes the journal very different from any travel magazine we can find today. Until May 2004, when Shinchosha began to edit the *Tabi* magazine, and the editorial concept changed drastically focusing mainly on travel abroad and travel to large cities in Western

countries (Akai 2008), a total of 924 issues had been published between 1924 to January 2004, which make the magazine representative and playing a leading role in media portrayals of tourism destinations in Japanese domestic market. Analyzing the information from the *Tabi* magazine from 1924 to 2004 would hopefully shed some light on how the pilgrimage route was socially and culturally constructed as tourist oriented under its broader geographic context in modern days, especially before the overwhelming influences of the WHS designation.

2.3.3 Field work - Trail assessment

Physical survey is crucial to the understanding of the tangible aspects of cultural landscapes (O'Hare 1997). Technically speaking, a cultural route is neither invented nor designed. It is a physical route of historic importance that makes the very existence of the route as a material monument. Ideally, all existing material traces and functional structures of the route in present days should be considered. However, not every cultural route can be found to be preserved in its perfect form up to the present. Many of the tangible elements, especially the road in its clear form, have often been destroyed or lost due to various causes through time. Recognizing the scope of this study, the field survey examined the characteristics and existing conditions of the path (where the physical path is fortunately preserved). The physical delimited path serves as understructure for all the interactions happened and still happening along the route. It is one of the most obvious tangible elements in the route corridor to convey the meanings, to document the past use and to sustain the future use. As a results, an assessment of the route characteristics, evaluation of physical condition and analyzing its influential factors is an essential step

to understand the impacts of the current tourism use on the existence of the heritage route.

2.3.4 Field work - Tourist count and information

The necessity for collecting visitor counts and information on visitors themselves is slowly emerging within recreation sectors, from urban to natural environment. Previous studies on visitor counts/hiker volume focused primarily on predicting usage of urban multipurpose trails and greenways (Lindsey and Lindsey 2004; Meyers et al. 2012; Reynolds et al. 2007). For publicly managed natural areas, data on visitor counts helps in justifying budget requests and it can provide a direction for appropriate resource distribution (Loomis 2000; Hochmair et al. 2012).

Currently, there is a variety of monitoring approaches taken by managers of protected area, heritage sites and public land. Measuring use level is the fundamental part since severity of visitor management problems increases in direct relationship to visitor numbers (Shackley 2001: 74). The fundamental baseline information required is visitor numbers, and particularly how these are distributed in time and space across the protected areas. A wide variety of counting techniques are available to management agencies, such as fee collection, permits, and trail registers (Lynch et al. 2002). More recently developed are mechanical and electronic counting devices (Lynch et al. 2002). While visitor count monitoring is widespread and diverse, its application is characterized by its inconsistency (Cessford & Muhar 2003). Among the different techniques, direct on-site observations through camera recordings is considered highly

accurate. Before being used for visitor counting, time-lapse photography was already applied to observe unwanted behaviour of visitors in heritage sites (Vander Stoep 1986), and to record recreational river use (Ditton et al. 1983), but film capacity is limiting this method to short-term observations. However, compared to the more frequently used methods of mechanical counter, video recording/time lapse photograph distinguish between different user types, and human being from wildlife. By detecting the motions and record the movement of people in photos or footages, it increases the accuracy of data collection.

The Nakahechi Route, which has functioned actively in local people's livelihoods, is unlike a museum, in which objects are displayed and easily maintained. It's a open road/trail system with multiple entrance points. As a result, many pre-tests are necessary to determine the most significant nodes in the trail network for the placement of counting stations (Muhar et al. 2002). Along the whole length of the route, there are both remote locations and sections near town center where short-time visits could be carried out. Considering the advantage of motion-triggered recording, which allow for longer observation periods and the ability of this method to capture movements, this study adopted this method in a time-lapse fashion by using Passive Infrared Sensor (PIR) camera to record use of the Nakahechi Route on photographs. While video recording /time-lapse photography have not been widely applied on either recreational or heritage trails, this method was considered useful for providing important information to understand the dynamics of uses for a long-distance route.

As with other park systems and protected areas, heritage routes are accessed selectively, either by self-selection on the grounds of consumer choice or by the employment of some other criterion, causing drastic temporal and spatial differences in terms of usage. Thus, understanding visitors themselves, their motivations are also important aspects of visitor monitoring. Under a recreational context, qualitative information about the needs and motivations of visitors, their origin, their habits and activities as well as their routes within a recreational area are used to supplement quantitative data from counting stations for drawing important conclusions the management (Arnberger et al. 2005; Muhar et al. 2002).

2.3.5 Field work - Landscape experience

Studies on experience are important topics under recreational context. In recreational literature, the perceptual constructions of people's experiences were related to the physical environments within certain contexts. For example, in an urban forest setting, the understory density, dead wood, and visible human impact became the managerial concerns for which special attention was given in relation to visitors' preferences (Heyman 2012). For a wilderness setting, the characteristics of terrain surfaces were investigated to predict the potential hiking experience in Chhetri and Arrowsmith's study (2002). Regardless of the diverse environments, recreational walking, as Kay and Moxham (1996) argued, "is so diverse and dynamic... (that) this diversity is one of the great virtues of walking: it offers much too many, but it is difficult to comprehend and still more difficult to manage." Despite the abundant studies, visitors' on-site experience

on a pilgrimage route has been rarely studied, especially for the cases of Japanese pilgrimage.

Hugo (1999) argued that trails should be more than links between places, but rather should enable the creation of holistic, integrated person–environment systems. The landscape approach is based on an objective evaluation of a physical landscape within a subjective context of experiencing (in particular, viewing) the landscape. The advantage of this approach is that it relies on a combination of both objectivist and subjectivist paradigms that describe people's perceptions and emotional responses to landscape attributes. As it recognizes individual differences and the holistic, complex characteristics of the visitor experience, a landscape approach can provide planners with an effective tool to explore commonalities in landscape features and characteristics across cultures and individual preferences. Although there is no fixed landscape methodology, the indicators of content-based properties of a landscape and its spatial configurations, as developed from landscape ecology (in particular, visual complexity), are broadly agreed to interact in perception and preference judgments (Nielsen et al. 2012). Content-based properties respond to landscape elements on the element level. Those properties that are "the basic, relatively homogeneous, ecological units, whether of natural or human origin at the scape of a landscape" (Jessel 2006) are generally considered to be of the upmost importance in the experience (Dramstad et al. 2006). Spatial configurations are on a higher complexity level and are reflected by "typical configurational patterns, sequences of land use types, as well as characteristic complexes of shapes, characteristic proportions of a landscape, and sometimes pronounced temporal components" (Jessel 2006; Palmer 2004). Spatial configuration is

an inherent factor in landscape perception, as it relays a sense of spatial definition and position of the body in relation to its surroundings (Nielsen et al. 2012). For a linear landscape, the importance of spatial configurations is particularly reflected by the sequence of existing and revealing views and places, referred to by Cullen (1971) as "serial vision." This concept, which is widely recognized as an important principle for urban designers, landscape architects, and parks and gardens designers, is sometimes known by other names such as "the emerging view," "arrival sequence," and "movement/motion through space." In Hull and Stewart's (1995) article, serial vision is considered one of three important parts of the "experienced landscape," which is defined as a sequence in which scenes or objects are encountered while one is in situ and engaged in a site-relevant task (e.g., hiking). Although the "sequence with which views are encountered may influence such things as novelty, surprisingness, and variety, and hence influence a person's experience of the whole landscape," this idea was not explored in detail in Hull and Stewart's (1995) study due to the complex reasoning that "an infinite number of sequences" may exist within the real context.

With the development of photographic technologies, a technique referred to as Visitor Employed Photography (VEP) has been recognized as an important method for capturing the dynamic interaction between humans and the environment, without redefining the visitor experiences (Taylor et al. 1996; Dakin 2003). The VEP technique uses participants' own photographs to measure human perceptions. With minimum researcher intrusion on the visitors' experiences, these photographs illustrate how visitors see and interpret the world and the people and places in it (Haywood 1990). The technique was first introduced by Cherem (1972) in his study of public images as social

indicators. The VEP method allows for an effective, fast measurement of on-site and real-time responses, making it particularly applicable to a variety of field situations, particularly linear situations such as rivers, trails, and roads (Oku and Fukamachi 2006; Dorwart et al. 2007). VEP has been widely used in recreational contexts. For example, it was used to measure experiences during an urban visit to Toronto (Haywood 1990); tourist destination images (Jenkins 1999; MacKay & Couldwell 2004); and to identify similarities and differences in the opinions and experiences of locals and tourists (Balomenou & Garrod 2014). Although it has not yet been used in a pilgrimage context, this method was adopted to allow categories to 'emerge' inductively from the data that were gathered.

2.4 Chapter summary

The essential merit of using a cultural landscape approach to study heritage tourism for a route corridor is to understand the interrelationships between the users and the physical environment of the route corridor. Different perspectives drawn from the past, present and on-site interactive relationships between the visitors and the Nakahechi Route help to achieve an understanding of the route corridor from both 'inside' and 'outside' the corridor. Using a variety of resources, we aimed to provide some detailed knowledge towards understanding the cultural landscape of the Nakahechi Route corridor.

Chapter 3 Formation and Transformation of the Nakahechi Route in Heritage Tourism.

3.1 Introduction

Lewis (1979:22) stated that "in trying to unravel the meaning of contemporary landscape,..., history matters. That is, we do what we do, and make what we make because our doings and our makings are inherited from the past". A historian sees a landscape as an accumulation. The landscape is an enormously rich store of data about the peoples and societies which have created it, but such data must be placed in its appropriate historic context if it is to be interpreted correctly (Meinig 1979:44). By function, a cultural route is a historic route of communication. An understanding of the historic cultural landscape frames the historic context and meaning of the form and pattern of the artifacts of human activity (Yahner et al. 1995). In the case of cultural routes founded on historic heritage, the significance of time during which the interrelationships of people and the physical route process was or still continuous to take place is one of the most important elements that form its values in tourism. And this relationships need to be considered from a broad and diverse spatial and temporal context beyond the boundary of the route corridor and contemporary time period.

As mentioned in section 1.1.3.2 that roads in Japan are full of symbolic meanings that are closely associated with travel in Japan, especially until the beginning of the Meiji era, as nearly everyone was walking, except of a small minority, moving meant going

along the road on foot and could be assimilated with the word *tabi* (moving, journey, trip). The patterns of *tabi*, the word in Japanese still enjoys a wide use, has changed completely with modernization, trains came, and then public transport, and later on cars, etc. The advancement of modern technology completely changed the style of people's way of moving. A new word came into use to name traveling using the new style: ryoko (travel). In the middle of the 19th century in Europe and especially in Britain the word "tourism" came into use and meant traveling and enjoying oneself. In Japan, although moving for purpose of play had already existed for centuries, the concept of "tourism" only came into general use during the Taisho era (1912~1926) (Guichard-Anguis & Moon 2009). The changing patterns of traveling and the introduction of 'tourism' concept at the beginning of the 20th century in Japan requires a historic examination and a broader understanding of the function and meanings of the Nakahechi Route that founded its formation and transformation in heritage tourism.

Chapter 3 are divided into two parts. The first part focuses on the time period from ancient to the Taisho era, before the introduction of "tourism" concept from the western countries using method of formal literature review (section 2.3.1). The historic meanings of the route are explored beyond the boundary of route corridor but closely related to other routes, sacred sites and the Kumano area in general. The second part focuses on the time period after Taisho era to the current, using a combination of formal and popular literature review (section 2.3.2) in order to examine the transformation phases for the routes in modern heritage tourism. Combining the two parts, the convergences and divergences between the media representations and historic meanings

of the route can be thus identified in order to imply on interpreting the Nakahechi Route in tourism founded on its historic heritage by addressing the dimension of time.

3.2 Historic meanings of Nakahechi Route

3.2.1 The Kumano area

It is impossible to discuss the history of the Nakahechi Route without explaining the Kumano area it is embedded in, as the route is also generally referred to as *Kumano Kodo* (old road in/to Kumano). Kumano, as a geographic term, refers to the southern part of Kii Peninsula. The boundary of this area is still under academic discussions. But generally, it was considered synonymous with another ancient place name - muro, which is municipally divided into four parts of the eastern-muro (higashi-muro gun), western-muro (nishi-muro gun) (belonging to the current Wakayama Prefecture) southern-muro (minami-muro gun) and northern-muro (kita-muro gun) (belonging to the current Mie Prefecture) in the modern period (Kuwahara 1999) (Figure 3.1). Some scholars also consider that the Shimokitayama-mura, Kamikitayama-mura, in Nara Prefecture also belongs to the ancient “kumano” area because of the religious status of the Tamaki Shinja shrine (areas circulated by blue lines in Figure 3.1).

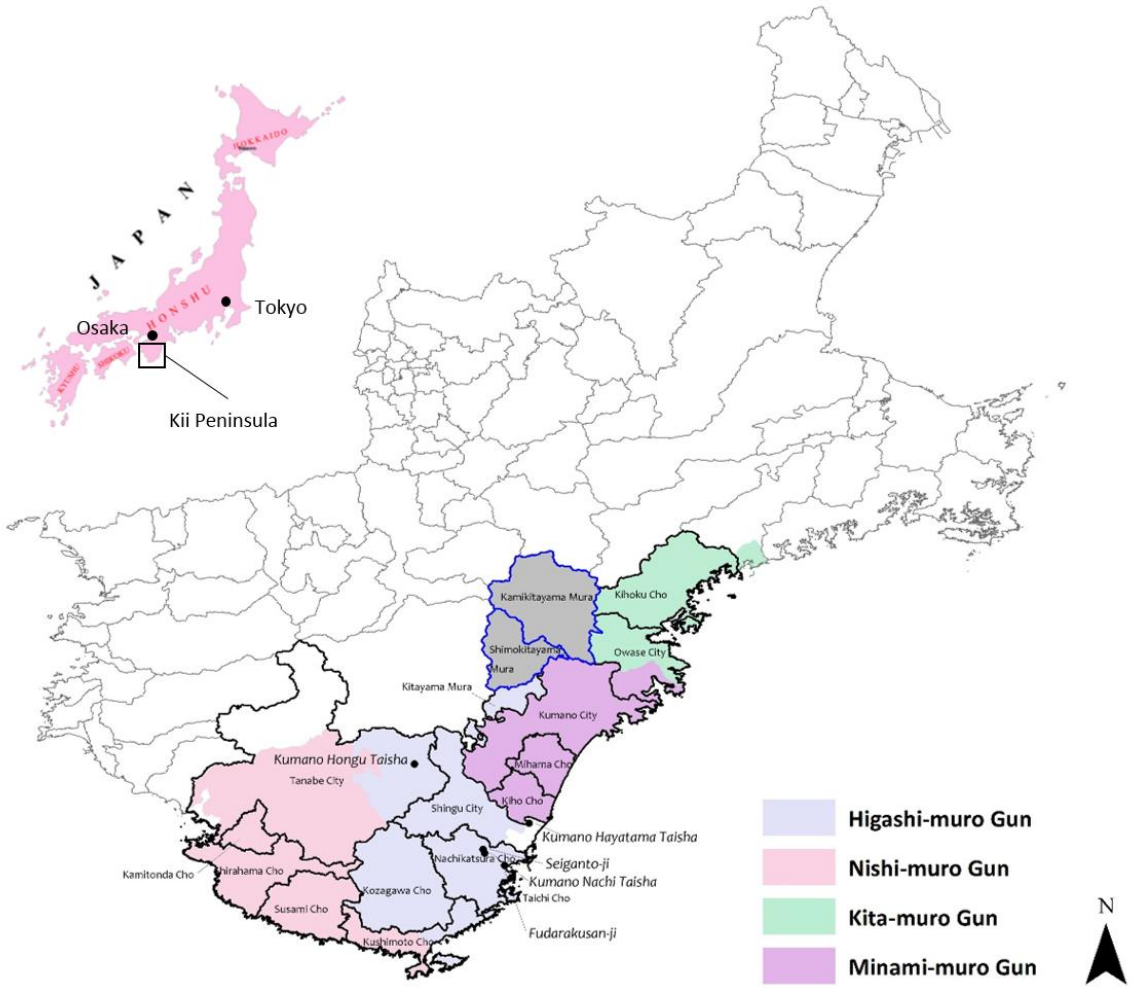


Figure 3.1 The map of Kumano area, indicated by the synonymous place name - "muro" (shaded areas together). The enlarged map consists of municipalities of the three prefectures, Wakayama, Nara and Mie, as of 1st January 2015. Shaded areas were drawn based on the municipalities of the three prefectures in 1st October 1950. (Base map source: National Land Numerical Information download service, http://nlftp.mlit.go.jp/ksj/gml/datalist/KsjTmplt-N03.html, accessed in 2015/11/10)

Both the place name "kumano" and "muro" are considered strongly associated with the religious meaning as the deep mountains on the Kii Peninsula have nurtured the spirit of nature worship. *Kumano Shinko* (beliefs in Kumano) can be traced recorded in "Nihon-shoki", the oldest chronicles of Japan completed in 720 CE[3]. Secluded from the outside

by the stretching and undulating mountains, Kumano area have developed its unique religious culture, which later on received influences of Buddism during the 9th and 10th century. *Kumano Mode* (Pilgrimage to Kumano) means the pilgrimage to *Kumano Sanzan* (literarily meaning three mountains in Kumano), each of which had established its own distinctive form of nature worship at the beginning. However, under the influence of the *Shin-Butsu Shugo* (Shinto-Buddhist fusion), they came to be revered as *Kumano Sansho Gongen*, the trinity deities of Kumano from the 11th century. *Kumano Sanzan*, which is also well known by their places' name as Hongu, Shingu and Nachi, consists of three shrines: Kumano Hongu Taisha shrine (Hongu), located in the central reaches of the Kumano River, the largest river in Kii Peninsular that runs into the Pacific Ocean, Kumano Hayatama Taisha shrine (Shingu), approximately 40 km downstream at the river mouth, and Kumano Nachi Taisha shrine (Nachi), approximately 20km further to the southwest in the Nachi Mountains. There are also two temples, Seiganto-ji temple and Fudarakusan-ji temple (Nachi) that are an integral part of the sacred sites (Figure 3.1). As around the same period that the belief that the Shinto deities are Japanese incarnations or manifestations of Buddhas became prevalent, the deities of the three shrines were considered to be incarnations of Amida-nyorai (Anitabha), Yakushinyorai (Bhaisajyaguru-vaiduryaparbha) and Senju-kannon (Sahasrabhuja), respectively. Kumano area thus became worshiped as the Buddhist Pure Land and as such, attracted much religious attention and prospered as a pilgrimage destination since ancient times.

3.2.2 Religious journey in ancient times

In Japan, like everywhere else, travel without external compulsion initially arose as a phenomenon of the upper class (Funck & Cooper 2013). During the Middle Ages, routes connecting Kyoto to Kumano was actively used for pilgrimage by abdicated emperors and aristocrats from the 11th to 13th century. These journeys, which were made with an average entourage of one thousand persons, took about a month, covered the distance of approximately 300km and represented the beginnings of the *Kumano Mode* (Figure 3.2). “Ryojin Hisho”, a corpus of “Imayo” (popular style of song in Heian era) songs compiled by Emperor Go-Shirakawa (Emperar 1155-1158, cloistered 1158-1179/81-1192), has a verse saying that to visit Kumano, the routes of Kiji (short of kanji character “伊” in the middle of the current name Kiiji) and Iseji could be taken.

Figure 3.2 *Kumano Mode* in Heian period. (Source: "Kii no Kuni Meisho Zue: Kohen, Ni-no-Ken" (Illustrated collection of famous places of the Kii Province, the second volume, the second chapter), 1811)

Following the noblemen, it was largely the samurai who undertook pilgrimage until the 14th century (the Muromachi era) did the economic situation of the peasants allow some of them to make these kind of journeys. Visitation form the people in the upper class left physical marks along the route, which is called *Ōji* shrine (subsidiary shrines of the Kumano Hongu Taisha shrine), providing rituals and resting place. Compared to these aristocrats, less written documents were left by or for the common people. However, the phrase *Ari-no Kumano Mode*[4] confirmed their enthusiasm. The phrase, firstly appeared in 1603 to describe the situation at the end of Middle Ages, was used to liken scenes that so many people passed along the routes, making long lines that resemble the processions of ants.

3.2.3 Development of the routes in the Early Modern times

During the Early Modern times (Azuchi-Momoyama to Edo era), the enthusiasm for pilgrimage destined only to *Kumano Sanzan* gradually diminished. The focus of the major pilgrimages shifted to Ise, which is the shrine of the goddess of the imperial family and consequently the highest deity in the land (Funck & Cooper 2013). In the latter half of the Edo era, destinations diversified to temples and shrines in Shikoku (literarily, western provinces). In the 17th century, people, especially those from the Kanto and Northeastern regions would travel to Ise, then use Iseji to visit Seiganto-ji temple in Nachi Mountain, as it is the first one of the 33 pilgrimage destinations called *Fudasho* for *Saikoku-junrei* (pilgrimage to the western provinces), visit *Kumano Sanzan* on the way and continue their journey to the west. The diversification of the destinations

Figure 3.3 Remaining of road reparative and maintaining construction during Edo era ordered by then ruler of the Kishu Domain on Nakahechi Route for the section from Hosshinmon Oji to Kumano Hongu Taisha shrine. a. Stone-pavement; b. Relics of Ichiri zuka (milestone); and c. Stone steps.

resulted in a more diverse use pattern, which further entailed more detailed naming of the routes. The first appearance of the name *Ohechi* and *Kohechi* in written documents were thus not seen until the book "Seisuisho (meaning waking people up and laughing)", a collection of comical stories, which widely circulated among the common people compiled in 1628. The name, *Nakahechi* was considered derived after the *Ohechi*. There

were also saying that "O", "Naka" and "Ko" refer to the distance of each route from Kyoto respectively. According to historic documents, *Ohechi* and *Kohechi* were only started being used for pilgrimage purposes during the Early Modern times.

The Edo era (1603-1868) was considered the maturation phase for the routes, as historic materials documented the routes with descriptions of their directions, checkpoints, relics left by predecessor users etc. In "Kii Zoku Fudoki: Dai-ni-shu (the local history of Kii province, continued, Kumano 2nd Series)", compiled in the late years of Edo era (1608-1839), roads were referred to as *Kumano Kaido* (Kumano Highway). Iseji was termed as *Higashi-Kumano Kaido* (Eastern Kumano Highway) and the *Kiji* was termed *Nishi-Kumano Kaido* (Western Kumano Highway). The name *kaido* confirmed the pivotal rules of these routes as transportation for people, materials and goods. During that period, the five major roadways connecting the country were established. Roadways in the Edo era were places where people of different ranks, backgrounds and statuses could meet and mingle, where information and knowledge were shared and transmitted. As the primary routes in both local and regional transportation for the Kumano area, the then ruler of the Kishu Domain ordered large scale reparative and maintaining construction for the roads as sections with steep grades were armored by stone pavement, stone steps, road signs were erected for pilgrims and other users alike (Figure 3.3). Routes prospered as inter-media of culture. Interestingly, the earlies written record of *Kumano Kodo* (kodo means old road) also appeared during this period. Instead of the current use of it as a generic term, it was used to differentiate the original section that passed Takijiri with Shiomi-toge, which was developed as the new road connecting Tanabe and Shibamura (the current Kurisugawa district) (Figure 3.4). Such changes

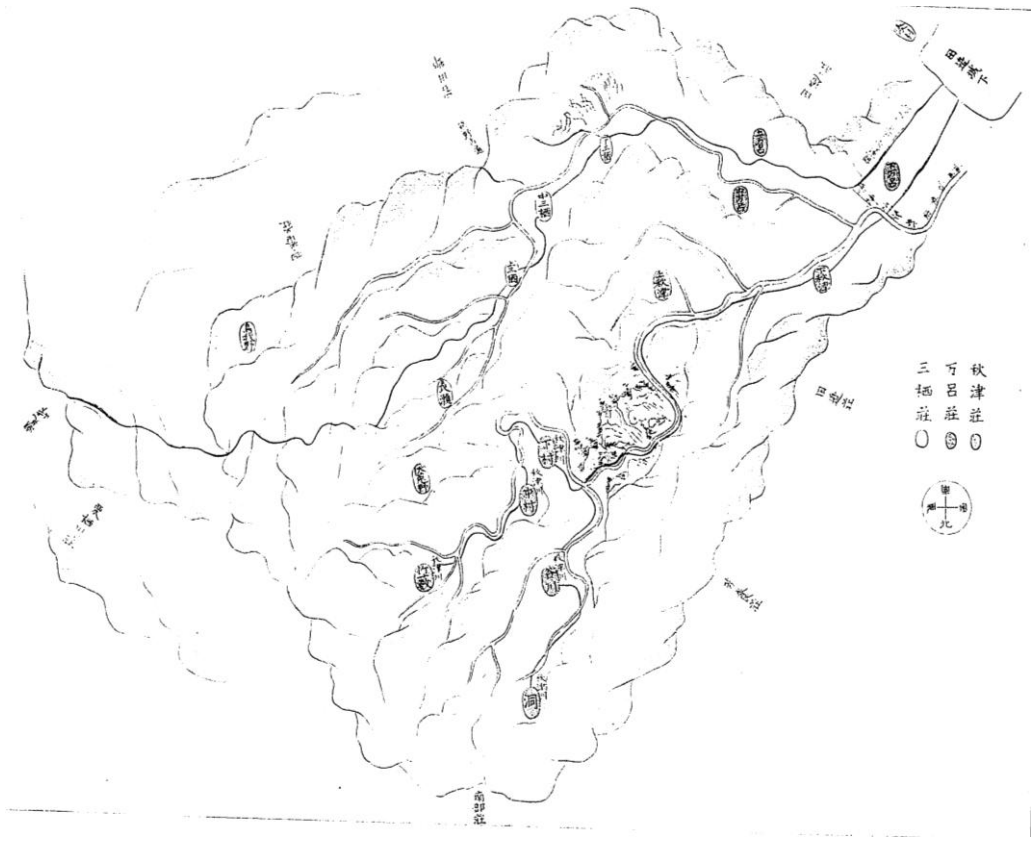


Figure 3.4 Map of Misu sho, Maro sho and Akizu sho in "Kii Zoku Fudoki: Dai-ni-shu" (the local history of Kii province, continued, Kumano 2nd Series). The name of "kumano kodo" was used here to differentiate from the newly developed shiomi-toge route.

occurred to the routes also indicate that roads can be flexible and adaptable to the change of their function. As entering the Edo era, the increase traffic of logistics result in the development of Shibamura (Kurisugawa), located on a comparative flat land of fluvial terrace developed into an intermediate hub of transport. By connecting Shibamura and Tanabe in a more direct way, Shiomi-toge, which already existed in the Middle Ages and had been functioning as short cut for local people gradually attracted more traffic and upgraded to *Kumano Kaido* which left the older section being referred as *Kumano Kodo*.

The maturation of the routes in the Early Modern times left traceable marks on the landscapes of the route corridor. During this period, settlements along the routes developed into staging posts with *tenma-jo* (post stations where horses are prepared for transportation of official travelers and commodities) developed for some major stops such as Tanabe, Kamimisu, Shiba (current Kurisugawa), Takahara, Chikatsuyu, Nonaka, Fushiogami, and Hongu. Kuwahara (1999) compared the numbers and scales of villages along the *Kumano Kaido* recorded in the historic travel/guide books in 1676

Figure 3.5 Villages along the Kii route from different time. Upper-left: scenes from “Nanbu Eki” (scenes of the southern station), (photo source: "Kii no Kuni Meisho Zue"(Illustrated collection of famous places of the Kii Province), 1811); Upper-right: Resident houses lined up along Nakahechi route in Takahara village, (photo source: “Shashinkiroku:Nihon no Kaido-Kii・ Kumano-ji” (photographic record of Japanese highway- Roads in Kii and Kumano),1973); Bottom-right: look out point from Takahara village (by author in 2013). Bottom-left: Lookout for Chikatsuyu village from Hashiori-toge (by author in 2013).

(Empou 4th) and 1689 (Genroku 2nd) and found an slight increase in resident houses built on lands of manors and for *buyaku* (forced construction labor) who also worked for *tei-so* (speedily delivering mail in a relay operation, 逓送). The increase of such residents indicated an increase of population depending on the functioning of the roads. However, as not all the residential houses were built along the road, the increase of the houses does not necessarily indicate the increase of villages. In fact, *gai-son* villages, village that centers along a street, were observed to greatly increase during the following 150 years 1839, due to increasing population and business activities along the route (Figure3.5). Road conditions were greatly improved during this period to accommodate busy traffic as feudal lord of the Kii Shingu, Mizuno ordered the repair of the section from Fushiogami to Hongu by stone-steps and stone-pavement. Ōgumo-tori, which was said to be the toughest section of Nakahechi Route was paved with stone by a traveler called Enribo (厭離坊) for 15 years from 1690 (recorded in Kinan-Yunou 紀南遊嚢 1799).

3.2.4 Secularization of the religious journey in the Early Modern times

Edo era (1603-1868) was also the time when pilgrimages began to undergo a secularization process, and religious journeys developed into highly organized forms of travel that allowed for sightseeing. Visiting temples or shrines were used sometimes as not more than a convenient excuse getting permission to leave one's own community for fun and being away from the daily environment. Compares to other short journey near their residency, visiting Kumano and Ise was a long journey both geographically and psychologically, that worth at least "once for a lifetime." Traveling was also made

easier compares to the ancient time as road environment was improved; the number of *hatago*[5] (economic inn) greatly increased, and several guidebooks (e.g. “Meishoki”) and travelogues (e.g. “Dochuki”) had been published (Figure3.6).

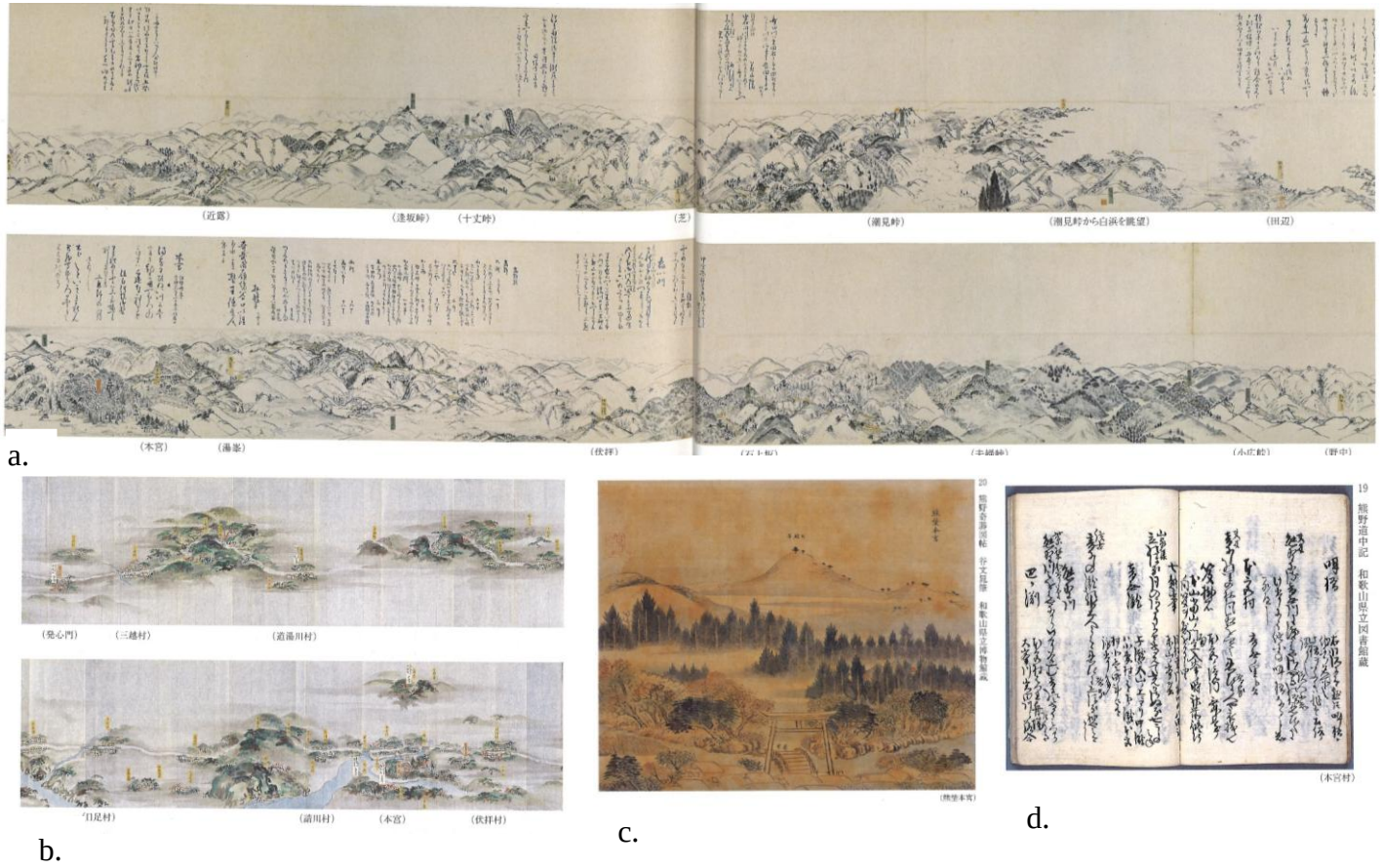


Figure 3.6 Guidebooks and travelogues published in the Edo era. a. “Kumano Sansui Zuken” (Kumano landscapes scroll, Tokyo National Museum collection, very likely by GION Nakai (1676~1751)); b. “Nakahechi Zu” (Map of Nakahechi, Wakayama Prefectural Museum collection, Edo era; c. “Kumano Kisho Zujo” (Kumano Scenic Folio,Wakayama Prefectural Museum collection, by TANI Buncho (1763~1840)); d. “Kumano Dochuki” (Travel journal of Kumano, Wakayama Prefectural Museum collection, by TORII Gennojo, 1722).

Besides accommodation, visits also involved consuming for food and buying souvenirs. Events to welcome people back from their journeys were also performed such as in Tanabe, after circulated the sacred sites of *Kumano Sanzan*, *mochi* (rice cakes) were made from pounding glutinous rice (performed for celebrating situations in Japan) in accommodations, which later on developed into buying *mode-mochi* from Hongu and Shingu. There were even records that businesses emerged for agencies to be paid to let surrogate person to perform those religious rituals (*daigori*), such as wetting feet for purifying purposes before entering shrine (*mizu-gori*).

Meishō, literally a place of fame, is another important idea that greatly enhanced traveling for pleasure from that period. It is a concept associated with *uta makura*[6], the pillow word, until the place tended to become a real tourist destination during the Edo era. To the famous places celebrated by Japanese poetry, new places were little and little added, which were chosen for their own characteristics. All those places became listed in all kinds of information books, illustrated ("meisho zue") or not. For example, in "Kii no Kuni Meisho Zue" (illustrated collection of *meisho* of the Kii Province), physical structures such as shrines, *Ōji* relics along the Nakahechi Route were recorded with along historic anecdotes or poetries that relates to the place. Natural wonders of mountains and rivers, views of undulating mountains within sea of clouds were also recorded with along quotation from literature. Those well-known "scenes" in the Japanese literature along the routes could also be considered as important to enhance the enjoyment of traveling when circulating these sacred sites for Japanese in the Edo era.

From the historic records, it could be clearly seen that routes in Kumano were lively used for travelers who prayed and played. As a result, the Kumano area was considered the advanced places of traveling for recreational purposes for Japanese people. In another word, the routes were actively used for the purposes of pleasure that we call "tourism" today.

3.2.5 Obsolesce of the religious function of the route during Meiji and Taisho eras.

The modern Japanese tourism experience is said to have begun in the Meiji era (after 1868), with the gradual removal of internal travel restrictions (Funck & Cooper 2013). However, for the Kumano area, the prominent Heian era that associates the routes with abdicated emperors and aristocrats and the heroic Edo era that witnessed the heydays of the pilgrimage routes outshone the following Meiji era during which the government policy was to deify Emperor, establish Shinto as the national religion and returned Japan to the state of *saisei icchi* (unity of church and state, theocracy). The resulting ordinance of *shinbutsu-bunri* (separating Buddhism and Shintoism) and *haibutsu-kishaku* movements (anti-Buddhist) greatly damaged the religious status and popularity of *Kumano Sanzan*, as it

Figure 3.7 Local students commute to school using section of the Nakahechi Route. (photo source: "*Shashinkiroku: Nihon no Kaido - Kii・Kumano-Ji*" (photographic record of Japanese highway- Roads in Kii and Kumano), 1973)

represents the fusion of Buddhism and Shintoism. However, it was said by the local people that while travelers from the Kanto or Northernestern region could still be sometimes spotted, recognized by the dialects they spoke, such people disappeared completely entering the Taisho era (1912-1926). Historic use of the routes had come to an end especially for recreational purposes. Pilgrimage routes was pushed to the blink of distinction as apart from sections that were still used in local peoples' livelihood most of the section in the mountains were overgrown by grass and those that went through villages and towns were paved, widened or renovated to accommodate modern transportation vehicles **(**Figure 3.7).

3.3 Media representations of the routes in modern tourism

To trace the transitional change in portraying "modernized" tourist destinations in the Kumano area, the 55 textual and pictorial articles from the *Tabi* magazine as described in section 2.3.2 that are relevant to this area were chosen for analyses. A literature review for regional and national tourism development and events related to tourism development in the Kumano area was firstly conducted to grasp a general picture for this area. An analysis on the contents of the articles from magazine *Tabi* was then conducted through coding. Both the textual and pictorial articles were coded using the same categorization method, as individual photos had captions, which explained the contents and location of the images (Table 3.1). Categories were specifically designed based on the common article themes, referred to as "dimensions" to order to fit into the local context and characteristics of Japanese tourism. Some dimensions and attributes

referred to the Beerli and Martin's study (2004) were used in order to examine the perceived images of the tourist destination. This was considered appropriate, since the articles in the magazine *Tabi* were generally written based on the post-visit image of the authors.

Table 3.1 Dimensions and attributes used for coding the textual and pictorial articles.

Category	Sub-categories
Religion, History & Culture (N=49/55)	①Temple, Shrine ②Relics, Statues & Monument ③Festival ④Local lifestyle, food, industry ⑤Art (e.g. Architecture, Literature etc.) ⑥Myth, Folklore, Historic story ⑦Pilgrimage
Natural resources (N=38/55)	①Ocean (water, beach, coastline etc.) ②Land (Mountain, forest etc.) ③Water (River, lake, valley, waterfall etc.) ④Variety and unique flora and fauna (natural monument etc.) ⑤Hot spring (water quality, smell etc.)
Landscape (N=26/55)	①Townscape ②Village, pastoral scene ③Wide or panoramic view
Facilities for travelers (N=24/55)	①Accommodation (e.g. Japanese inns etc.) ②Restaurant ③Rest area, tea house, road sign etc. ④Guide (Kataribe)
General infrastructure (N=31/55)	①Carriage ②Ferry, boat ③Railway ④Bus, taxi ⑤Travel expense, ticket fare etc. ⑥Development of local infrastructure
Tourist leisure (N=3/55)	①Experience activities (e.g. Rafting) ②Shopping, souvenirs ③Golf, Resort area
Social Environment (N=9/55)	①Hospitality and friendliness of the local residents ②Under-privilege and poverty ③Recession of local industry

Table 3.2 Textual and pictorial articles concerning Kumano area extracted from the magazine Tabi (1924-2004).

Year	1927	1928	1929	1932	1933	1936	1939	1940	1956	1959
Month	Apr.	Sept.	Nov.	Jul	Feb. Apr.	Nov.	Apr. Sept.	May.	Apr.	Sept.
Textual Article	1	1	1	1	2	1	2	0	1	1
Photo-gravure	0	0	0	0	0	0	1	1	0	0
Year	1960	1961	1966	1969	1971	1974	1975	1976	1983	1986
Month	Nov.	Feb.	Feb.	Feb. Dec.	Jul.	Aug.	Jul. Oct.	Jul. Nov.	Feb.	Sept.
Textual Article	1	1	2	3	1	1	2	2	0	1
Photo-gravure	0	0	1	0	0	0	0	0	1	0
Year	1989	1990	1992	1993	1994	1996	1999	2001	2002	
Month	Oct.	Jan. Jun.	May-Dec.	Jan.-Apr.	May	Jan.	Jun.	Nov. Feb.	Nov.	
Textual Article	1	2	8	5	1	1	0	1	5	
Photo-gravure	0	0	0	0	0	0	1	1	0	
Total No. of Textual Articles 49				Total No. of Photogravures 6						

According to Table 3.2, the first article that cited Kumano appeared in the April 1927 issue, under the title "*Kumano—meguri*" (tour around Kumano). Over the past 80 years, the Kumano area had been portrayed by a diverse range of topics. In 2002, a special collection of articles under the topic of "*Kumano-wo-aruku*" (walking the Kumano area) was compiled in the November issue, demonstrating the popularity of this area as destination in the Japanese domestic tourism market. Among all the textual and pictorial articles, the dimensions of Religion, History, and Culture were most prominent, appearing in 49 out of a total of 55 articles. This was followed by Natural Resources (38/55), General Infrastructure (31/55) and Landscape (26/55). The least covered dimensions in this magazine were Social Environment (9/55) and Tourist Leisure (3/55). Since the dimension of General Infrastructure is mostly introduced as facilitator for other dimensions, the following paragraphs will explain the results of longitudinal comparisons for the detailed attributes portrayed for the Kumano area, including the routes, particularly regarding the three mostly portrayed dimensions of 'Religion, History, and Culture', 'Natural Resources' and 'Landscape'.

3.3.1 Religion, History and Culture

Given the rich historical and mythical background of the Kumano area, this dimension was represented by various attributes ranging from tangible elements such as historic relics (29/55), and temples and shrines (26/55) to intangible elements such as local people's lifestyles (28/55), myths and folklores (20/55), and festivals (9/55).

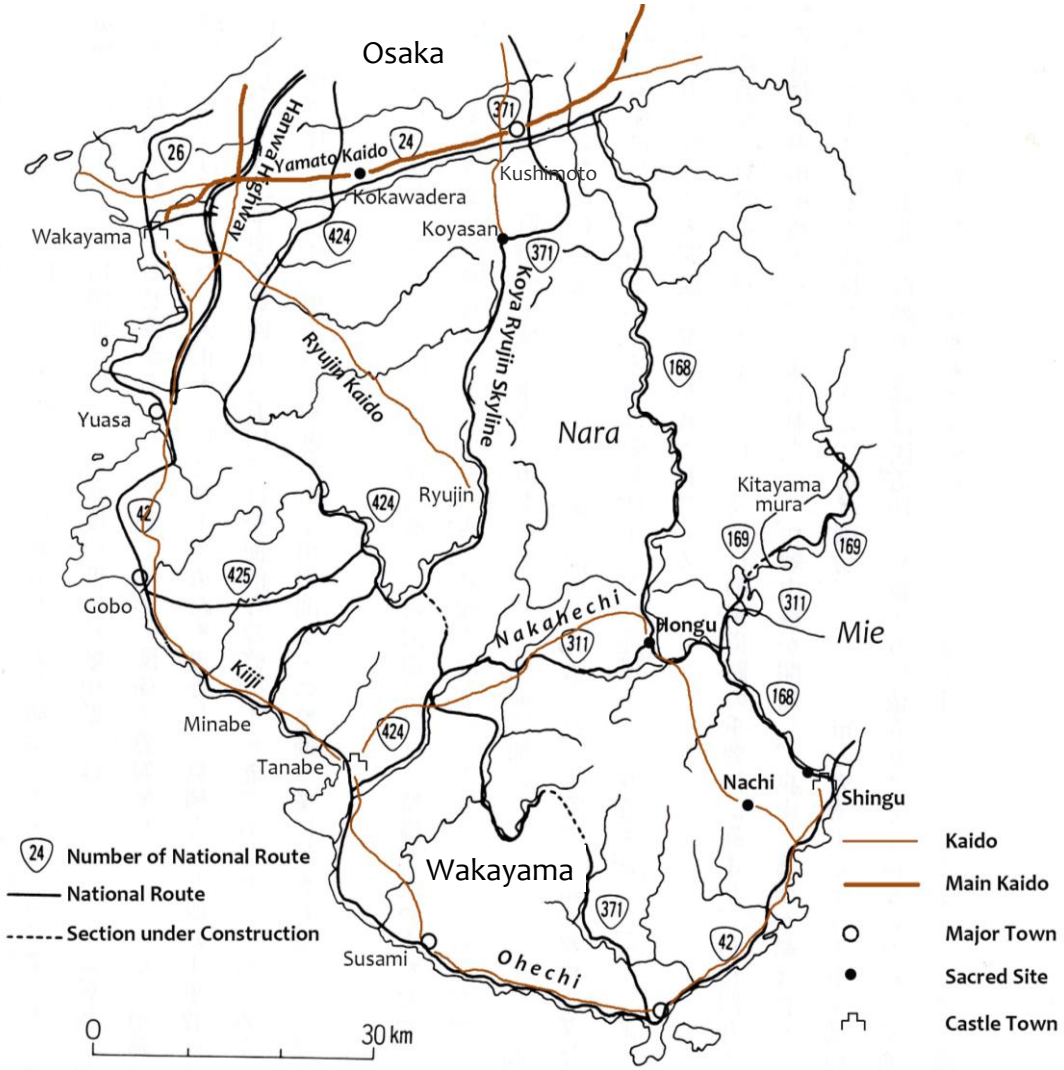


Figure 3.8 Map for the land transportation network in Wakayama prefecture by overlapping highway (kaido) in Edo era and national roads by 1993. Dawn on maps in Wakayama Federations of Wood Cooperatives (1993: 18-20)

Before 1956, portrayals of the historic relics focus on the ruins of Shingu Castle, the tomb of Jofuku in Shingu city and the relics related to the legend of Ogurihangan and Terutehime (the Princess Terute) in Yunomine. Corresponding to the early efforts of Japanese government to protect the tangible cultural properties, the word of "national treasures" and "specially protected buildings" were used in these paragraphs for temples and shrines. The tradition of *Kumano-mode*, paying pilgrimage to *Kumano Sanzan* and

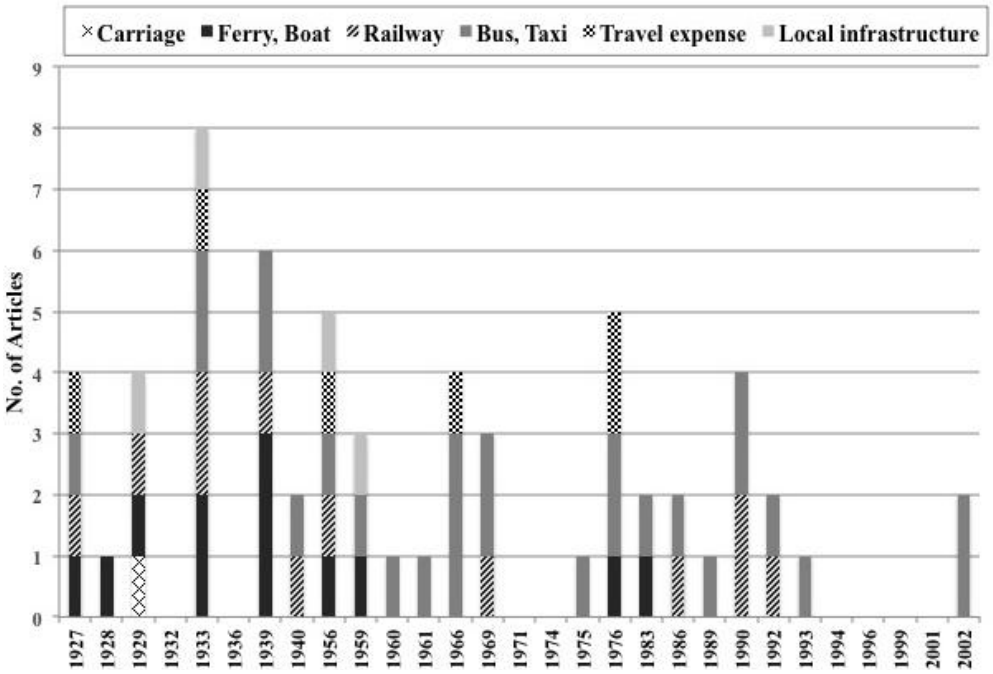


Figure 3.9 Results of longitudinal comparisons for the dimension of General Infrastructure.

the ascetic practices of Buddhist priests were only mentioned in three out of 12 articles. Only the Iseji route (route that connects the Ise Grand Shrine with the Kumano area) and the Omine Okugake-michi route (referred as *Shugen-do*, road of ascetic practices, which as a metaphor translates to a way to acquire power) were mentioned by their religious meanings.

Between 1959 and 1969, representations of historic relics concentrated on *Ōji* shrines, (subsidiary shrines of the Kumano Hongu Taisha shrine, mostly relics but some still remains the shrine architecture), ruins of teahouses, statues or famous people's tombs in the surroundings of the routes. This phenomenon was contributed by the construction and improvement of land transportation for the mountainous inland part of the Kumano area (Figure 3.8). Completion of National road No.168 from Gojo (Nara) to Shingu (Wakayama) in 1963 and upgrade of No.311 from Owase city (Mie) to Kamitonda-cho

(Wakayama) as national road (1970) made the access cutting through the inland of peninsula more easily by bus or car. The result of a longitudinal comparison of the General Infrastructure dimension (Figure 3.9) can also support this argument that water transportation (e.g. ferry, boat) played a major role in the articles prior 1960, while after 1960, land transportation (railways and buses) gradually dominated the modes of transport to this area. Along with the development land transportation, the historic importance of these routes started gaining importance over the perception on their transport functions. Routes were started to be referred as *gokomichi* (road used by the emperor, 御幸道) to exemplify the importance of repeated visits by the abdicated emperors during the Heian era. Among the articles between 1959 and 1969, seven out of nine articles described the Nakahechi Route, as it was deemed as the "orthodox" route Japanese emperors actually used when visiting the *Kumano Sanzan*. Traveling along these routes and stopping at the historic relics were full of symbolic meaning, pursuing the path of the retired emperors.

The routes themselves started being depicted as an important representation of the religious and historic dimension of the Kumano area from 1983. Before 1983, routes' morphologies were already frequently mentioned from the 1970s. The routes were firstly referred to as *Kumano Kodo* (*kodo* literally means old road) in 1976, included in a special issue of *Kyoshu-no-kaidō to syukuba gaido* (guide to the nostalgic main roads and accommodations). However, only the short stone-paved section before reaching the Nachi Taisha shrine, and the Ōgumo-tori, Kogumo-tori sections that together connected the two sacred sites of Kumano Hongu Taisha shrine and Kumano Nachi Taisha shrine were considered retaining their original appearance of high historic value. During

Japan's rapid economic growth in the 1960s and 1970s, the concept of protecting the cultural properties started to expand to include groups of traditional buildings from 1975 under the fear of losing the local traditional environment from the accelerated modernization of Japan. The further extension of this concept to protect traditional environment from a broader context has seen its realization through the launch of the *Rekishi no Michi* (History Road) project in 1978 by the then Agency of Cultural Affairs (Nishikawa 2014). Routes in the Kumano area that are located inside Wakayama prefecture were selected as one of the first three History Roads and went through a large scale restoration project for five years. It could be said to a certain extent that the completion of the project marked the start of the routes as representative in the media portrayals of the religious, historic and cultural dimension of the Kumano area. After the project, articles in magazine *Tabi* began referring to the routes as "historic relics" that were restored from the *Rekishi no Michi* (History Road) project.

3.3.2 Natural Resources

Media representations for the natural resource dimension of the Kumano area had also gone through several transitional phases under the broader cultural and socio-economic influences.

Articles in the 1920s describe to great extent the geographic beauties along the coastline of Katsuura and Shingu (e.g. Mitarai-no-hama (seashore of Mitarai), Onigajo), Doro valley and Nachi waterfall. Poetic phrases and/or old literature were frequently quoted to describe these places, representing the strong cultural influence of literature work on

Japanese tourism. During the increased nationalism in 1930s, a national park system was established in Japan following American patterns of designating sites of cultural and natural importance as representing "the nation." With the designation of national park causing a "sensation" (Article in 1933, February) for tourism to areas of outstanding natural beauty, the Yoshino-Kumano National Park, established in 1936 naturally became representative for tourism in Kumano area. Three articles out of six during this period used the word "national park" in the titles to attract readers. In the two articles included in the 1933 February and April issues, transportation (mainly on land) and proposed schedules of varies length were introduced in detail to the Yoshino-Kumano National Park. Yet the author expressed his doubts over the idea of "putting a stamp on a landscape by nation" may raise a objection from people who believe that there should not be an objective evaluation towards landscapes, as every landscape can be perceived differently by different people. Although the author compromised by saying that the system can still be utilized as a generalization for the current time that might have a potential influence on people choosing tourism destination in the future, the critical stance of the writing style, differs from other kinds of travel magazines that we see nowadays.

Onsen (hot-spring or spa) is a constant popular attribute under this dimension that constitutes the image of Kumano area. It is not surprising given the long history of traveling to hot springs in the Edo era, that visiting hot-springs became common not only among feudal lords and samurai but also common people, and since then the basic

Figure 3.10 Yunomine onsen, typical mountain village centering the linear street. Up: Yunomine onsen depicted in "Kii no Kuni Meisho Zue: Kumano Hen" (Illustrated collection of famous places of the Kii Province, Volumn of Kumano, 1811, with the route connecting with Hongu shown as "Hongu-michi" on the upper-left side of the picture on the right); Bottom: Japanese onsen inn in Yunomine onsen, (by author in 2014).

structures of today's spa settlements were completed. Across the Kumano area over the years, the most heavily portrayed *onsen* in *Tabi* magazine is Yunomine, which claims to be the oldest spa in Japan and strongly identified with the pilgrimage tradition (Figure3.10). Before 1940, hot springs along the coastline (e.g. in Katsuura, Kushimoto and Susami) received more coverage thanks to the accessibility by ship to Katsuura as a "fine harbor" and later on by train that gradually connect the outskirts of the peninsula. With the attention gradually shifting to the inland of the peninsula, Japanese-style accommodation facilities that with access to *onsen* water located along the routes gathered more popularity (For example, Ayukawa onsen along the Nakahechi Route). However, neither the already famous Yunomine nor any individual *minshuku* (family run Japanese-style guesthouse) that scattered along the routes received as much attention as in the 1970s and 1980s when the *onsen* boom (hot spring boom) brought unprecedented scale of popularity to the *onsen* villages in the mountains. Yunomine, with its *hinabita* (rustic) atmosphere became the most representative, followed by Kawayu, bringing in a unique character of absence of sex-segregation with its public and visible riverside hot spring pools. In fact, Kawayu also has a long history and was already mentioned in the first article in 1927. Being more adaptable to social and cultural changes, Kawayu has a more open feel than Yunomine and it established the "hermit bath[7]" or "thousand people bath" in the mid-1980s for the winter season.

3.3.3 Landscape

The dimension of Landscape changed with along the other two dimensions of Religion, History and Culture and Natural Resources as it represents the general atmosphere and

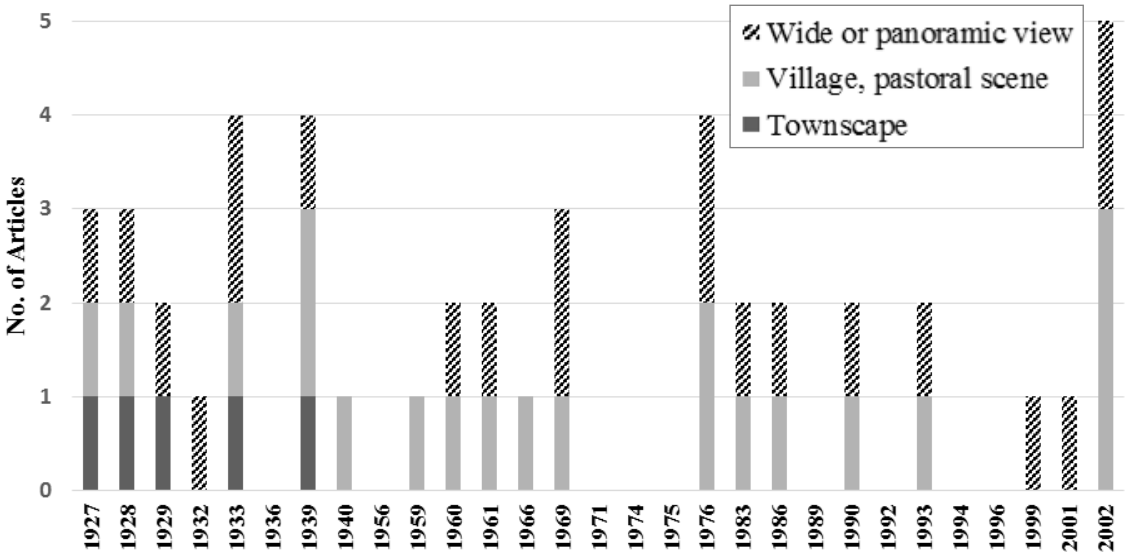


Figure 3.11 Results of longitudinal comparisons for the dimension of Landscape.

scenic spots mentioned for the Kumano area. Figure 3.11 shows those articles prior to 1940 addressed townscapes that mostly referred to Shingu, the port town (Figure3.8). Originally developed around the Shingu castle as a *Jyokamachi* (castle town), the port town prospered with commerce and tourism. The architecture styles of the houses (For example, *kawara*, houses on the dry riverbed) and the panoramic view for the town from Kamikura San (Kamimura shrine on a higher position of the town) were the most representative for the landscape depicture in Kumano area. A few villages were mentioned, but mostly from a distant view while taking the boat ride along Kumano River to Doro valley.

A drastic shift happened from the 1960s when rural villages scattered in the mountains started capturing more attention from tourists. This shift corresponds to the retro-boom in Japanese tourism that began in the 1970s. In the nostalgic cast of this retro boom, the remote and rural areas represented Japan's pre-industrial agrarian heritage (Akatsuka

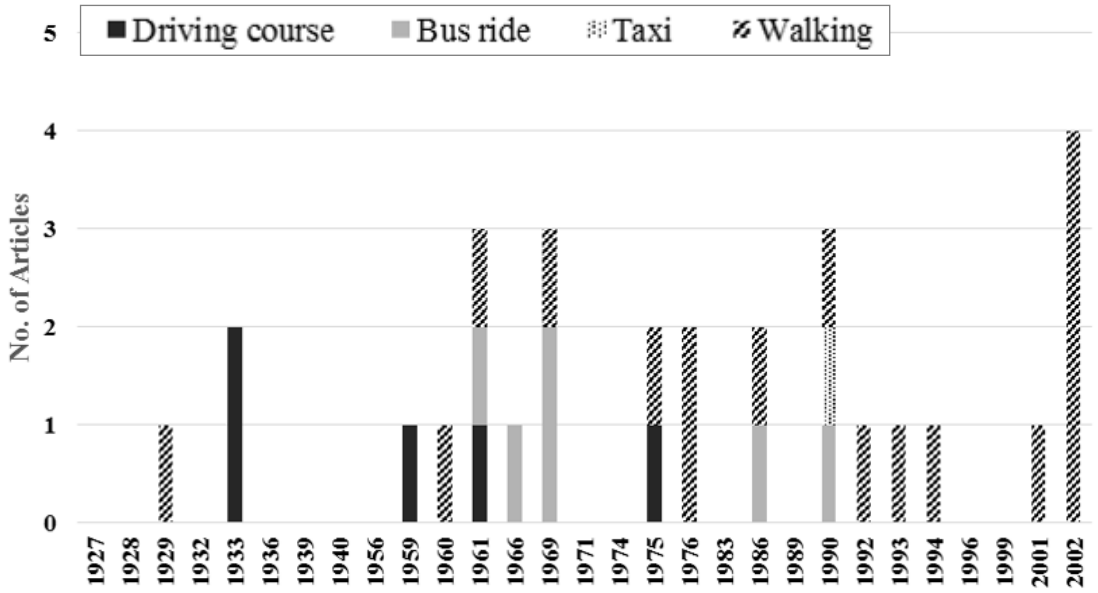


Figure 3.12 Results of longitudinal comparisons for how were the routes traveled by the authors.

1988). Triggered by the campaign "Discovery Japan" launched by the Japan National Railways in 1970, not only traveling to these villages, but also using the routes, particularly those that remained unpaved in the forest, became popular by providing Japanese visitors with a means to reconnect with their past. Thus the media representation of the landscape in Kumano area shifts to rural landscape of the isolated mountain villages that were interpreted as peaceful and not-overly developed. Words like "nostalgia" and "reminiscence" frequently appeared in three out of four articles in the 1980s.

The final transition of landscape dimension relates to the routes. As a wide panoramic view has been consistently popular throughout time, during the 1990s, most of the views are mountainous landscapes that were contributed from hiking and walking the routes. Beginning 1992, walking became the major recommended touristic way to use the routes (Figure 3.12). A special issue in 2002 on the topic of "*Kumano Kodo*" (old

Figure 3.13 Walking events during the Japan Expo Nanki Kumano (*Nanki Kumano Taiken Haku*), 1999. Wakayama prefecture took the advantage of the broaden campaign for registering the sacred sites and pilgrimage routes in Kii Mountain Range as a World Heritage site around 2000 and initiated many activities of walking the Nakahechi Route. Photos are from the book published after the Expo (2000), recording such activities. Articles in the photo were given the title "Walk to bring the kumano kodo back to life (Kumano Kodo Yomigaeru Wouk)".

road in Kumano) basically defined the routes as hiking/trekking courses of various difficulties. There were several walking options, such as visiting several times, each time covering one section of the route, or walking with *kataribe*, the local guides. Various administrative initiated campaigns contributed to the trend such as "*Fureai Kishūji Rekishi-no-Michi Kyanpɑ̂n Kumano Kodo Pia*" (campaign for connecting with Kumano Kodo, History Road in Kishū) in 1990 and walking events during the "*Nanki Kumano Taiken Haku*" (Japan Expo Nanki Kumano) in 1999 (Figure 3.13). As a result, sceneries encountered at random spots during walking/hiking the routes became representative for the landscape dimension of the Kumano area.

3.4 Chapter conclusions

3.4.1 Transformation of the Nakahechi Route

As a complex route network system that has developed through a long historic span, routes in Kumano have been organically evolved with the environmental, socio-economic and political conditions. For example, Kuwahara (1999) pointed out that except for two major changes, the routes of *Kumano Kaido* recognized during the early times of *bakufu*-domain (feudal domain) system in Wakayama largely remained the same from the route of *Kumano Mode* (pilgrimage to *Kumano Sanzan*) in the Middle Ages. The change of routes was mostly due to the development of settlement areas to accommodate increasing population and transportation of people, material and goods. This process also reflects the necessity for the development of routes to match with the changing needs of the travelers.

Entering the Meiji era, further drastic changes happen to the routes as the need for the route to accommodate motor vehicle use result in new construction of the roads almost parallel but located lower from the traditional mountain passes. For those sections that run through human settlements, pavement and re-routing progressed in a dramatic speed. For example, construction of the new road (older National way No.311) from the 1883 resulted the older sections of Nakahechi Route that remained as forest trails fell into disuse and became overgrown with grass (Figure 3.8). From the analysis of the travel magazine *Tabi*, the newly build old national way No. 311 was referred as Nakahechi since the new one completely replaced the older section and functioned as the primary

route that connect Tanabe and Hongu until the "*Historic Road*" project from the 1970s restored those sections in the forest.

While the paved sections of the routes still somehow play a role in local communities' livelihood, those that were left as mountain passes that remains their forms as trails were mostly forgotten. It was not until the designation of *Kumano-michi* (Roads in Kumano area) as one of the first three designated *Rekishi-no-Michi* (History Roads) by the Cultural Affairs Agency of Japan in 1977 and the following five-year large-scale restoration project that brought the "revival" of Nakahechi Route, especially those older sections in the forest. Entering the late 20th century, those sections are strategically promoted by the local government and became particularly sought after for travelers (for hiking or for reminding them their past). *Kumano Kodo* was used to refer to the restored roads emphasizing the symbolic meaning of the route as *kodo* (an ancient road) (Figure3.4). Teranishi (2005) argued that such administrative initiated activities like the *Japan Expo Nanki Kumano* (Nanki Kumano Taiken Haku) held in 1999 to attract tourists only had a temporary effect. The brand image of the route as world heritage should be rethought with a critical mind.

3.4.2 The dimension of time

Combining the two parts, a deeper understanding for the cultural meanings of the routes can be achieved at a temporal length. The transition of routes in religious journey from ancient to the early modern times demonstrated that the use and religious meanings of routes in Kumano have never been static and have been depending on the historic and

religious transition processes of the sacred sites they connect with from both inside and outside the Kumano area. Different courses using different routes were established gradually and each route process their own distinctive history and characteristics.

For the Nakahechi Route, its cultural meaning within the context of Kumano area can be multi-faceted and can be manifested through different dimensions ranging from *Ōji* relics in ancient time, construction work in middle ages, important places recorded in literature (*meisho*), sustaining and prosperous use of the routes by the local communities, religious buildings, festivals, myths, folklores and other enormous tangible and intangible elements that are associated with multi-layered history. It seems far from adequate to simply commercialize or commodify these routes through a narrow interpretation of cultural meanings that only associated with the history of ancient aristocrats' visits (e.g. Nakahechi Route) when traveling to the Kumano area along the routes has organically evolved to satisfy visitors' cultural needs under different temporal context.

Although historic documents available and used in this study as well as using only one type of travel magazine, *Tabi* in the second section may raise the question as not encompassing to capture all of the aspects for the routes and the area, enough credit can be given to a large amount of literature reading and the constant style and long life span of the travel magazine *Tabi* which does provide a useful and credible angle from the outside area, in terms of the travelers' perceptions of this area as a tourist destination. With the increasing popularity of the Kumano area and the routes in this area in tourism, this study provided an insight towards the discussion over the extent to which the past

or history should be exploited or distorted as a resource for entertainment in the form of heritage.

3.4.3 Comparisons to other pilgrimage routes

As the Nakahechi Route has been promoted to a great extent as their functions in religious journeys, termed as pilgrimage, it is also interesting to compare its functions and meanings with other pilgrimage routes in the world. Guichard-Anguis (2007) made an interesting comparison between the pilgrims to Santiago de Compostela with pilgrims in Japan and found out that the experience of the European pilgrims had nothing to do with the notion of *tabi*, as it lacked the idea of playing (*asobi*). Conversely, although difficulties and hardships of the journey was described in those travelogues, Japanese pilgrims also wrote poems at places they enjoyed and sightseeing played a part as enhancing their pilgrimage. And making a journey in the manner of *tabi*, following the patterns of these poets, allows the successors to share the same feeling, looking for acquaintances on their way and discovery themselves, as the whole human being is involved in experiencing. Although traveling patterns were greatly changed by modernization, this tendency to seek for the true meaning of life has never ceased, as in the nostalgic cast of Japanese domestic tourism that began with the 1970s retro boom, traveling to the remote or rural areas and walking the unpaved roads in the forest that represented Japan's pre-industrial agrarian heritage provided Japanese visitors with a means to reconnect with their past to find their identity. The historic roots in Japanese culture that has always seen a fusion between nature and culture also have profound influences on modern Japanese tourism as media representations after the Taisho era

still finds literature works playing an important role for the interpretation of natural beauties and the recreational style of hiking the routes are still closely related to the historic meanings of the routes from the 1990s. From this sense, pilgrimage to the Kumano area never dies as discovering oneself through walking along the road will always attract human beings.

The formation and transformation of the routes illustrated by historic examinations and their media representations indicate that the very essence of the cultural meanings of the routes rely on travelers who prayed and played. The active use of the routes under the recreational context encourage the recognition of the phenomenon after 1990s that visiting the historic roads starts embracing new meanings of recreational hiking and trekking. This dynamic evolvement of the route in heritage tourism also contributes towards answering Research Question 3 that how could enhancing the contemporary visitors' interaction with the Nakahechi Route contribute to the conservation of its heritage value. In another word, how modern heritage tourism can be accommodated in a way that reinforces the distinctive landscapes that attracts the tourists to come in the first place. The question cannot be answered without further investigations on the experiences of modern tourists explained in Chapter 5 and 6. And together with a detailed examination of the physical conditions of the route in Chapter 4, the constraints and opportunities for the current heritage management to meet with the goal can be identified.

Chapter 4 Characteristics and Physical Conditions of the Nakahechi Route

4.1 Introduction

The physical routes serves as understructure for the interactions that happen along the routes. Chapter 3 explains that, before the modernization and motorization during Meiji era changed people's moving patterns, people mainly used the route by walking. After land transportation of train and motor vehicles started gaining importance in the modern period, people started to enjoy walking the routes again for recreational purposes. Traveling the Nakahechi Route has started embracing hiking as an increasing popular activities which requires the physical conditions of the route to be well monitored and maintained. The route's high cultural values were exemplified on trail sections that had bare soil or stonework (flagstone and staircase) surfaces (Figure 4.1). As mentioned in section 2.2.2, current heritage management consider trails as containing substantial value, categorized as "inscribed zone," or "core zone" under the UNESCO context. Those sections are also designated as Historic Sites, under the Law for the Protection of Cultural Properties that management strategies for normal recreational trails such as building new routes, rerouting, or changing the route's physical appearance to avoid the

Figure 4.1 Stone pavements that can be observed along the Nakahechi Route, estimated to have been constructed during the Edo era.

vulnerable sections are not applicable to them due to the concerns of their historical values ("authenticity" under the UNESCO heritage context).

Despite the importance of these trails, because no scientific assessment has been conducted of the route conditions and factors that created those conditions, managers of the Nakahechi Route lack guidance on how to proceed. The limited financial and labor resources available are used to rehabilitate those parts that have been severely damaged by flooding or landslides (Figure 4.2). The author found no evidence of official patrols on the Nakahechi Route's trail system, or of any monitoring programs. This situation highlighted the urgent need for research that could facilitate a better ability to predict where unwanted deterioration is likely to occur, and how feasible management practices can be used to minimize such damage. The adoption of a precautionary strategy based on an efficient and effective monitoring program could obviate the need for more costly

Figure 4.2 Severely damaged part of the Nakahechi Route due to flooding (left) and landsliding (right). Photos were taken by the author in 2013.

remedial actions.

Another concern for this chapter regards challenges to the conventional "curatorial approach" for managing the Nakahechi Route raised by increasing recreational use. It has long been recognized that the ideological and institutional context of heritage tourism is fundamentally different from that of general tourism, and that the objective of a heritage mission is to care for the property and maintain it in as pristine a state as possible (Garrod & Fyall 2000). Such concerns have become prevalent with the evolving scope of cultural heritage, which began with monuments, groups of buildings, and sites set out in the World Heritage Convention, to its current inclusion of cultural landscapes, routes, and other types of heritage compounds (UNESCO World Heritage Center 2013). The Nakahechi Route, which has functioned actively in local people's livelihoods, is unlike a museum, in which objects are displayed and easily maintained. The route's cultural meanings also evolve with use. As routes in Kumano area have cultural meanings that consider the human influences as an integral part of their human-environment systems. The long maintenance history of the route which contributes to its existence also makes managerial practices overlap and exert effects in complicated ways that sometimes overrule the influences from other environmental or usage factors that are more of a concern for managing a recreational trail (Olive & Marion 2009). The current management strategy raises a question as to whether or not it is effective for enhancing the sustainable use of the trails in the contemporary context of heritage tourism. Literature reviews of trail assessment techniques can help select appropriate parameters for an investigation of trail conditions and influential factors—in particular, the importance of managerial practices.

In order to answer Research Question 2 about how should the physical path of the heritage route be managed under its world heritage route context, an integrated trail assessment techniques for characteristics and conditions of the Nakahechi Route is developed in Chapter 4 based on established techniques in recreational studies but tailored to take special consideration to trail design, historical features and other important maintenance practices under their heritage context. Findings of this chapter can also contribute to providing timely and objective information on trail conditions and the influential factors, serving as basics for following chapters on all the interactions happened and still happening along the route.

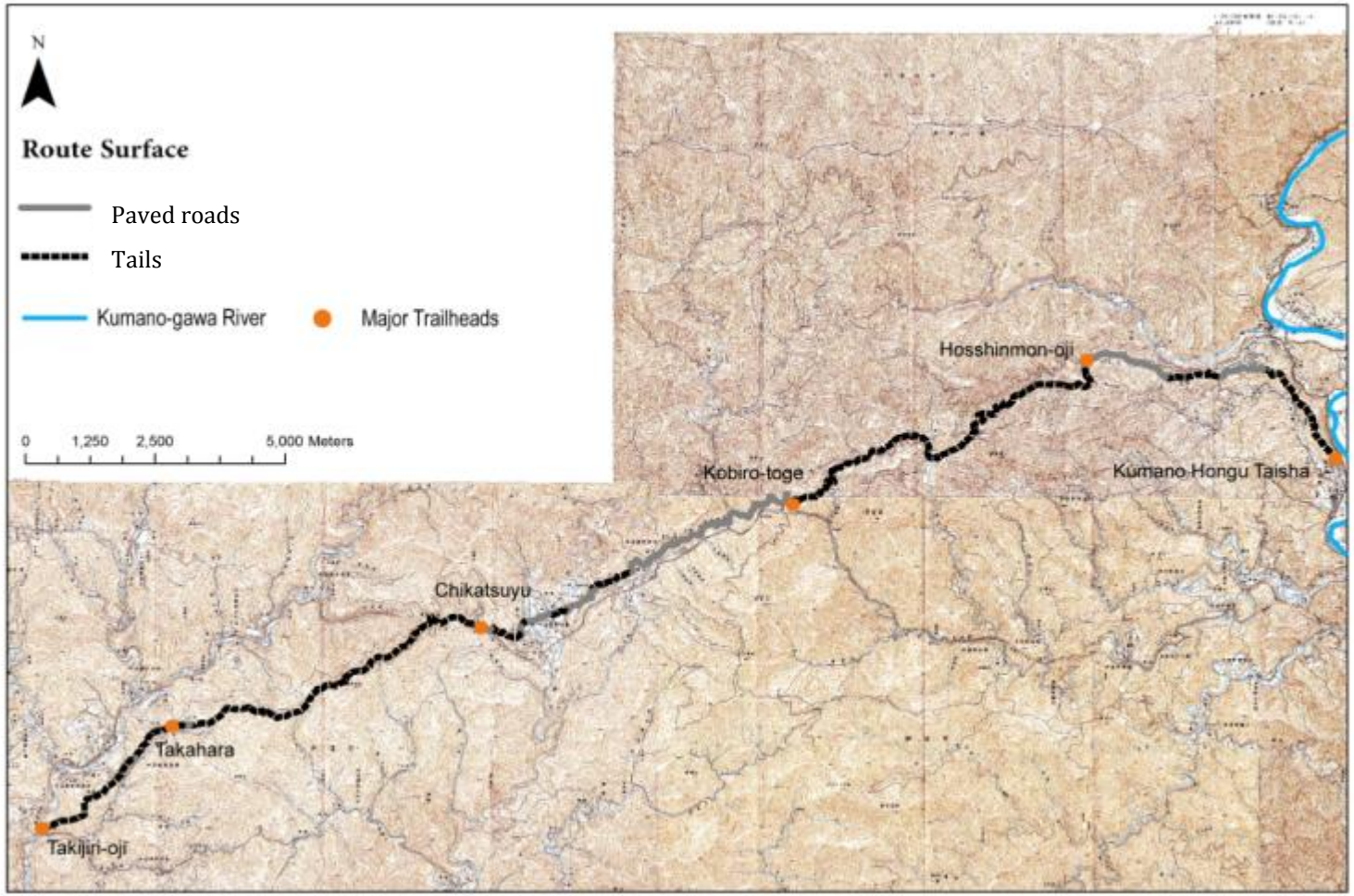
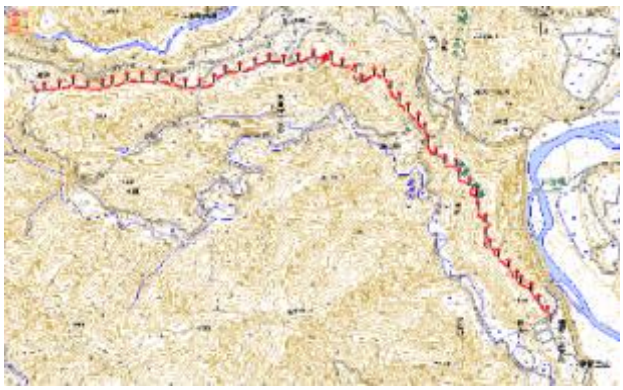


Figure 4.3 The sampled section of the Nakahechi Route from Takijiri-Oji to the Kumano Hongu Taish shrine on the Kii Peninsula, located on the southern tip of Honshu Island, Japan. The 1:25,000 topographic map (Fushiogami) published by the Geospatial Information Authority of Japan was used to create this map.

4.2 Assessing the Trails of Nakahechi Route

4.2.1 Sampling Method

Considering the length of the Nakahechi route, the area sampled (Figure 4.3) start from *Takijiri-Ōji*, which is considered the point of entry to the sacred area of *Kumano Sanzan*, to Kumano Hongu Taisha shrine. The unpaved sections of the route locate at elevations between 100 m and 700 m with a dominated surrounding environment of closed, coniferous plantation forest. A rapid survey technique using systematic sampling facilitated by ArcGIS 10.1 (ESRI, Redlands) was adopted in this study. The trail data was collected as linear feature using a portable GPS (Garmin 62Sj) device in September and October of 2013. The trails under study were required to have natural, continuous surfaces of more than 100 m. 16 trails that satisfied the requirements were selected along the route from *Takijiri-Ōji* to Kumano Hongu Taisha shrine, with a total distance of 26066.2 m. The linear GPS data were further processed using ArcGIS10.1 to generate sampling points at 100-m intervals along the trails (Figure 4.4). In contrast to the conventional measuring-wheel method, generating sample points using ArcGIS can avoid unknown measurement errors arising from terrain variations such as stone staircases and vertical ascents



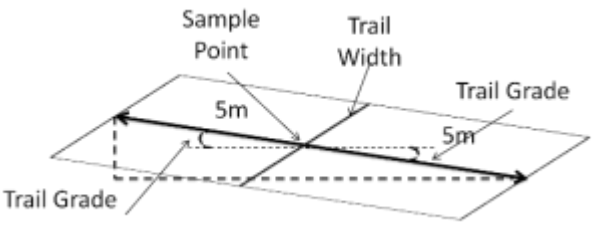


Figure 4.4 Example of sample points of 100m intervals made by ArcGIS10.1 on the trails and illustration of sample area identified using those points in the field.

(Wimpey & Marion 2010). In total, 254 sample points were generated and reloaded back to the same portable GPS device for field survey staff to locate sample points in field based on the first occurrence of a proximity alarm set at 10 m. At each sample point, a transect was established perpendicular to the trail tread with endpoints defined by the outer boundaries of the trail and the sample area was determined by extending 5 m in both directions along the trail from the transect

4.2.2 Variables measured

Few trail assessments of heritage trails can be found in the literature, due to their complexity and limited application. The Nakahechi Route is located in a mountainous area. The physical characteristics of its trails, and the formidable geological environment of its mountains create a situation similar to that of a normal hiking trail, and trail assessment techniques that have been developed in the recreational context in similar natural areas seem to hold promise for the Nakahechi Route. Similar environmental conditions and recreational demands put trail sections on the Nakahechi Route with bare soil surfaces at risk of experiencing common trail impacts such as trail incisions, root exposures, and multiple treads. For purposes of this study, a rapid survey method was used, with samples taken at fixed intervals, to allow variations in trail conditions to be related to the potential influencing factors (Cole 1983).

Surface type, function of trail design and maintenance

There were few references in the heritage literature that were of relevance to trail assessments for the Nakahechi Route, however, research on trails with a long history often found that surface characteristics provide historical insights for trail maintenance

Figure 4.5 Stone steps along the Nakahechi Route. a. left Steps that are thought to date back to the Edo era. The native rocks are arranged according to the adjacent landform and trail widths, allowing the natural flow of water drainage on the side; b. right Steps constructed during the restoration project 1978–1982. The stone structures fixed by concrete at the bottom are determined with a fixed length, accelerating water flow through the surface. A second tread is also shown in the photo, indicating that a severe incision at the bottom of the stone structure caused difficulties for walking.

(Bratton et al. 1979). Since the effects of managerial actions have often been neglected in previous research, even though their indirect effects sometimes overrule the influences of other environmental or usage factors (Marion & Leung 2001; Olive & Marion 2009), the surface characteristics of trails that have long maintenance histories are measured in ways that are specific to the Nakahechi Route. Some traceable maintenance practices date back to the Edo era, when more preventive methods, such as stone pavement and step construction, were used. These practices often used native stone as a material, and carefully arranged it by adapting to the surrounding landform and trail width (Figure 4.5a). More often observed are maintenance practices undertaken on a smaller scale, such as replacing old stonework with new stones. It is difficult, however, to confirm when these practices occurred, just by viewing the trail. Another large-scale maintenance practice that significantly altered a trail's surface characteristics was the restoration project 1978-1982 mentioned earlier. One distinguishable practice

was soil excavation, which left a sharp cut near the edge of the trail that differed from natural bank erosion caused by flowing water (Figure 4.6). The reason for this practice was not stated in the written documents that provided construction guidance, or in the after-project report. According to one of the administrative staff persons involved in this project (who was given assurance that he/she will not be identified in this study), this practice was probably conducted together with trail widening, to smooth out the surfaces that were buried under soil and vegetation, to create a clean-looking face for the trails. Another practice is step construction, in which cobbled stones are fixed at the bottom with concrete, and timber logs of Japanese cypress trees are used as materials (Figure 4.5b). Such practices were considered for the same reasons step construction was commonly used in the Edo era, however, using far less-meticulous construction methods and lower-quality materials. Other maintenance practices have mostly been conducted since strict regulations were passed that required maintaining the status quo of the trails' physical appearance. Small-scale repairs are evident along the route, and they include activities such as replacing soil (referred to as soil refill in the following text), using different types of soil that can be distinguished from the native soil, and adding log water-bars to prevent further degradation, by diverting water from the trail's surface using an obvious wooden structure. Since managerial factors are an important aspect of distinguishing management objectives for the Nakahechi Route from those for normal recreational trails, they exert an influence on existing trail design variables in a complicated way. This group of factors is of particular concern in this study.

During the field survey, surface characteristics of the trail samples were identified and categorized into six groups. Trail samples with a natural surface are those with a surface of natural substrate, that is, soil, vegetation, or gravel. The category of stone pavement consists of trail samples of a surface paved by stone (Figure 4.1). As yet, there has been

no archaeological research of the morphology of the stonework for the Nakahechi Route. This category was identified with the help of a local archaeologist who has extensive experience working with cultural properties. The category of step construction can include various types, according to the material used for construction and the history of the construction work (Figure 4.5). This category includes both steps constructed in the Edo era, and those constructed during the restoration project 1978–1982. The category of soil excavation includes trail samples that were identified as having a sharp descent of the footpath near the edge of the trail (Figure 4.6). The categories of soil refill and log water bars represent more recent maintenance practices that have been conducted on a much smaller and local scale. Evidence of these practices was confirmed with management staff, and they were identified in the presence of different textures of soil that had been added directly to the incised surface, and by wooden bars placed across the surface to prevent further degradation.

Trail Condition Variables

A direct way to examine overall trail condition is to utilize general trail condition indicators, often referred to as condition classes, which use a predefined condition class system (Nepal 2003; Knapp & Ducey 2009). In consultation with the local management staff, a condition-class rating system was developed based on a classification system applied by Nepal's study in 2003 on trails in Nepal's Sagarmatha National Park. The five condition classes range from Class I (barely damaged) to Class V (severely damaged) (Appendix 1).

Of all the impacts, trail incisions caused by soil erosion are the major concern for the Nakahechi Route's management staff. They are also considered the most significant, and are probably the most-reported form of trail degradation discussed in current trail assessment literature (Cole 1991; Törn et al. 2009; Marion et al. 2011). The maximum

Figure 4.6 An example of the soil excavation practice in the restoration project 1978–1982. a. Upper-left, photo from the construction report that was taken before construction; b. Upper-right, photo from the construction report that was taken after construction. The sketch above the photos was drawn by the author, based on the original design graph (Photos are credited to the Local Education Office of the Hongu-District.). c. Bottom-left, photo taken by the author in 2013 at a location close to the locations of the two photos above. The sharp descent near the trail edge was used for the on-site identification of such practices; d. Bottom-right, a disturbed surface of the entrenched trail caused by lateral erosion. Photo taken by the author in 2013 near that shown in c.

trail incision method is a procedure that can be used quickly to assess trail incisions caused by soil erosion. It is widely applied in the recreational context (Leung & Marion 1999; Marion & Leung 2001; Manning et al. 2006; Marion et al. 2011). Other trail impacts such as excessive root exposure and multiple treads are also considered closely related to trail incisions caused by erosion (Bratton et al. 1979). In this study, *maximum trail incision* was measured as vertical measurements of the deepest portion of the tread surface; *excessive exposure of tree roots*, identified where more than 25% of the sample area was covered by tree roots; and *multiple treads* when two or more parallel treads were present within the same trail corridor. For the convenience of the survey and analysis, they were all measured as point-data.

Trail design variables

Slopes along trails are often measured in trail assessment surveys, with regard to their influences on trail incisions. Some studies identified trail slope as the most important physical factor associated with severe trail degradation such as exposed rocks and roots (Bratton et al. 1979; Nepal 2003). Others found that although steep segments are often greatly deteriorated, flat segments are also prone to problems associated with drainage (Cole 1983). In this study, trail grades were measured as the average grade for each sample area using an Abney hand level. Other important factors are trail location (described as ridge, hillside, or valley) and the trail slope alignment angle (TSA), measured as the angle between the trail and the prevailing landform (Bratton et al. 1979; Nepal 2003; Olive & Marion 2009; Wimpey & Marion 2010).

Compared to the trail grade, TSA, and trail location, trail width is often neglected as a factor influencing trail incisions. Trail assessment surveys in a recreational context

often treat trail width as a measure of the impacts of trail widening associated with trampling (Weaver & Dale 1978; Cole 1983; Wimpey & Marion 2010). In a recreational setting, excessive trail width can lead to negative ecological effects such as vegetation loss, and negative social effects such as degraded aesthetics (Marion & Leung 2001; Nepal 2003; Li et al. 2005; Knapp & Ducey 2009; Wimpey & Marion 2010). Although trail width has been recognized as a design variable that can be manipulated according to different use types, amounts, terrains, and environmental factors (Leung & Marion 1999; Wimpey & Marion 2010), its relationship to trail incisions has not yet been fully studied. Furthermore, land managers often fail to specify the intended widths of trails, or to maintain trails at those widths. For the Nakahechi Route, maintaining expected trail widths is a particularly important concern for its design, maintenance, and restoration. Historic documents tracing back to the Edo era record trail widths at certain locations. During the restoration project 1978–1982, specific requirements for restored trails were widths of 150 to 250 cm, where geological conditions allowed (Hongu District 1983). Considering that trail width can contribute to increased water runoff and the areal extent of intensive trampling-related impacts, and that it can potentially influence trail incisions caused by soil erosion, this study incorporates trail width as one of the explanatory variables for trail incisions and measured the trail width transected the boundaries.

Use-related variables

A substantial number of studies have demonstrated the influential role of use-related factors. Historically, the Nakahechi Route supported various types of traffic such as foot, horseback, farm carts, and, entering the twentieth century, motor vehicles. After it was designated a cultural property by the Agency of Cultural Affairs in 1977, most parts of

Figure 4.7 Sections of Nakahechi route that still function in local people's life, accessible by motor vehicles.

the trails were closed to all vehicles, while some portions are still in use for forestry, especially those sections that are part of the existing forestry road network (Figure 4.7). Since most of the trails are maintained only for pedestrians, the variable of use level was only calculated for foot traffic in this study. In previous research, the effects of deepening trails were found to be as pronounced on light-use trails as on heavy-use trails. The threshold for use-levels causing trail incisions can be low, and further increases in use were found to have little effect on problem frequency (Cole 1983; Marion & Leung 2001). Use type was categorized into either pedestrian only, or forestry road, depending on the functionality of the trail to support motor vehicles. Use level was categorized into low, medium, and high, in consultation with the management staff and experienced guides for the route.

4.2.3 Analyses

Descriptive statistics were calculated for the trail conditions and the design characteristics of all samples, according to different surface characteristics, to identify the underlying environmental factors that potentially influenced the choice of different managerial methods.

A series of multivariate regression analyses were performed on the impacts of trail incisions, since these are the most significant problems relating to management of the Nakahechi Route. The first models were applied to trail samples of natural surfaces (N = 156), and included trail design and use-related variables for explaining the variances of trail incisions. These trail samples were chosen because of the pristine state of their surfaces, which resembled a normal recreational trail. Identifying the influential factors under these conditions can facilitate a comparison of these results with those in the current trail assessment literature. Backward stepwise selection procedures were applied to identify the influential factors, using the criteria of $p < 0.05$.

The second set of regression analyses were conducted for trail samples (N = 238), excluding those in the categories of stone pavement (N = 13), because of the applicability of the maximum trail incision method, and soil refill (N = 3), for heterogeneity, due to its extremely small sample size. This procedure was meant to explore the potential relationships and influences of managerial practices, in addition to the design variables, measured as surface type. Adding the surface type variable first individually, and then with the trail design variables as interaction terms, was intended to expand researchers' understanding of which management practices are of particular concern when incorporating heritage mission and recreational objectives into making management decisions and providing guidance on trails of the Nakahechi Route.

For both sets of trail samples, the variance inflation factor (VIF) and correlations matrix

were examined, before conducting regression analyses for each variable, to detect any unacceptable levels of multicollinearity. There were no violations for the cut-off points of 4 (VIF) and 0.75 (correlations) in either case, suggesting that there was no problem with multicollinearity. The Ordinary Least Square (OLS) regression was used for analyses in this study.

4.3 Conditions and Characteristics for the Trails of Nakahechi Route

4.3.1 Trail Conditions

The majority of the trail is in generally good condition (Table 4.1); 72.0% of the trail is barely or only lightly damaged, whereas less than 2% of the trail is severely damaged. Trail impact related to soil loss appears to be the most apparent problem as multiple treads, excessive root exposure, and severe trail incision were all recognized in the preliminary survey. At the sample points, 10.7% exhibited multiple treads and 7.9% exhibited excessive root exposure. In addition to soil loss, excessive tree roots impact also indicates how trails are associated with tree density at the trailside. Fourteen sample points exhibited trail incision caused by soil erosion in excess of 30 cm beneath the estimated post-construction tread surface. A more prevalent trail impact problem was moderate incision between 15 cm to 30 cm, which occurred at 63 sample points. Among locations where it was possible to apply the procedure (N=241), the maximum incision ranged from 0 to 46 cm and the mean was 11.61 cm.

4.3.2 Trail characteristics by surface type

Table 4.2 shows that average maximum trail incisions are lowest for natural surface trail samples (9.0 cm), and highest for samples with step construction (21.0 cm). Excessive

root exposure is most frequently observed with step construction (28.57%), but no exposures were observed in the stone pavement and soil refill categories. This is reasonable, given that these two maintenance practices protected and rehabilitated the surface from the impacts of incisions and root exposures in a mostly effective, but also costly way, compared to pristine trails or other maintenance actions. Multiple treads were prevalent mostly for samples with log water bars, considering that people would naturally look for the easiest way to get past a severely damaged section of trail, using remedial repair that involved adding wood-bars.

Furthermore, design characteristics showed that the average trail grade of the route is highest for samples with step construction (13.75 degrees), and lowest for samples that exhibited features of soil excavation (5.32 degrees). The average trail grades exceed the competitive level of more than 11.3 degrees illustrated by most trail instructions for samples with stone pavement and log water bars. At the sample points where trail width could be clearly defined, the average trail width ranged from 147.9 cm for natural surface trail samples, to 189.9 cm for samples of soil excavation. Compared to normal recreational trails in natural areas, trails of the Nakahechi Route are generally wider, and could potentially accommodate two-way traffic (> 120 cm). The TSA angle results showed patterns similar to those of trail grades, namely that trails with step construction (44.00 degrees) aligned with smaller angles to the fall line (landform grade), and trails of soil refill (80.67 degrees) aligned more closely to the contour lines. Generally, alignment that nearly parallels (0 < = TSA < 20 degrees) the fall line should be avoided, as that is the path naturally taken by water running down a mountain slope, leading to potential problems with trail incisions.

Table 4.1 Number and percentage of sample points by trail condition variables.

Condition Variables	Occurrences	
	(No.)	(%)
General Condition Class (N=254)		
Class I Barely damaged	32	12.6
Class II Lightly damaged	151	59.4
Class III Moderately damaged	56	22.0
Class IV Highly damaged	10	3.9
Class V Severely damaged	4	1.6
Missing	1	0.4
Trail Incision (cm) (N=241)		
Minor incision (0<=, <15)	162	67.2
Moderate incision (15<=, <30)	63	26.1
Severe incision (>=30)	14	5.8
Missing	2	0.8
Mean = 11.61 Median = 9.00 Range = 0-46		
Excessive root exposure (N=254)	20	7.9
Multiple treads (N=254)	26	10.7

Table 4.2 Trail sample characteristics by surface type influenced by surface characteristics of the trails, subject to maintenance-related practices.

Trail surface treatment	Natural surface (N = 156)	Stone pavement (N = 13)	Step construction (N = 21)	Soil excavation (N = 37)	Soil refilled (N = 3)	Log water bar (N = 24)
Trail condition variables						
Maximum trail incision [a] (cm)	9.0 (8.18)	Un-applied	21.0 (6.74)	12.5 (9.95)	9.3 (10.07)	19.0 (10.15)
Excessive root exposure [b]	10 [6.41]	0	6 [28.57]	3 [8.11]	0	1 [4.17]
Multiple treads [b]	11 [7.05]	1 [7.69]	3 [14.29]	3 [8.11]	0	8 [33.33]
Trail design variables						
Trail grade [a] (degrees)	6.29 (5.16)	13.39 (3.14)	13.75 (5.85)	5.32 (3.62)	8.94 (3.31)	12.82 (5.88)
Trail width [a] (cm)	147.9 (80.26)	169.1 (34.70)	188.6 (79.77)	189.9 (77.24)	167.7 (55.19)	152.1 (78.97)
Trail location [b]						
Ridge	27 [17.31]	2 [15.38]	7 [33.33]	3 [8.11]	0	6 [25.00]
Hillside	98 [62.82]	11 [84.62]	14 [66.67]	32 [86.49]	3 [100]	17 [70.83]
Valley	31 [19.87]	0	0	2 [5.41]	0	1 [4.17]
TSA [a] (degrees) (Trail Slope Alignment)	57.13 (33.47)	52.31 (29.28)	44.00 (38.81)	69.38 (23.56)	80.67 (7.02)	54.75 (30.21)

a. Mean, standard deviation in ( ); b. Count, percentage (%) in [ ].

4.4 Influential Factors from Regression

4.4.1 Multivariate results for natural-surfaced trails

The first set of regressions conducted on natural surface trail samples (N = 156) reflected the conditions of trails that are closest to the state of normal recreational trails, by excluding the potential influencing factors of management practices that are strictly controlled for heritage trails. Table 4.3 shows that both R^2 values for OLS and Step OLS are large enough to prove the validity of the models. According to the OLS model using a backward-stepwise selection method (Table 4.3 (2)), trail grade ($p < 0.01$) and trail width ($p < 0.1$) exhibited a significant influence on maximum trail incision. The regression coefficients for both indicators were positive, indicating that an increase in trail grade or trail width contributes to an increased maximum trail incision. Use-related variables only exhibited a significant influence for use type ($p < 0.05$), as sections used only for pedestrians could be more incised than sections used as forestry roads (negative regression coefficient value for forestry roads). The statistical results indicated that TSA and trail location, which were frequently cited as influential factors on trail incisions (Olive & Marion 2009), did not exhibit a significant influence.

4.4.2 Interaction effects from surface type

The second set of regressions added the surface type variable, and explored its influences when adding to the existing trail design variables. Adding the surface type variable, first individually (Table 4.4), gave similar results to those shown in Table 4.3, based on the backward-stepwise selection method, for which the trail grade, trail width,

and use type retained their significant influences on maximum trail incision. Interesting results were found when surface type was added as an interaction term in Table 4.5. In addition to the influential factors shown in Table 4.4, step construction ($p < 0.05$) was found to significantly increase maximum trail incision when other trail design variables are zero. This result is not interpretable under realistic conditions, but the interaction terms illustrated that the trail design variables exerted their effects under different conditions of surface characteristics, which could be more useful for informing managerial practices. The negative regression coefficients for step construction ($p < 0.01$) and log water bars ($p < 0.05$), when interacted with trail grade, illustrated that the strategies of building steps and adding water bars can decrease the extent of maximum trail incision caused by increasing trail grade. On the other hand, adding log water bars increased the extent of maximum trail incision (positive regression coefficient) significantly ($p < 0.01$) when trail width was increased. However, this practice seems more appropriate for trails that are located in a valley, as the interaction term showed a significant influence on decreasing the maximum trail incision ($p < 0.05$). R^2 values are large enough to prove that the two models are valid

Table 4.3 Regression on maximum trail incision for natural-surfaced trails (N = 156).

	Regressions	
VARIABLES	(1) OLS[a]	(2) Step OLS[b]
Trail design variables		
Trail grade (degrees)	1.183***(0.137)	1.186***(0.135)
Trail width (cm)	0.016*(0.008)	0.020***(0.007)
Trail location		
Ridge	0	
Hillside	-1.214(2.775)	
Valley	0.468(2.514)	
TSA (degrees) (Trail Slope Alignment)	-0.002(0.022)	
Use-related variables		
Use type		
Pedestrian only	0	0
Forestry road	-2.914*(1.632)	-3.564**(1.463)
Use level		
Low	0	
Medium	1.510(1.129)	
High	1.939(1.712)	
Constant	-1.108(2.343)	-1.028(1.142)
Observations	154	154
R^2	0.567	0.555
Adjusted R^2	0.549	0.546

Robust standard errors in parentheses

a. OLS: Ordinary Least Square regression using all explanatory variables

b. Step OLS: OLS after backward stepwise selection of the variables

*** p<0.01, ** p<0.05, * p<0.1

Table 4.4. Regression on maximum trail incision for trails with maintenance practices (N = 238, Observations = 236), excluding those with stone pavement and surface soil refilled.

	Regressions	
VARIABLES	(1) OLS	(2) Step OLS
Surface type		
Natural surface	0	
Step construction	3.360(2.113)	
Soil excavation	3.203*(1.728)	
Log water bar	3.086(2.549)	
Trail design variables		
Trail grade (degrees)	0.972***(0.126)	1.061***(0.097)
Trail width (cm)	0.022***(0.007)	0.030***(0.007)
Trail location		
Ridge	0	
Hillside	-0.017(2.214)	
Valley	0.539(2.032)	
TSA (degrees)	-0.004(0.020)	
Use-related		
Use type		
Pedestrian only	0	0
Forestry road	-5.190***(1.437)	-6.701***(1.306)
Use level		
Low	0	
Medium	2.819**(1.170)	
High	2.381(1.448)	
Constant	-1.980(2.266)	-0.677(1.120)
R^2	0.465	0.438
Adjusted R^2	0.448	0.431

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4.5 Regression with interaction terms on maximum trail incisions for trails with maintenance practices (N = 238, Observation = 236), excluding those with stone pavement and surface soil refilled.

VARIABLES	Regressions	
	(1) OLS	(2) Step OLS
Surface type		
Natural surface	0	0
Step construction	6.361(8.080)	12.526**(5.812)
Soil excavation	6.165(5.061)	
Log water bar	20.726(13.011)	
Trail design variables		
Trail grade (degrees)	1.188***(0.138)	1.152***(0.134)
Trail width (cm)	0.017**(0.009)	0.014**(0.006)
Trail location		
Ridge	0	
Hillside	-2.185(2.668)	
Valley	-0.571(2.406)	
TSA (degrees)	-0.001(0.022)	
Use-related		
Use type		
Pedestrian only	0	0
Forestry road	-3.397**(1.696)	-2.915**(1.292)
Use level		
Low	0	
Medium	2.271**(1.113)	
High	0.383(1.578)	

Interaction terms		
Trail location × Surface type		
Ridge, Natural surface	0	0
Hillside ×Step construction	7.328*(4.321)	4.546(3.395)
Hillside ×Soil excavation	2.241(4.826)	
Hillside ×Log water bar	-0.664(5.654)	
Valley ×Soil excavated	-3.782(3.813)	
Valley ×Log water bar	-14.534**(7.101)	-6.247***(1.386)
Trail grade × Surface type		
Natural surface	0	0
Step construction	-0.909***(0.323)	-0.954***(0.294)
Soil excavation	0.408(0.492)	0.711**(0.303)
Log water bar	-1.282***(0.484)	-0.447**(0.220)
TSA × Surface type		
Natural surface	0	
Step construction	-0.039(0.039)	
Soil excavation	-0.029(0.066)	
Log water bar	-0.003(0.096)	
Trail width × Surface type		
Natural surface	0	0
Step construction	0.031(0.023)	
Soil excavation	-0.017(0.015)	
Log water bar	-0.006(0.033)	0.048***(0.017)
Constant	-0.772(2.372)	0.044(1.107)
R^2	0.572	0.535
Adjusted R^2	0.551	0.521

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

4.5 Chapter conclusions

Chapter 4 focused on the characteristics and physical conditions for the trails of Nakahechi Route, using an integrated trail assessment method. Managerial data was used to reveal trail characteristics in light of their cultural and historical importance. Results of this chapter led to discussions of the implications of managing heritage trails of the Nakahechi Route for both conservation and recreational purposes, and the application of trail assessment techniques.

4.5.1 Trail conditions

Study findings reveal that the most prevalent impacts on trails of Nakahechi Route are trail incisions, and in most cases moderate trail incisions that are smaller than 30 cm. The results showed that moderate trail incision is the most prevalent trail impact problem on the Nakahechi Route. The extent of this problem, rather than the severity of the problem itself, indicated that periodic and continual maintenance practices on a local basis may be more appropriate for the conservation of the trails.

The maximum trail incision method is direct, efficient, and easy to apply on trails of the Nakahechi Route, which exhibits diverse types of surface characteristics. Compared to trail depth, which only measures the vertical distance to the trail center, it reflects the problem in a more accurate way, and is easy to convey to the managing staff. A cross sectional area (CSA) method has often been used in recent trail assessment surveys. Compared to the maximum trail incision method, it is deemed to be more accurate for measuring soil loss (Olive & Marion 2009). However, since the CSA method

incorporates trail-wide information in estimating soil loss, the use of this method could lead to over-amplified results for trail width. The study demonstrates that trail managers should identify appropriate indicators of potential trail problems before conducting an assessment.

4.5.2 Multivariate results

Multivariate regressions from this study illustrated that trail grade is the most robust determinant of maximum trail incision across all models. This is particularly the case for the trails of the Nakahechi Route, which are located on a landform of undulating mountains with many resting stops and *Ōji*(s) (subsidiary shrines of the Kumano Hongu Taisha shrine), placed on the *to-ge*(s) or mountain ridges. It is possible to imagine that when the ancient pilgrims chose this route, they sometimes sacrificed trail grades to reach their destination of Kumano Hongu Taisha shrine by the shortest distance. The ups and downs that made the journeys difficult are infused with religious meanings that convey the notion that hardships are a necessary part of self-rejuvenation. Unlike recreational trails that are mainly designed for purposes of enjoying the scenery along the way, the major purpose of the Nakahechi Route is to lead people to the Kumano Hongu Taisha shrine.

This study's findings also demonstrate the importance of trail width as a strong and robust significant influence on maximum trail incision across models. Wide trails are not always necessary, if their purposes cannot be verified. For example, maintaining a certain trail width is one of the priorities of the restoration project 1978–1982 (Hongu District 1983). However, the practice of trail widening for purposes of producing a clean-looking surface was intended to "rediscover" trails that had been overgrown,

and/or were partially buried or had collapsed from repeated landslides. A fixed width of 150 to 250 cm was not decided on the basis of appropriate guidance or supervision from road engineers or geologists with regard to the sustainability of the route, or from archaeologists and historians with regard to the historic meanings of such practices. Previous literature has also verified that, left unattended, more soil loss could result on those incised wide trails than from further incisions on the deepest parts of the trail (Cole 1983).

For use-related variables, the results revealed that for the parameter of use type such as forestry roads, which can accommodate motor vehicles, they appear to be less significantly incised than those that only allow foot traffic. This is similar to the finding by Bratton et al. (1979), when they compared the trail conditions of a variety of erosions between former jeep roads and foot and horse trails in the Great Smoky Mountains National Park, USA. They found that at lower grades jeep roads were generally in better condition. However, the results contradict other research that found motorized vehicles have a greater potential for causing impacts than non-motorized uses (Liddle 1997). Different situations should be considered to explain the reasons for these apparent contradictions. For the Nakahechi Route, the forestry road open to vehicle use is only sectional, because it connects intersections of the forestry road network. That they are in better condition in terms of trail incisions may be due to the functionality of the roads in the local people's daily lives, resulting in greater awareness of and concern for more frequent reparations.

4.5.3 Interactions among variables

Multivariate regressions with managerial practices added as interaction terms expanded our understanding of the combined effects of maintenance and design. The trail maintenance actions of installation and upkeep of rock steps has proven vital to limiting soil erosion in previous studies (Birchard & Proudman 2000). This study proved the mitigation effect of step construction. However, the significant influences of this variable by itself illustrated that it required more careful consideration in terms of construction method and more frequent upkeep for its effective functioning, a finding also supported by on-site observations (Figure 4.5b). Similar mitigation effect was found for log water bars. Further, if the trails are located in the valley bottom, adding log water bars that divert the water from the trails' surfaces is the most effective means for reducing trail incisions. This is reasonable, considering that trails located at the valley bottom can be most vulnerable to water erosion since they are in a lower watershed position (Nepal 2003; Olive & Marion 2009). As a result, maintenance practices that tackle the issue of drainage can be the most effective measures. The results of the interaction terms also helped to identify the inappropriate managerial practices of soil excavation, which could lead to more severe incisions on steeper trails. However, as shown in Table 1, the 37 trail samples of soil excavation are mostly on level sites (an average of 5.32 degrees). Compared to severe incisions, problems of muddiness during the rainy season and lateral erosion that greatly disturbed the aesthetic beauty might be more of a managerial concern (Figure 4.6d).

4.5.4 Future studies

It is never a simple task to maintain a trail for its best performance with limited resources and staff, let alone to balance the needs of preserving heritage values and sustainable use. Because physical variables such as trail design and maintenance

strongly influence trail conditions, it is necessary for managers to address different situations and different characteristics of trails. Generally, heritage managers have more limited options for mitigating the impacts of trail incisions than park managers have for recreational trails, since the materials they choose and the methods they adopt are more strictly constrained by their objectives of protecting the trails' other values, rather than functionality. Practices that can typically be applied to recreational trails, such as building new routes, rerouting, or changing a route's physical appearance to avoid vulnerable sections, are not applicable to trails on the Nakahechi Route, due to the concerns for their historical values ('authenticity' in the UNESCO heritage context). More thorough research is needed to identify a trail's origin, what trail characteristics are to be prioritized and preserved, and what mitigation methods are appropriate. No universal or oversimplified standard should be applied to the Nakahechi Route, which has been used for centuries.

Chapter 4 are with limitations as more variables, such as vegetation types in the surrounding environment, detailed trail designs for drainage (on a more local and site scale), natural factors such as climate and natural hazards (on a broader regional scale), and trails' spatial patterns (for example the spatial relationships with other forestry roads, and scenic spots) could be incorporated. The accuracy and precision of the assessment techniques used for heritage trails can be further improved by comparing this rapid survey method with the more thorough methods and applications of this method on other trails in similar conditions (for example, other trails from the route system in the Kii Peninsula). As the first attempt that has been ever conducted for the Nakahechi Route, this study serves as the basis for evaluating the current trail condition standard, developing a monitoring program that can reveal trends in trail conditions, and evaluating the effectiveness of the management actions that have been implemented.

After all, the routes are not displayed in a museum. Managing the physical path requires further examination for the interactions that are still happening in the route corridor which will be reflected in Chapter 5 and Chapter 6.

Chapter 5 Characteristics and Use Patterns of Visitors to Nakahechi Route

5.1 Introduction

The essential merit of adopting a cultural landscape approach to study heritage routes is to understand the interrelationships between the users and the physical environment of the route corridor. And, monitoring visitor use of a heritage route presents the most fundamental information about visitor that is required by management agencies of these heritage routes. Such information is crucial for informing management policies and guiding on-site managerial practices to ensure that uses such as tourism are compatible, sustainable and sensitive to the natural and cultural values found along the way.

For the Nakahechi Route, walking/hiking is the only allowed mode of use for visitors to the trail sections right now. And this recreational style of hiking or trekking is discussed as adding new meanings to the heritage value of the route in Chapter 3. However, neither the actual number of visitors, their characteristics, uses patterns nor interactions with the route corridor have been studied before. Those issues can be critical in planning and management for this heritage site to incorporate tourism goals, regarding the increasing demand of the tourism use for heritage sites. From the point of tourism goal, studies tackling these issues are needed for a good understanding of how to design specific setting characteristics to provide recreation opportunities that the public would find valuable and worthwhile to visit (Hochmair et al. 2012). From the conservation

goal of the heritage sector, these studies can also benefit for assessing visitor impacts, facilities planning and budgeting. Empirical studies with scientifically collected information to assist in monitoring if and how visitation rate on the heritage route is changing as well as if and how the characteristics of route visitors is changing can thus enforce the unification of these two goal.

After the UNESCO World Heritage Site designation, heritage tourism boomed with an annual visitation about 3.7 million visitors for the city of Tanabe where the Nakahechi Route locates (Wakayama Prefecture 2013). However, there is no accurate information and systematic monitoring program for the Nakahechi Route in terms of its use as the author could find. A 'best guess' estimate of visitors use method was used by collecting count data from the souvenir shops and *saisenbako* (offertory box) in the destination shrine. Such "best guess" method, which could be used to estimate visitation to the entire region or area is considered far from accurate for estimating visitors who actually walked the Nakahechi Route. As Cessford and Muhar (2003) stated, "the important point (for monitoring visitor numbers) is that visitor monitoring is concerned with more than just the technology of visitor counting methods - it is about providing fundamental visitor and conservation management data." The long distance Nakahechi Route could potentially provide various kinds of use from multiple hiking to day walk. There is also a unique walking style of walking with local professional guides, *Kataribe* (literally a storyteller) that could rarely be found in recreational walking such as in wilderness or in neighborhood parks. Yahner et al. (1995) stated that "not every hiker passing through the trail corridor will be able to interpret fully the culturally history inherent in the landscape. Many of connections and observations that can be made, such as those

between geology, hydrology, ecology and the form of the cultural landscape, will elude most hikers." Thus, walking with the professional local guide of *Kataribe* is expected to provide visitors with an enrich experience of "not only the history and culture, but also seasonal vegetation and first-hand knowledge of the local livelihood" (Official website of the *Kumano Hongu Kataribe no Kai)*. As a unique type of on-site interpretation that developed with the evolving concept of heritage to include cultural landscape, understanding the current situation of this type of walking is also considered important for the management.of the Nakahechi Route. Although an important task for management, the current information collected on visitor use of the Nakahechi Route can be hardly considered satisfying the management needs. And this situation highlighted the urgent need for research that could facilitate a more systematic way to collect and analyzing visitor information in order to cope with the increasing recreational demands and conservation needs.

In order to answer Research question 3: How could enhancing the contemporary visitors' interaction with the Nakahechi Route contribute to the conservation of its heritage value, Chapter 5 provides empirical examinations on this research question through three sub-questions.

> Sub-question 3a: How does the current visitor use distribute along the route spatially and temporarily?
>
> Sub-question 3b: What are the characteristics of the visitors and their use patterns?

Sub-question 3c: How do the visitor characteristics in terms of their motivation relate to spatial distribution of the visitors? And how does that imply on-site management?

5.2 Methodology

Chapter 5 combines the passive infrared sensor cameras for visit count and questionnaire survey on more specific information of visitors themselves (section 2.3.4) in a step-by-step way to generate reliable use estimates of each survey sites, which can be inferred to the sections of Nakahechi Route with similar categorized used; to combine the section estimates to create an estimation to the visitors use for the whole distance of the main route of Nakahechi and to collect specific information such as socio-demographic and trip characteristics for visitors of those typical sections sampled.

5.2.1 Survey sites

The survey sites chose to monitor visitor use locate in between Takijiri-oji, which is considered the point of entry to the sacred area of *Kumano Sanzan*, and the Kuman Hongu Taisha shrine, one of three major shrines of *Kumano Sanzan*, (Figure 5.1). This section is the main part of the Nakahechi Route. The whole length of the Nakahechi Route in the World Heritage context also includes part of the Kumano River, since the retired emperors took a boat to continue their pilgrimage from Kumano Hongu Taisha shrine to the other two major shrines, and several sub-routes developed later in time. The original main route of Nakahechi studied in this research is located at elevations between 100 m and 700 m, with the dominant surrounding environment being

comprised of closed, coniferous plantation forest. Since the surveyed Nakahechi Route is an open route with multiple entrances, the first task is to select survey sites. The whole distance of Nakahechi Route could be divided into 9 sections with possible entrance/exit points for pedestrians (Figure 5.1). And all 9 sections were categorized into different types of use level (Table 1). For visit count, 4 survey sites (orange circles with capital letters in Figure5.1) were chosen at the established trailheads for these sections. And on-site interviews were conducted at three sites (blue circles with small letters in Figure 5.1) that are trail-ends that received the most visitations along the route and spread across the whole route in order to gather information in the most efficient way. Choosing survey sites based on classification of the sections type in consultation with staff working in the management and tourism section data collected in an efficient way with limited labor and expenditure conditions. Data collected at similar section can be used to infer without data. Thus the distribution of the visitors on the Nakahechi Route could be obtained. The three survey sites for questionnaires ensures that information could be obtained for as much patterns of use as possible for the long distance route considering there are often cases that visitors chose sections in the middle to walk.

Table 5.1 Pre-categorization of survey sites for setting passive infrared sensor cameras.

Survey site for visit count	**Representing section**	**Use level**	**Date placed in the field**
D	8,9	High	2014.06.18 ~ 2015.05.22
A, B	1,3	Medium	2014. 11.22 ~ 2015.10.25
C	6,7	Low	2014.11.22 ~ 2015.10.25

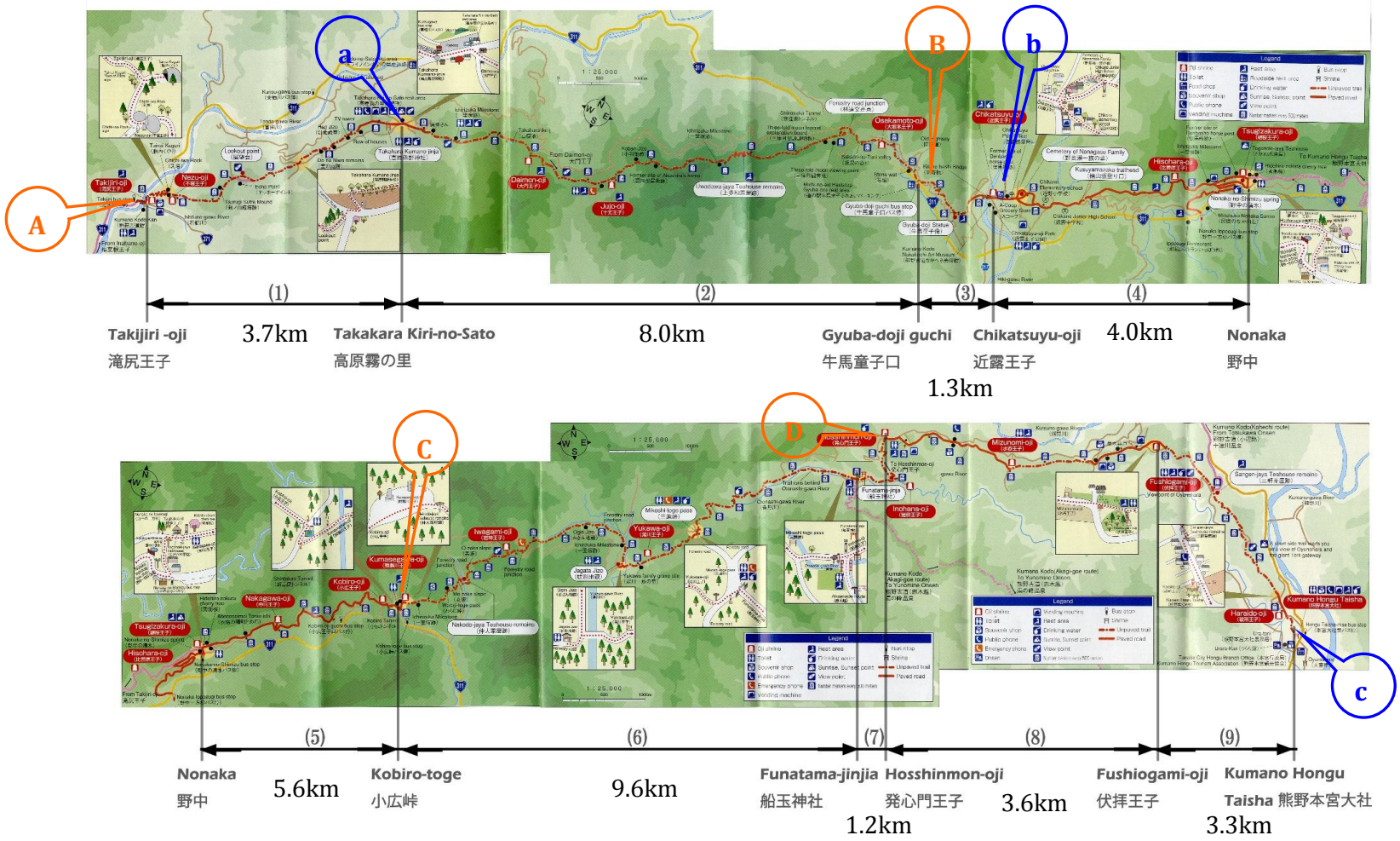


Figure 5.1 Survey sites for passive infrared sensor cameras and questionnaire indicated on the map of local guidebook for the main route of Nakahechi Route. Sections were divided according to entrances and crossing with other routes. Orange circles represent survey sites for cameras and blue circles represent sites for collecting on-site questionnaires.

5.2.2 Data collection

The Bushnell Trophy Cam HD, Essential type 119736c was used for visit count. This camera was chosen considering its high performance in outdoor environment, endurable to temperature range -5 to 140 degree Fahrenheit and is cased with waterproof hard plastic case. It PIR sensor is motion activated out to 24 meters (80ft) and in wilderness environment runs up to 12 months on one set of batteries (8 A4 batteries). The cameras were installed within 50 meters from entering the trailhead to prevent over-counting of visitors who did not walk the route. They were camouflaged on tree trunks and adjusted with an angle that covers at least 10 meters of the route. This adjustment was needed to balance the setting of interval when will the next photo be taken after the previous reaction. After repeated test and adjustments, 2 seconds trigger intervals were programmed for site A, B, and D. A longer interval was set for site C for 5 seconds since the camera was set to capture a wider angle of the trail. 3 images per trigger were set for each camera to deal with situation of large group. And 8GB SD cards were prepared for three months storage of photo data. This initial preparation stage was essential as it directly influence on the quality of the camera data. Cameras were set to function through a extent of whole year from 2014 to 2015. After the cameras were set, battery and memory cards were changed every three months. Sometimes additional exchanges were added to cope with peak seasons. Photographs collected were transferred into computer for manual counting.

At the same time researchers conducted on-site exit questionnaire surveys for 4 national holidays, 9 weekends and 27 weekdays from May to October, 2014. Surveys were conducted under fair weather condition from 11:00 am to 4:00pm. Pedestrians over the age of 18, coming out of the trail exit, were approached randomly by the researcher. It took an approximately 10 to 15 minutes to complete the questionnaire and for those who were willing to be informed about the survey result, their contact information was recorded by the researchers.

5.2.3 Data processing and analysis

The manual count process intermittently whenever the photographs were collected and transferred into computer. The method resembles personal observations, only that photographs allow the researcher to collect the data after the events, which gave more flexibility for working hours and weather condition. The interpretation of the photographs was conducted only by the researcher to ensure the anonymity of the visitors. Since not every person passed the camera is a visitor. Persons just passing through (people returned within 15mints), local residents or people tending other business other than coming to walk the route for recreation and cultural appreciation purposes were excluded from the counts. When walkers were observed twice (e.g. if they made multiple laps around the trail and passed the camera more than once) they were only counted as one time. Any data that included researchers working on the route erased from the count, as with those people who entered the trail and went back within 30 minutes.

5.2.4 Analyses

Information gathered from the photographs includes; a) total visits per day; b) number of people walking the opposite direction per day; c) number of groups with *Kataribe* guide per day; and d) total number of people walking with *Kataribe* guide per day. However, some photograph data were lost during the season due to operating issues or malfunctioning of the camera (e.g. a camera's memory reached capacity before researchers were able to conduct a data download; a camera recorded an inordinately large number of photographs, causing over consumption of the battery). Therefore, bootstrap techniques were used to estimate mean count for different types of use (total, direction, individual or group), by period of time (day and season), to account for the fact that all of the cameras had some instances of missing data. This method has already been applied for estimating visitor use in Yosemite National Park (Pettebone et al. 2010). Similarly for the case of camera count, the approximating distributions are the incomplete datasets of camera counts and the population distributions are the corresponding complete sets of camera counts that would have resulted without device operating issues and other sources of missing data. The approximating distribution is randomly sampled with replacement at sample size n from the original sample size of N 1000 times to estimate mean for the population. The observed and estimated means of daily visit were recorded on an MS-Excel spreadsheet for per type of use and per type of day and season for all monitoring device. Annual estimation for total visits were calculated by the estimated average total visit for each season multiplied by the total number of days in each season for each site.

For the questionnaire survey, there were 272 questionnaires in total gathered. After the data was input into Excel, a serious of analyses was conducted in order to find out visitors' characteristics and how it relates to their traveling patterns. Firstly, visitors were categorized into groups depending on the distance they walked, and characteristics were summarized for each group. Then, Principle Component Analysis was conducted for the motivations the respondents chose for their visit. Finally, principle component scores were calculated for different walking patterns in terms of the sections these respondents selected. The results from two surveys are combined together for a discussion at the possible reasons for explaining walk patterns of the Nakahechi Route.

5.3 Results of monitoring camera

5.3.1 Visit count

Visit counts collected from the passive infrared sensor cameras on the four sites revealed that visitors' use of the Nakahechi Route varied with site, season and time of week. Table 5.2 shows that Site D as the trailhead for section 8 and 9 welcomes the most visitors, with an annual use estimate of around 29053 visits. These two sections, as the last two sections before reaching the Kumano Hongu Taisha shrine can be accessed by shuttle bus to the trailhead. While Site C, which locates at the trailhead of section 6 in the middle of the Nakahechi Route is the least visited, with an annual use estimate of around 6786 visits. Site A and Site B receives an annual use estimate of 14283 and 19639 visits respectively. These two sites locate at the trailhead of section 1 and section 3 with relatively well-facilitated parking space than Site C. Results of the estimated annual visit of various sites of the Nakahechi Route verify the prior classification of

these sites into different use levels of high, medium and low and revealed the gaps among visits received by different sections of the route.

Besides the spatial distribution of visits, results of the study also revealed the temporal distribution for visitors who came to walk the Nakahechi Route. Site A, Site C and Site D welcome the most visits in spring. While for Site B, it was autumn. The daily average of visitors who walked section 8 and 9 (Site D) during spring is about 121, compared to about 30 in winter. For those least visited section, i.e. section 6 (Site C), visitation reduces to an average of 6 in winter compares to 34 in spring. On the other hand, Site B at the trailhead of section 3 is mostly visited during autumn with a daily average visits of 84.9, followed by 72.9 visits in Spring. Winter sees the least people with a daily average 19.0 for Site B, following Site D as the second most popular site along the Nakahechi Route. Another temporal distribution of visitation is obvious among holidays and weekdays (Table 5.3). All four survey sites observed more visits during holiday (including weekends and national holidays) than ordinary weekdays.

Table 5.2 Temporal and spatial distribution of visitors as indicated by mean daily visitation at the four site by seasons.

	Spring Total Number of days 92		Summer Total Number of days 92		Autumn Total Number of days 91		Winter Total Number of days 90		Total Estimate
	No. of days with data	Mean	No. of days with data	Mean	No. of days with data	Mean	No. of days with data	Mean	
Site A	92	66[a] 24[b] 6[c]	92	23[a] 2[b] 4[b]	64	56.3 ±12.3 [a]* 17.2 ±7.6 [b*] 7.8 ±1.9 [c*]	69	10.8 ±7.6 [a*] 3.0 ±2.0 [b*] 1.9 ±0.6 [c*]	14283
Site B	92	72.9[a] 22.5[b] 10.0[c]	77	38.0 ±6.3 [a*] 10.7 ±4.4 [b*] 7.0 ±1.9 [c*]	38	84.9 ±24.6 [a*] 32.0 ±14.8 [b*] 9.0 ±3.3 [c*]	17	19.0 ±7.8 [a*] 4.2 ±5.3 [b*] 3.3 ±1.8 [c*]	19639
Site C	32	33.9 ±6.8 [a*] 6.3 ±3.5 [b*] 4.4 ±1.9 [c*]	92	14.3[a] 5.4[b] 1.1[c]	64	20.1 ±3.9 [a*] 2.1 ±1.6 [b*] 2.2 ±0.7 [c*]	14	5.8 ±6.0 [a*] 2.1 ±4.1 [b*] 0.1 ±0.2 [c*]	6786
Site D	31	121.2 ±41.4 [a*] 9.2 ±4.5 [b*] 7.5 ±2.3 [c*]	75	68.8 ±9.8 [a*] 4.3 ±1.3 [b*] 5.6 ±1.4 [c*]	91	97.6[a] 15.3[b] 7.0[c]	50	29.9 ±7.0 [a*] 8.2 ±4.6 [b*] 3.6 ±1.3 [c*]	29053

a. Total visitation; b. Number of people walking with *Kataribe* guide; c. Number of people walking the opposite direction.

* Estimated mean using bootstrap techniques.

Table 5.3 Temporal and spatial distribution of visitors for holidays and weekdays.

	Holiday		Weekday	
	No. of days sampled	Mean	No. of days sampled	Mean
Site A	104	63.9 ±11.6 [a*] 22.7 ±7.9 [b*] 8.2 ±1.8 [c*]	213	27.9 ±3.6 [a*] 6.7 ±2.4 [b*] 3.5 ±0.6 [c*]
Site B	75	85.4 ±15.7 [a*] 25.7 ±7.4 [b*] 11.6 ±2.6 [c*]	149	45.4 ±7.0 [a*] 15.1 ±5.0 [b*] 6.6 ±1.2 [c*]
Site C	68	27.4 ±6.5 [a*] 6.3 ±4.3 [b*] 3.0 ±1.1 [c*]	134	14.2 ±2.3 [a*] 3.2 ±1.5 [b*] 1.4 ±0.5 [c*]
Site D	83	116.2 ±21.2 [a*] 13.1 ±4.0 [b*] 7.3 ±1.5 [c*]	164	58.8 ±5.9 [a*] 8.1 ±2.3 [b*] 5.3 ±0.9 [c*]

a. Total visitation; b. Number of people walking with *Kataribe* guide;
c. Number of people walking the opposite direction
* Estimated mean using bootstrap techniques.

5.3.2 Visit characteristics

The advantage of the passive infrared sensor cameras allows this study to examine certain behaviors of the visitors, such as their traveling direction and whether or not they walked with professional guides (Table 5.2 & 5.3). Considering the religious meaning of pilgrimage walking towards the Kumano Hongu Taisha shrine, there is a substantial amount of visitors observed to travel the opposite direction, except for Site D (accounting for about 1/10 of the total visits). Site B has seen the largest proportion of visitors walking the opposite direction of Kumano Hongu Taisha shrine (accounting for about 1/3 of the total visits), compared to Site A and C

Table 5.4 compares the number of visitors with *Kataribe* guides to the Nakahechi Route for four sites during their busiest season. Although the last two sections (Site D) was the mostly visited section for total counts, there were more visitors walking with professional guide on section 3. The average sizes of group lead by professional guides are particularly high for Site A and C, with a size over than 7. While the average size of group with professional guides are only about 2.3 for Site D.

Additional information extracted from the photographs include time of the Nakahechi Route under visitor use identified from the available data. Averagely, Site A has seen the earliest visitors at 6:51 and the latest at 14:05. For site B, visitors came later at an average time of 9:06 and the last one appeared at 16:40. For Site C, the latest time for visitors passing through the camera is earlier than other four sites, which is 13:27. The earliest one came at 7:41. Site D has seen the earliest visitors appeared at 8:17 and the last one passed the camera at 14:56 on average.

Table 5.4 Number of people traveling with *Kataribe* guide.

Estimation	Daily average for number of visitors with professional guides	Daily average for number of groups leading by professional guides	Group size
Site A (Spring)	6	0.8	7.5
Site B (Autumn)	9.0 ± 3.3 *	1.9 ± 0.9 *	4.7
Site C (Spring)	4.4 ± 1.9 *	0.6 ± 0.3 *	7.3
Site D (Spring)	7.5 ± 2.3 *	3.2 ± 1.2 *	2.3

* Estimated mean using bootstrap techniques.

5.4 Results from questionnaire survey

5.4.1 Visitor Characteristics

Visitor demographics shows that the most frequent type of visitor was a Japanese (93.4%), male (51.5%), in his 20s (22.0%), a company employee (53.7%), had a university degree (40.8%) and currently lived in Osaka (16.5%), a neighbouring prefecture on the north side of Wakayama prefecture. He came with his family relatives

the same time, visitors show different characteristics if divided them by the distance of their walk. Table 5.5 shows that for those people who hiked for more than 15km, there are higher percentages of visitors who come from outside Japan and firstly heard about this route from their friends. The highest percentage of foreigners and people in the 60s all fell into the groups of people who hiked for more than 20km. Since visitors in large size organized groups were more likely to refuse the survey because of the inflexibility of their schedule, the average visitor per group appears smaller from the counter survey (Table 5.4) with the highest number (3.83) belongs to visitors who hiked relatively long.

Table 5.5 Selected characteristics of visitors. Visitors' characteristics are categorized by the distance they walked.

Variables	All sample (%)	Very-short (0,5km] (%)	Short (5,10km] (%)	Medium (10,15m] (%)	Long (15,20km] (%)	Very Long >20km (%)
Nationality						
Japanese	93.4	98.1	96.8	94.1	76.9	84.0
Foreigner	14.3	2.0	3.2	5.9	23.1	16.0
Age	20s (22.0)	40s (29.6)	20s (28.0)	40s (35.3)	40s (46.2)	60s (32.0)
Visitor per group	2.58	2.76	2.84	2.00	3.83	2.00
Information source	Internet (21.3)	Internet (18.5)	Internet (25.8)	Internet (23.5)	Friends (30.8)	Friends (24.0)
How long they spent in this area?	½ day (56.2)	½ day (85.2) Average 10:15 – 13:35	½ day (84.9) Average 10:28 – 13:29	1 day and more (58.8) Average 1	1 day and more (100.0) Average 2	1 day and more (88.0) Average 2
Total No.	272	54	93	17	13	25

5.4.2 Motives

According to the correlations between the original data for each motive and each principal component illustrated in Table 5.6, there is not a particular motive large in magnitude for the first principal component (Component a). This indicates that Component a is not strongly correlated with any of the variables which in the other way represents a multiple motive for visitors to come walking the route. The second principal component (Component b) increases with decreasing motives *to interact with local people* and *to buy souvenirs*. This suggests that visitors who are more willing to interact with local people are also more willing to buy souvenirs. The third principal component (Component c) has one particular high correlation with the motive *to observe rural life*. This component can be viewed as a measure of motive to observe rural life without overly interference. These first three components explained over 85% of the variances together and are considered the most important components to explain the visitors' motives.

Table 5.6 Loadings for the first five components extracted from the original 16 motives using ***Principal Component Analysis***. Numbers are the correlations between the component and the original motives. Correlations smaller than 0.1 are not shown in this table. Correlation values (below) above (-) 0.5 in boldface are deemed important in this table.

Motive	Component a	Component b	Component c	Component d	Component e
1. To learn about history and myths	-0.279			-0.156	
2. To pay pilgrimage to "Kumano"	-0.271	0.181		-0.122	-0.140
3. To observe the beauty of nature	-0.301				
4. To observe wildlife	-0.283				
5. To sense the beauty of seasonal change	-0.292		0.102	-0.209	
6. To enjoy local food	-0.228	-0.341	-0.143	-0.118	-0.286
7. To interact with local people		**-0.627**	0.148	0.289	-0.406
8. To observe rural life		-0.266	**0.817**	-0.317	0.202
9. To escape from pressure and stress	-0.239	0.148			
10. To challenge myself	-0.240	-0.190	-0.189		-0.353
11.To promote physical fitness	-0.299				
12. To get some fresh air	-0.298				
13. To be with the people who came with me	-0.284	0.153	0.153		0.112
14. To tell others about it at home	-0.198		-0.458	**0.801**	0.367
15. To buy souvenirs		**-0.538**		-0.207	**0.630**
16. To visit a world heritage site	-0.299				
Eigenvalue	3.287	1.365	1.004	0.825	0.712
Cumulative variance	0.675	0.791	0.855	0.898	0.929

5.4.3 Relationship between motives and walking pattern.

According to Table 5.7, Section 8 & 9 is the mostly walked course for the respondents among all the walking patterns. Scores for Component a is also the highest of magnitude for this group, which indicates that visitors coming to walk the section 8 & 9 often have multiple purposes. Respondent who walked Section 1 also has a relatively high score on Component a, indicating a certain extent for the variety of their motives. However, Component b for this group scored the highest of magnitude, which indicates that they were more likely to interact with local people and to buy souvenirs. Such motives are decreasing for those visitors who only chose the last or last two sections of the route for walking. Respondent who walked section 3 has the highest positive score on Component c. Since this is also the component that is the measure of motive to observe rural life without overly interference, respondent who chose to walk this relative short section located in the middle of the route has certain interest in local life but more or less from the standpoint of outsiders. Finally, for the respondent who walked the full length of Nakahechi Route, neither of the two major components a or b was high enough to indicates a major influence. A small negative value for Component c may indicates a combination of the motives from the negative loading of *to tell others about it at home*, *to challenge myself* and *to enjoy local food*. Considering the socio-demographic characteristics of this group of respondents (such as higher proportion of foreigners, higher proportion of people in their 60s and higher proportion of getting information from their friends), these motives are highly considerable.

Table 5.7 Principal Component scores for the five mostly walked courses.

Section (No.)	Section 8 & 9 (78)	Section 9 (22)	Section 1 (19)	Section 3 (12)	Full length (11)
Component a	-15.043	-2.798	-3.266	-1.278	-1.192
Component b	1.362	1.403	-5.294	0.588	-0.657
Component c	-0.164	-0.332	-1.017	0.948	-0.080
Component d	-0.220	0.585	0.353	0.662	-1.272
Component e	-0.148	0.256	0.241	0.733	-1.419

5.5 Chapter conclusions

The estimated visitor use of the Nakahechi Route calculated from the monitoring camera, combined with the questionnaire survey provided important insights for managers of this heritage route. Moreover, it revealed the current insufficiency of visitor monitoring for the Nakahechi Route and calls for more detailed and comprehensive system to collect visitor monitoring data based on the findings of this study.

5.5.1 Spatial and temporal distribution of visitors on Nakahechi Route

Compared to the annual visitation of about 3.7 million visitors to the city of Tanabe as mentioned in the introduction section of this chapter, visitation to the most popular section of Nakahechi Route is about 29053. The high visitor frequency due to the WHS designation is only caused, to a minor extent, by visitors who actually walked the Nakahechi Route. A typical visitation pattern in a protected area was found to mainly results from the attraction of visitors to specific natural or artificial landscape features, the accessibility of a site, its spatial relation to other sites (that allows/hinders possible

joint visits) and its adequacy for camping, resting or parking (Wolf et al. 2012). In this study, results from the visitor count also showed clear pattern of spatial concentration on specific sections of the Nakahechi Route. The access to the trailhead, car-parking facility, distance to promoted cultural features and total length of walks seems to influence on the visitors' distribution.

The popularity of the last two sections of the route can result from a combination of many variables including shuttle bus to the trailhead, the Kumano Hongu Taisha shrine as the destination of the walk, a comparatively easier descending walk about 7km, which is considered appropriate distance for a half day walk compares to those long distance sections in the middle part. The highest score of Component a for visitors who walked the last two sections is another prove of strong influences of the physical setting on visitors' concentration on these two sections as Component a represent a variety of motives from the visitors instead of a particularly strong one. The high visitation rate of these two sections poses visitor impact problems such as tramping, vandalism on the physical conditions of the route. At the same time, with a lack of particular interest or background knowledge on the history, natural and cultural heritage values of the route, managing these sections of the route requires particular attention towards making the walk into an educational experience rather then a simple access towards the destination shrine.

Compares to the particular popularity of the last two sections, fewer visitors extend their range of activities to other sections of the route unless those sections with better parking facilities. However, those visitors who actually decided to explore more were found to

have more intention to interact with the local culture, either in a way of to interact with local people and to buy souvenirs (Component b for section 1) or to observe rural life without overly interference (Component c for section). An annual visit of about 10000 to 20000 people may seem small when compared to those traveled to the last two sections, but these visitors may have higher expectation for experiencing cultural elements of the route which could be developed into a more interactive style of traveling involving the local communities and enhancing the understanding of the Nakahechi Route as an essential component of the cultural landscape.

Results of this study also identified those long sections in the middle as receiving the least visitation for the Nakahechi Route except from those serious hikers. Other than a "tasting" style of sightseeing, the Nakahechi Route also provide opportunities for longer distances walking, which welcomes more than 6000 people a year. Den Breejen's study (2007) on walkers of West Highland Way in Scotland found out that the strong relationship that walkers forge with their surroundings and the expected sense of achievement they attain from completing a multi-day, challenging walk, are found to be variables that appear to determine the long distance walkers' experiences of the end of their walk as a climatic high. More detailed research and understanding of the walker-environment interactions are thus needed to aid future management of those least walked sections of the Nakahechi Route.

Finally, visit behaviors are found to be strongly influenced by the dimension of time, such as seasonality. Spring and autumn are the peak seasons, summer as shoulder season and winter is off-peak periods for all sites of the Nakahechi Route. Expectation

for seasonal scenes in the route environment such as cherry blossom in spring and colored autumn leaves may also contribute to the temporal distribution of visitation. The difference between workday and holiday also reflect the influence of work and shool schedules on specific outdoor activities (Arnberger & Eder 2007).

5.5.2 Visit Characteristics

Besides visitor volume, the use of passive infrared sensor camera also contributed to identifying certain walking behavior such as direction of walking and group visits with *Kataribe* guide. Visitors walking the direction opposite from the Kumano Hongu Taisha shrine also illustrated the influences from the physical environment on use of the route. One of the important factors is accessibility. According to the result, Site D had the least number of visits walking the opposite direction,this site locates at the trailhead of section 8 and 9, closest to the Kumano Hongu Taisha shrine and can be accessed by shuttle bus. Visitors traveling the opposite direction majorly came from those traveling to the crossing of Nakahechi Route with the Akagi-goe Route (section 2.2.1:17) that leads to the hot spring village Yunomine. On the other hand, Site B has more mixture use from visitors traveling both directions. The relative short distance of section 3 with parking space at both ends facilitated visitation of this section of the Route in a “tasting” style for the atmosphere of the route, which may also contributes to this survey site as the second mostly visited among the four survey sites. Personal observation from the photographs also validated these traveling behaviors as in the photographs, there were a substantial amount of visitors wearing casual clothes, passing the camera and returning back in a short time.

The results of this research also found out that walking with *Kataribe* guides accounts for only a small portion of the total visits. Walking with professional guides concentrated on busy seasons of spring and autumn. However, rather than following the same temporal distribution of the general visitors, small variations among the busy seasons of spring and autumn were found out for Site A (trailhead of section 1) and B (trailhead of section 3). This might be because that rather than only catering to the educational demands from visitors who came to experience the world heritage site with profound history and cultural background, guided walk can also provide visitors with easier access to different sections along the route through cooperation with organized tourism group. As a result, Site A and B, which locate closer to the official start of the route might attract such organized groups at early seasons of the year. The size of the organized groups observed from the photographs for different sections of the route could also support the influence of accessibility as a relative larger group size for location at the beginning of the route (Site A), middle of the route with relative less facilities (Site C) than locations that are more easily accessed for individual travelers by cars or shuttle buses (Site B & D).

5.5.3 Visitor monitoring for Nakahechi Route

While the development of visitor monitoring system remains an ongoing process of continual improvement (rather than a specific endpoint fulfilled by a specific tool), the passive infrared camera proves to be an effective tool in Chapter 5 to gather information on visitor count of different types of use for the Nakahechi Route. And when complemented with a questionnaire survey, this method could reveal much useful

information on the influential variables affecting the spatial and temporal distribution of visitors' use. However, malfunction of the camera due to both technical problems of the cameras and outer environment factors such as weather condition still proves to cause problems in data collection., especially for those remote sites for which maintenance of the monitoring facilities are both time and labor consuming. For example, when malfunction caused the device to record an inordinately large number of photographs, causing over consumption of the battery before supplementation, a large amount of data could be missing.

Bootstrapping was found to be an effective method for treating missing data in this study over the conventional methods of replacing missing values with means. Typically, mean values to replace missing data are calculated from the same day of the week from the previous and following weeks of a missing data. However, this method is not feasible in this study when there are more than a few missing days from which means could be calculated. Furthermore, the temporal patterns of visit count indicate clear influences from seasonality that clearly influences on results. Thus using bootstrapping techniques to calculate daily means for each season and to estimate the total annual visits based on the estimated mean is a more accurate way for estimating visit count of the Nakahechi Route than using the traditionally "best guess" way. However, the monitoring camera does exhibited several disadvantages such as a lot of efforts in calibration phase; costly and vulnerable equipment to use and maintain, staff time needed to interpret photographs, power requirements mean not a long-term option at far away and attended sites. A comparison between this method and a mechanical counting method, which is simpler to build and maintain with a low cost, should be made in

future studies. And considering the short of staff and limited funding for a vast area of the world heritage site, collaboration between the management staff, tourism sector and the local community could be considered, such as the local *Kataribe* guides could also be assigned tasks such as maintaining monitoring device and get rewarded with useful information, sense of responsibility or certain amount of economic reward. Cooperative and/or joint management structures are needed and only in this way, a long term, comprehensive and more systematic monitoring program could be established in order to match the conservation and recreational needs of increasing visitors in an more effective way. Ethical and privacy issues have also to be discussed if the collaboration is to be realized.

5.5.4 Conclusions

As a first attempt to estimate and understand current visitor use of the Nakahechi Route using long-tern time-lapse camera supplemented by a questionnaire survey, Chapter 5 revealed that for a heritage route of Nakahechi, it was not only the visitor volume but also their walking patterns that are the products of interactive effects from the physical attributes of the route (accessibility, distance of walk etc.) and the inner motives of the visitors themselves. The diverse characteristics of different sections of the heritage route and its relationship with the surrounding landscapes can be of an important asset in tourism but also pose difficulty in terms of long term monitoring and management. Thus specific information on the use of the Nakahechi Route in this chapter such as estimation of monthly count for different sections, use patterns, motivations, and visitors' socio-demographics were important reference for helping managers and

planners create a balance between the conservation of the route, its surrounding environment and providing quality recreation experiences. Currently, counting the visitor use and study on their characteristics has lower priority for the conservation sector than the tourism sector. However, this study suggested that the objective and systematic long term monitoring of the users can be important for both two sectors and required joint efforts from the two sectors as well.

Compares to the conventional “best guess” method for estimating visitor count and understanding current visitor use of the Nakahechi Route, this study provided more reliable and concrete information which connects visitor use with both physical conditions of the route and the motives of the visitors themselves. Some deficiencies of the monitoring method was also identified in this study which requires more systematic and comprehensive studies to improve the accuracy and more importantly, to provide managers with the right information they need. Cooperative and/or joint management structures seems to be needed for the feasibility of a monitoring program which covers a vast area and a heritage route with a complex nature as an essential element of a cultural landscape.

Chapter 6 Visitors Experience on the Nakahechi Route

6.1 Introduction

Understanding visitor experience on the Nakahechi Route is fundamental to answer Research question 3: How could enhancing the contemporary visitors' interaction with the Nakahechi Route contribute to the conservation of its heritage value. In another word, by exploring visitor experiences, this chapter aims to bridge the gap between the subjective nature of walking a pilgrimage route with the need to contextualize the confined landscape of the route corridor.

As elaborated in Chapter 5, the heritage route itself has already become the destinations and focus of recreational activity. While visitors' traveling patterns, motivations variate among different physical environment and individuals, a general conclusion could be reached that a demarcation line between a so-called tourist seeking recreational experience and a devout pilgrim seeking only religious purposes may not exist for modern time travelers to the Nakahechi Route. The secularization of pilgrimages and travel to sacred sites is an emerging global phenomenon that greatly impacts the contemporary tourism industry. As many sacred sites are also tourist attractions of international fame, the difference between tourism and a traditional pilgrimage is fading: both require spatial movement and involve an emotional desire to a meaningful site (Collins-Kreiner 2010). Historically, a pilgrimage has been defined as "a journey resulting from religious causes to an external holy site for spiritual purposes and internal understanding" (Gatrell & Collins-Kreiner 2006). Today, the world "pilgrimage" is becoming widely used in various contexts, including

visitation of rural areas (Sharpley & Jepson 2011), battlefields (Hyde & Harman 2011), or the graves and residences of celebrities (Alderman 2002). The formalization of pilgrimage routes, a recent phenomenon that has increased the popularity of visits, has made movement between sacred sites a significant part of the visitor experience (Shackley 2001: 105). International examples include the revival of interest in the pilgrimage to Santiago de Compostela using the ancient route of El Camino or St. James's Way (Collins-Kreiner 2010); traditional walking routes, such as the Via Francigena that connects Canterbury and Rome (Irvine 2015); and the 3-kilometer Inca trail that provides walking access to Machu Picchu in Peru (Shackley 2001). Despite the variety of sacred sites and heterogeneity of the visitor experience, researchers have recognized the importance of the physical environment. The sacred site's appearance was found to be important to 47% of visitors to holy sites to Holy Land (Israel) for Christian pilgrimage, for the reason that the site made the biblical story "come alive" and helped them to understand theological events and concepts (Collins-Kreiner & Kliot 2000). While pursuing spiritual experiences, visitors also perceive the aesthetic beauty of the landscape. That is, the colors, shapes, textures, and other physical qualities of the landscape are often found to be an important aspect of sacred sites for visitors who travel in solitude (Andriotis 2009). History, art, and the daily routines of people living in the area are also found to be an integral part of the visitor experience, and are closely related to the quest for "authentic" experiences in heritage places (MacCannel 1973; Rinschede 1992). Thus, the tendency to approach visitor experience exclusively through a subjective lens is problematic, as it obscures the influence of real physical places with shared, collectively authored meanings. Another benefit of including the physical environment in understanding visitor experience is stated by Myra Shackley (2001), who notes that as sacred sites become visitor attractions, competent management becomes essential, and ultimately

"it is the task of sacred sites to manage the mysterious and reach for the sublime, while coping with the prosaic." With the religious and the secular spheres of tourism rapidly merging, managing the visitor experience has become a primary concern for managers and planners, who must base their decisions on empirical research specific to their sites.

In modern Japan, pilgrimages are often promoted more for their cultural heritage than as a sectarian experience tied to Buddhism (Reader 2014). While many variables help explain the proliferation of pilgrimage routes and the increasing number of pilgrims across Japan, many scholars have found that religious devotion does not seem to be either an essential or central motivator (Watkins 2008; Reader 2014; Pye 2015). As mentioned in Chapter 3 *section 3.2.4* about the secularization of the religious journey in the Early Modern times. The intimate link between a pilgrimage and tourism is deeply rooted in Japanese culture; the secularization process for pilgrimages dates back to the early modern era, when religious journeys developed into highly organized forms of travel centered around sightseeing. Due to political controls on movement, visiting temples or shrines was sometimes used as a convenient excuse to temporarily escape one's own community and daily environment (Vaporis 1995). Susanne Fromanek (1998), for example, looked in detail at the pilgrimage to Mount Tateyama, and concluded that, by the Edo era, pilgrimage involved institutionalized and commercialized trips in which sightseeing and pleasure seeking was at least as important, if not more important than the religious goal. Campbell and Noble (1993) have found out that commercial areas, called *monzen machi*, literally "town in front of the (temple/shrine) gate", were developed around shrines and temples to serve the pilgrims to the island of Shikoku, which is perhaps the most famous pilgrimage in Japan. The services these towns provided represented an "embryonic tourist industry".

More deeply rooted in Japanese culture the uniqueness of Japanese pilgrimage is as Watkin (2008) asserts that a journey to a place of nature or history may be considered as sacred as a journey to a temple or shrine, while a pilgrimage may be enjoyed merely for "novelty," without moral restrictions on behaviour and intent, without losing its status as "pilgrimage."

The uniqueness of Japanese traveling associated with a pilgrimage route provides an opportunity to study the modern time interaction between visitors and a pilgrimage route through the direct, on-site experience of walking in order to seek out balancing tourism with heritage conservation. The specific objectives of this chapter are to understand:1.What kind of landscape elements enhance the visitor experiences along the Nakahechi Route, and how do these physical attributes influence the overall impression of walking this iconic pilgrimage route; 2.How does the distribution of scenic views along the Nakahechi Route affect the visitor experience. The landscape approach to study experience explained in Chapter 2 section 2.3.5 will help us to move beyond a solely subjective perspective and to highlight the interactions between humans and the route environment.

6.2 Methodology

6.2.1 Study Area

As revealed by Chapter 5, Nakahechi Route can be employed for various motivations and purposes, from multi-day hiking for serious hikers to casual walking by day trippers. This chapter chose the final 6.9-kilometer section (section 8 and 9) from Hosshinmon-oji to Kumano Hongu Taisha shrine, since these two sections is identified as the mostly intensively used for visitors who came to visit the Nakahechi Route (Chapter 5). The course traverses diverse landscapes comprising villages and forests, making it a very popular half-day trek (average walking time = 2.5 h), particularly with visitors who wish to experience the area, as opposed to only visiting the shrines and temples (Chapter 5). There is shuttle bus access to the trailhead, which creates a more controlled environment. The route was divided into 10 sections based

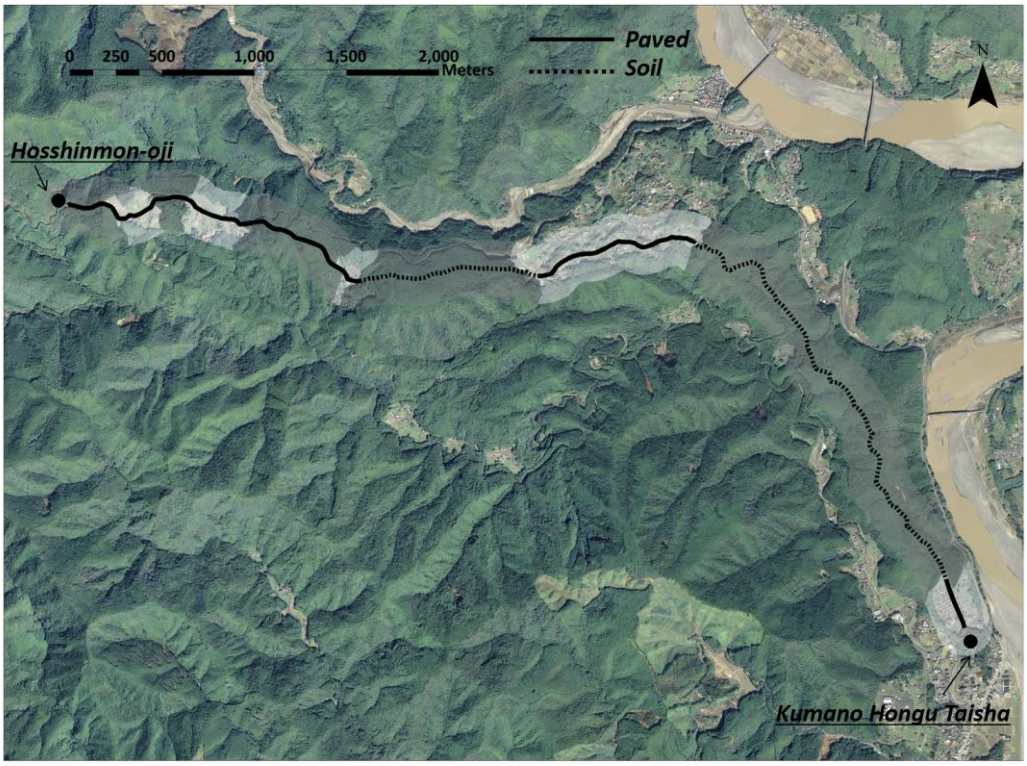


Figure 6.1 The Nakahechi Route of Kumano pilgrimage network and the icon course of the last 6.9km from Hosshinmon-oji to Kumano Hongu Taisha. The solid lines represent paved sections and the dash lines represent those unpaved sections with soil substrate. The shaded area are the 150m buffer zone around the route, area in gray represent the surrounding environment majorly composed of forest and those in white are mainly human settlement.

on the adjacent land-use type, which resulted in visually distinguishable units of either forest or human settlements (villages). The area was divided based on information provided gathered from aerial photographs and 1:25,000 topographic maps (Figure 6.1).

6.2.2 Procedure

To conduct the survey, 21 fine weather days were chosen from June to September 2014, which is considered the peak of the travel season for the Nakahechi Route. The study sample was randomly selected from visitors who came to walk the targeted section of the Nakahechi Route. Some researchers have impugned the credibility of the Visitor Employed Photography (VEP) method (e.g., subjects might take several photos to complete the "task" as requested; previous exposure to the research tool might lead participants to become overly self-aware and thus response patterns may be a result of this awareness rather than a measure of affective reaction) (Den Breejen 2007). Regarding these concerns, a control group was utilized to examine the "error" brought about by implementing this method itself. Sixteen respondents who were approached at the trailhead were categorized into the Main Group; participants were selected to create balanced age and gender groups. After the purpose of the research study was explained, respondents were handed cameras to take photographs of any "scenes or features that contributed to [their] walking experience." The Control Group included 15 people who were approached after they had completed their walk. Given the purpose of the control group was to detect the latent effects induced when people were instructed to take photos, this group was not aware of the study until they had completed their walk and were asked to share the photographs they took with their own cameras. Participants from both groups were asked to complete a short

questionnaire regarding information on their demographic status and travel experience after they had completed their treks. All of the photographs collected from the Control Group were confirmed with the respondents as representative of the positive features they encountered during their walks. Since photographing negative features is contrary to most tourists' photography behaviors (Taylor et al. 1996), it is not surprising to learn that none of the photographs recorded by the Control Group featured negative components.

Subjective qualities of the landscape features and the overall impression of the sites were elicited through interviews conducted with 28 respondents who expressed a willingness to participate following the photography session. The interviews were semi-structured. Respondents were asked to recall why they took the photographs at those particular locations, their thoughts about the route before arriving, what they found most impressive about their visit, and some general comments.

6.2.3 Analyses

All photos were organized and coded in conjunction with the questionnaires. The interviews were all verbally transcribed and open-coded to identify the subjective feelings behind the photographs and the general impression visitors had about the route corridor.

The photographs were aggregated and placed into categories according to the type of landscape element included in each photo. There were no predefined limitations for the number for categories or thresholds for the concurrency of a landscape element type to be classified into a particular category. Rather, through a process of reviewing

the photographs repeatedly, 14 categories were generated that reflected the participants' experiences. It was possible for photos to be assigned to two categories simultaneously. Therefore, in order to explore the differences between the Main Group and Control Group through a series of two-sample t-tests, the ratio of categories (instead of the number of photographs) was calculated by dividing the number of times each category appeared in each respondent's photographs by the total number of appearances in all categories.

Furthermore, to explore the distribution of scenic views perceived by the respondents, photographs taken at eye-level were classified by the breadth view, following the method prescribed in De Veer and Burrough's paper (1978). The main tenet of this method is that the effectiveness with which an element limits a view depends on its distance from the observer. The critical "extraocular" distance (i.e., the distance at which the elements' fine textures could not be discerned by the naked eye) was determined to be 1,500 meters. The closer, critical "ocular" and "intraocular" distances were arbitrarily determined to be 150 meters, based on the visual cues of discernible individual leaves on trees and shrubs. Viewing locations were subsequently identified by the researchers using aerial photographs of the study area, which were taken in 2011 at a height of 3,505 meters. The aerial photographs were overlapped in ArcGIS 10.1 (ESRI, Redlands, CA, USA) with the linear data of the route and point data from road signs located every 500 meters that were gathered in September 2013 using a portable GPS device (Garmin 62Sj; Garmin International, Inc., Olathe, KS, USA). The identification process involved numerous iterations of reviewing the photographs and consulting with experienced local guides and the World Heritage Center's management staff.

After identifying the location of every photograph, the linear route was smoothed and divided into 132 segments of 50.22-meter intervals in ArcGIS 10.1. (A 50.22-meter length was determined after considering variations within this distance result from point accuracy, and thus could be overlooked.) The location points were spatially joined to the line segments of closest distance for each segment. If randomly distributed, the number of location points on line segments would follow a Poisson distribution, for which the variation equaled the mean. If the variance/mean was less than 1, then there was too little variation among segment counts, suggesting possible "dispersion" rather than randomness. Similarly, if variance/mean was greater than 1, then there was too much variation among counts, suggesting possible "clustering" rather than randomness. This ratio, used as a rough measure of dispersion versus clustering, represents the index of dispersion and was calculated for each type of view and Pearson's chi-square goodness-of-fit was used to test the random distribution hypothesis.

In total, 631 photos were collected from the 31 participants. Among the photos, 479 were gathered from the 16 participants in the Main Group and 152 photos were gathered from the 15 participants in the Control Group. Table 6.1 provides a general picture of the participants' demographic information, traveling characteristics, and information regarding their photo-taking behaviors. Results of the two-sample t-test indicated that participants in the Main Group took significantly more photos per person than subjects in the Control Group ($p < 0.000$). The average number of photos taken by the Main Group was approximately three times that of the Control Group, although the time they spent walking was about the same. All photographs from the Control Group were taken for positive reasons (contributing to the experience), while only two photos from the Main Group were taken based on negative motives

(detracting from the values gained through experience), even though the instruction was given to take photos that contributed to the respondents' experiences. In the following analyses of the photo contents, these two photos were categorized into the class of Other, in order to eliminate their effects on the results. .

Table 6.1 Respondents' demographic information, traveling characteristics and behavior of taking photographs. The result of two-sampled t-test for the average number of photographs taken by each group is included.

Variables	Main Group	Control Group
Gender		
Female	8	6
Male	8	9
Age		
20s	1	2
30s	6	3
40s	4	3
50s	3	2
60s	2	3
No-response	0	2
Nationality		
Japanese	11	7
Australian	3	1
Spanish	0	2
Other	2	5
Residency		
Inside Wakayama	0	1
Outside Wakayama	16	14
Travel companions		
Alone	3	2
2 people	13	11
3 and More	0	2
Frequency		
First time	16	14
Second time	0	1
Time-spent walking		
Mean (min)	176	186
No-response	1	1
No. of photos per person		
Mean, sd, range	30.0 9.35 31	10.1 6.95 23
	t = -6.7447, df = 27.616, p <0.000	

6.3 Visitors with Landscape Elements

Table 6.2 summarizes the 14 categories established from the photographs' contents. Sub-categories and examples of interview results regarding the reasons for respondents to take the photos are also included in the table. Table 6.3 shows that among the variety of landscape elements that were considered contributing to the visitors' experiences, the category of *Path* contained the highest number of photographs. However, when it came to the average ratio of category per person, the *Statue and Symbol* category accounted for the most images, followed by *Terrain*, *Path*, and *Village*.

The symbolic meaning of walking the pilgrimage route was largely associated with the category of *Path*. The reasoning underlying this is speculated as that the path looks "different from a normal one." This could be interpreted from two aspects: some respondents described the physical appearance of the trail such as its stonework or the beauty of its curves (i.e., aesthetic considerations), while others said "it feels sacred and different when walking, imagining the pilgrims who had walked it since ancient times" (i.e., spiritual considerations). It was also interesting to note that the physical path was captured in visitors' photographs under different morphologies (e.g., the most prevalent images were of soil substrate running through the forest). Those trail sections were thought to match the visitor perception of an ancient pilgrimage route that extends into the forest, and were associated with a feeling of nostalgia associated with the visitors' knowledge of the route. On the other hand, respondents seemed to be less conscious that much of the stonework in their photographs that was ostensibly seen as having historic value (35 as in Table 6.2) was actually constructed

Table 6.2 Classifications for type of landscape element and two categories of *people* and general *other*. Comparison between the Main Group and the Control Group is also indicated by this table.

Category	Description	Sub-categories	Total	Main Group	Control Group	Example of reasons taking photo
Terrain	Photos that feature mountainous terrain or wandering river.		132	94	38	"Nice shape of the mountain"; "Beautiful mountain ridges"
Forest	Photos that feature a homogeneous texture of forest canopy or forest floor	Forest floor Forest canopy	60 4	44 4	16 0	"Like the contrast of the colors, green and brown branch of trees"; "Pretty trees and ferns"
Natural objects	Photos of a specific objects of nature, i.e. rock, exposed roots, flower etc.	Plant Animal Mushroom Other	34 1 3 3	34 1 1 3	0 0 2 0	"Don't know what the flowers are but they are pretty"; "Mushroom, love the detail in nature"
Statue	Photos that feature punctiform features of stele, Oji shrine, Jizo statue and other man-made tangible elements that have religious meanings		140	95	45	"It's great to have this trail and statues by the side" "The arrangement of small statues, water for purification, and moss-laden plate with words on it"
Village	Photos that shows simple patterns (less than three elements) of fields/house/trees or a complex patterns of village scene (more than three elements)	Simple pattern Complex pattern	29 66	25 50	4 16	"Fields are small, compact and neat, rarely seen in Australia; "Like the scenes of village, looks like not much has been changed since old times, makes me calm"

Local business	Photos relevant to business or other economic activities conducted by local people, e.g. shop, teahouse, hand-made self-kiosk etc.		21	11	10	"The elder lady form the local village treated us with the coffee made from spring water, so nice" "Nice hand-made teahouse"
Man-made structure	Photos of a specific building including interiors decorations or furniture etc.	Building Other	13 11	10 10	3 1	"Nostalgic to see this old-style folk-house" "A well villagers are still using"
Artifact	Photos of artistic product, i.e. woodcraft, sculptures and graffiti art		44	36	8	"Interesting" "It must the owner of the house who made these woodcrafts"
Tourist behavior	Photos of objects reflecting other tourists' behavior, i.e. Piled-up stones on tree stumps		9	7	2	"somebody's playful heart" "It makes the trip less boring imaging other people did this"
Facilities	Photos of tourism facilities, i.e. road signs, interpretive board or stamp-stands	Sign Rest-area Other	59 6 5	40 6 4	19 0 1	"Like this sign every 500 meter, a encouragement to moving forward" "Like the board with explanation"
Path	Photos with linear feature of the route per se that sometimes also includes a certain extent (5m) of the surrounding environment (termed trail corridor).	Historical stonework Modern stonework Asphalt/Concrete Soil-surface	22 35 21 79	14 28 15 61	8 7 6 18	"Beautiful curves"; "Like the stone-pavement, looks nice" "The trail looks very different from the normal ones"
Bridge	Photos of bridge on the route		8	7	1	"Looks nice"

People	Photos that incorporate people as part of the landscape, e.g. as villagers attending their gardens, other hikers on the route as well as photo of their companion	Local Companion Other	14 27 8	11 20 6	3 7 2	"My family are walking on this beautiful trail"; "We barely see people on the walk, it's nice to see people walking"
Other	Photos that represent negative feelings or un-identified features, i.e. an empty ground.		6	6	0	"The abandoned house makes us sad"

Table 6.3 The most-photographed four types of landscape elements on the icon course of the Nakahechi Route.

Category	Mean ratio of category per respondent	Photos taken [a]	Number of respondents taking photos
Statue & Symbol	19%	140	30
Terrain	18%	132	30
Path	17%	157	27
Village	11%	95	26

[a.] Since sometimes more than one theme could be extracted from one photo, column two sum up to the total number of themes extracted from the photos per respondent ($N_{theme} = 868$), not the total number of photos ($N_{photo} = 631$)

during a four-year restoration project that began in 1978 (Figure6.2). Photographs featuring the asphalt/concrete roads were often related to the overall impression of local people (e.g., “seeing people living by the side of the path, having their laundry hanging outside is interesting”).

Figure 6.2 Photographs that feature different morphologies of the physical path under the *path* category. *Upper-left*: trail of soil substrate; *Upper-right*: paved sections of path; *Middle*: tail with historic stonework; *Lower*: trail with modern stonework.

Figure 6.3 Photographs that feature man-made structures under the category of *statues and symbols*. *Upper-left*: torii gate of the Kumano Hongu Taisha shrine; *Upper-right*: *Jizo* statue; *Lower-left*: stele with the writing "sosei-no-mori kumano kodo" (forest of resuscitation kumano kodo); *Lower-right:* Ōji shrine.

Reasons for taking photographs of statues and symbols were a mixture of spiritual and cultural. The three Ōji shrines were the most common subjects in this category. Respondents often expressed that it was not only the physical structures of the Ōji shrines and Jizo statues, but also the setting for such symbolic structures in nature that made them feel a strong sense of place (Figure. 6.3). Respondents expressed different levels of understanding about the Nakahechi Route—some visitors were able to describe the purpose of the shrines or the meanings behind the words on the steles, while some visitors merely appreciated the atmosphere those elements generated

within the route corridor. Moreover, elements with religiously semiotic characteristics showed stronger influence on Japanese visitors (e.g., a middle-aged Japanese man said, "I cannot help close my hands and pray whenever I encounter a *Jizo* statue. Don't ask me why, I'm doing this because I am Japanese"). This does not imply foreigners sensed less spirituality than Japanese visitors along the route, but rather that the elements had more cultural impact for Japanese visitors.

The multiple and dynamic interests of the visitors were also reflected in the variety of natural and cultural elements that they focused on (Table 6.2). Terrain contained panoramic photographs of the mountains and rivers (Figure 6.4). Views of the mountains were mainly explained in terms of aesthetic value, such as undulating shapes, different levels of green, and so on. One respondent expressed feeling a sense of sacredness when he met a local villager and was explained by him that on the other side of the Hatenashi Mountains (western portion of the Kii mountain range), which he could see on the route, is Koyasan (one of the three sacred sites of the World Heritage Site). Most respondents expressed the spirituality of their experience was formed at least partly by the idea of terrain (i.e., a combination of mountains with a distant view of the Kumano Hongu Taisha shrine, the final destination of the journey). A substantial number of photographs of "ordinary" natural elements (e.g., forest floors with an understory of ferns, moss growing on tree trunks, wildflowers, etc.) were also recorded.

Figure 6.4 Photographs that feature more natural landscape elements such as those under category of *terrain* and *forest*. *Upper*:terrain photographs featuring mountains and river; *Lower*: photographs featuring forest with forest floor.

As for cultural elements in the photographs, the *village* category was disproportionate when one considers the long distances of the route that run through forest. Village elements were often photographed with a complex pattern of fields and folk-houses, or with the backdrop of the mountains (Figure 6.5). The geographic relationship between the villages and mountains was mentioned by some respondents as contributing to the aesthetic and nostalgic feeling of calm and peaceful rural life (even for some Japanese residents who were born and raised in the flat areas of the eastern provinces). Visitors also expressed unexpectedness in regards to simple and ordinary

Figure 6.5 Photographs that categorized under *village*. Village photos were presented as either containing mainly human cultivated scenes or a combination with the mountains.

objects, such as farming tools. This sense of surprise may have come from the contrast between a "so-called" UNESCO World Heritage Site and implements that seemed unchanged from days gone by.

Photographs featuring trail-relevant elements such as signposts and interpretative boards indicate visitors' consciousness of "heritage" and their pursuit of educational meaning. Signposts were not only treated functionally as showing directions, but also signified their journey as being different from a simple ramble in the countryside. Interpretative boards featuring history or folklore were particularly welcomed, as they conveyed information as well as "proof" of visitation.

Local inhabitants were found to influence the visitor experience in various ways. Photographs with people walking on the route, whether featuring their companions or people they did not know, often reveal the symbolic meaning of walking. For example, one respondent explained that, "The trail is beautiful, but more importantly my family is walking on it [with me]." The presence of local residents in the photographs indicated visitors' interest in cultural elements such as farming, local products, lifestyles, and so on. While foreign visitors enjoyed seeing local residents, Japanese visitors were more likely to start a conversation, especially with residents selling refreshments or local products at rest areas.

Finally, in regards to landscape elements, a comparison between the Main Group and Control Group showed that significant differences were only present for the type of Natural objects ($p < 0.01$). This indicated that although people might take more pictures when instructed to record their walking experiences, their photograph-taking behavior was not erratic. Rather, they had a tendency to take pictures of natural features such as plants, animals, or rocks.

6.4 Distribution of Scenic Views Perceived by Visitors

Four hundred and forty-one photographs taken at eye level were analyzed as "scenic views." Among the 441 photographs, 252 included intraocular landscape elements. Only 57 photographs were classified as ocular, and 132 photographs were classified as "extraocular." The proportion of photographs with extraocular views was comparatively high, considering a plantation forest blocks the view on most sections of the trail and limits the number of officially designated lookout points (only three are located along the route).

Figure 6.6 shows the distribution of viewpoints for both the Main Group and the Control Group. The dispersion indexes for each type of viewpoint were calculated for the sum of the Main Group and Control Group, given the distribution of the two groups indicated similar patterns in the graph. The dispersion indexes and chi-square goodness-of-fit tested under the Poisson distribution indicated that all types of viewpoints clustered significantly ($p < 0.000$), yet different patterns can be perceived in the graph.

Photographs with extraocular views were significantly clustered at certain spots along the route (Index of Dispersion = 11.71; $p < 0.000$). All of the peaks, except for the final peak near the end of the course, were located in the villages. The final peak, closest to the segment at a distance of 5,851 meters, is an official lookout point where a forest opening was created to overlook the Kumano Hongu Taisha shrine's symbolic gate (torii) (Figure 6.3). It is worth noting that people in the Control Group took almost the same number of photos as the Main Group at this spot.

Conversely, the distribution of photographs for intraocular views followed a pattern that peaked at the starting point, after which segments in which photos were more frequently taken spread out along the course. Similar to the extraocular viewpoints, visitors perceived more intraocular views in the human settlements than in the forest. While the Main Group's viewpoints of intraocular views peaked at various locations, participants in the Control Group captured few intraocular objects until almost the end of the route.

In total, ocular viewpoints accounted for the least amount of photographs taken at eye level. The highest frequency spot for both groups was closest to the segment located approximately 1,933 meters from the starting point. This is where the route enters the forest from a small assemblage of houses and an old schoolhouse, with the surface changing from asphalt to modern paved stone. The sudden change in view, with visibility reaching 1,500 meters, may have resulted in photographs being taken at this particular spot. The locations where photographs were taken also distributed evenly across the villages and forest, although with less frequency and clustering than for intraocular views (Index of Dispersion = 2.41, $p < 0.000$). This might be owing to the fact that while intraocular views were taken at certain spots with distinctive features, ocular photographs taken in the forest primarily featured trails and the forest environment, with visual penetration provided by trails and the narrow cypress and cedar trees.

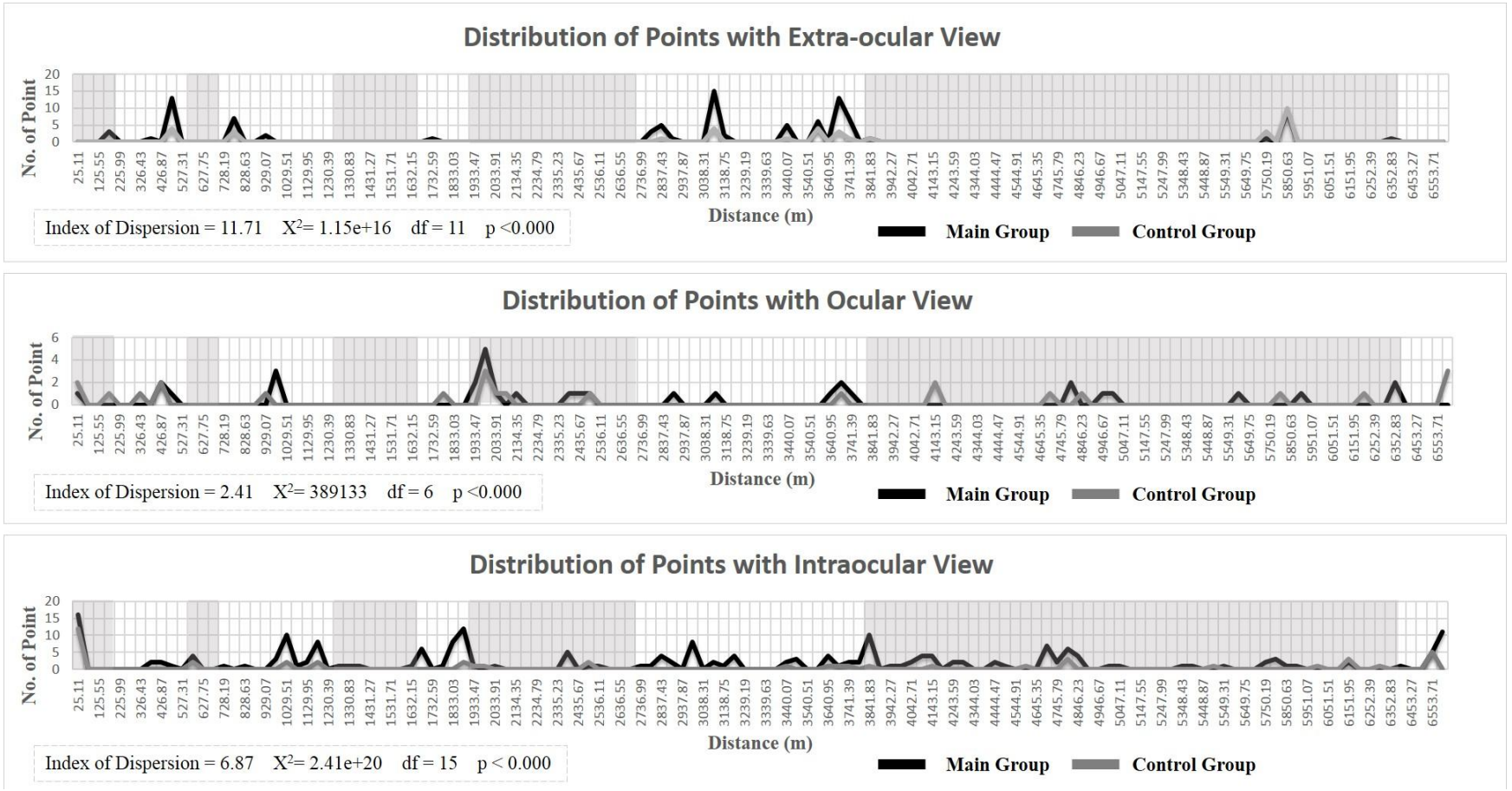


Figure 6.6 Distribution of the viewpoints by breaths of view along the course with the same direction starting from Hosshinmon-Oji to Kumano Hongu Taisha shrine. The x-axis of each graph represents the distance from the mid-point of each segment to the starting point designated on the map by ArcGIS. The shaded background, corresponding to Figure 6.1, represents the adjacent landscape characteristics as forest (shaded in gray in Figure 6.1). And the white background of the graphs represents human settlements (villages) shaded in white in Figure 6.1.

6.5 Chapter Conclusions

Chapter 6 illustrated that the walking experiences of the iconic Nakahechi Route were, rather than polarized as sacred or secular, highly integrated and extended far beyond a religious perspective by incorporating elements from nature and culture. The route corridor, which has diverse characteristics similar to other sacred sites located in cultural landscapes, provides a unique series of management challenges.

6.5.1 Conserving authenticity

Consistent with Rinschede's findings (1992) that religious tourism today is closely tied to holiday and cultural tourism, walking the Nakahechi Route is a multifunctional experience. The spiritual aspect of the route greatly contributed to the pursuit of "authenticity," as reflected by not only a substantial amount of photographs of landscape elements such as statues, symbols, and the physical path, but also of cultural elements that included a sense of nostalgia. According to MacCannell (1976), tourists seeking authenticity in other "times" and other "places" away from everyday life is a modern version of the universal human concern with the sacred. This study clearly shows evidence of this quest, as the visitors' pursuits of authentic experience stemmed from a nostalgic feeling that neither entirely relied on epistemological experience of the route (object authenticity) nor an ontological mode of being that depended on objects encountered along the route (existential authenticity) (Belhassen et al. 2008). Rather, visitors cared more about the holistic and contextual meanings of landscape elements. For example, respondents emphasized the importance of the

physical path, but not details such as the history and construction method of the stonework. In fact, the modern stonework constructed from 1978 to 1982 was equally praised by visitors for having significant scenic value. Similarly, although the paved sections of the route were far less popular in visitors' photographs versus sections with soil-substrate or stonework, they indicated a close relationship with the livelihood of local residents and thus featured in some images. On the Nakahechi Route, the cultural landscape that developed over centuries is still visible and provides clues to the lives of the people who built and maintained the route. Stone structures constructed of local material, cultivated fields, and farmhouses that adapted to the mountainous environment provide interpretable clues for visitors to imagine the past and reconstruct in their minds the "needs of the present" (Chhabra et al. 2003). Thus, the physical path is embedded within a functional context that preserves relationships and suggests mental images to visitors.

There is a management challenge for the area due to the complexity of the physical environment. Other sacred sites, such as Mount Athos in Greece, that contain cultural elements such as artwork, old iconography, and natural features have a similar challenge (Andriotis 2009). However, compared with visitors who trek in the Himalaya (Andriotis 2009) and carry their personal belongings in rucksacks, visitors to the Nakahechi Route can often be found in casual clothing, sometimes even with shoulder bags and leather shoes. Despite the appropriateness of this clothing for walking, it is clearly a sign of the convenient access to the Kumano Hongu Taisha shrine by car or bus. Indeed, the iconic Nakahechi Route has started to attract visitors who want to venture beyond the borders of the shrine and have a more educational, adventurous, or enriching experience. On the other hand, the casual walk undertaken by most visitors most likely prevents them from making observations that would

convey the full cultural history of the route corridor. Compounding this situation were stereotypical images some participants held before visiting, which led to misinterpretations of cultural elements along the trail. It thus becomes a challenge for site managers to identify visitors' potential needs and to take a proactive stance on conserving "authentic" landscape elements that could facilitate a better understanding of the site.

6.5.2 Ordinary landscape

Taylor (2004) has stated that, "The growth in popular heritage consciousness relates to the values people put on knowing about the history of events, places, and people through time, and not just distant history but the present." An important support for this idea can be found along the Nakahechi Route, where visitors have started to embrace ordinary elements of everyday place, as represented by the substantial amount of respondents' photographs featuring elements that were not so much "extraordinary," but rather mundane implements of daily living. Such ordinary elements can be conceived of at different scales. Besides the official lookout points where interpretive boards are erected, extraocular views can reveal variations in underlying geology that relate directly to discernible land use patterns perceivable by Japanese and people of other nationalities alike (Figure 6.7). Such views are important for both their scenic impact as well as cultural meanings that could potentially provide clues for 'reading' the landscape. At a closer distance, visitors can tell more about what kind of crops local people grow in their fields, how forestry was practiced through pruning and periodic thinning, and even see the *Jizo* statues sprinkled with seasonal flowers—all of which tell small stories about the region. Such elements contained in the ocular and intraocular photographs can further facilitate

Figure 6.7. Photo taken from a respondent categorized under the "extraocular" view, with tea plantation on the slope in the foreground, larger areas of filed reclaimed on the fluvial flat area by the river. View from this spot gives a good sense of how local resident adapted to the mountainous environment.

understanding along the route corridor. Finally, a broad range of interactions can be promoted while walking the Nakahechi Route (e.g., buying locally made products, chatting with villagers, or simply exchanging greetings). Such interactions contribute to not only interpretation of the landscape (chatting with local people gave one respondent a sense spirituality from the mountains), but also to creating a general atmosphere that helps to inform a sense of place. While it is essentially a visitor's own choice whether or not to interact with others, the contributive effects noted suggest such situations are generally positive, and at the same time prevent conflicts between visitors and the locals. In opposition to the typical approach to historic preservation and interpretation that focuses mainly on high-style architecture or human structures (e.g., bridges, landmarks, etc.), a strategy for conserving the ordinary landscapes of the Nakahechi Route seems to be a more urgent calling for management of the route corridor. This is not a simple task, but requires joint effort from local residents, cultural stakeholders, and the religious and tourism sectors.

6.5.3 The VEP technique

The final section of Chapter 6 centers on the VEP technique. This chapter was limited by a small number of respondents, and thus failed to make some general comparisons among visitors of different demographic and traveling characteristics. However, similarities and differences were detected between the Main Group and Control Group, such as the number of photographs they took, the type of landscape elements they preferred, and the distribution patterns of where the photographs were taken. To a certain extent, this study certified the merits of VEP as not only a familiar and enjoyable activity, but also its impact on sharpening observation skills (Garrod 2008). Efforts to use photographs to assist landscape assessments may be beneficial for modeling views that reflect what people are likely to encounter, rather than how a landscape will be used (Hull & Stewart 1995). By carefully examining and analyzing photographs, this study offers a practical method to understand the on-site experience of visitors on a pilgrimage route in Japan, which is also an urgent need for heritage and pilgrimage sites in other nations.

Chapter 6 has described the current day visitor experience on the Nakahechi Route through an empirical study. It illustrated that while the secularization process along the Nakahechi Route happened during the Early Modern Period (1600–1868), it is obvious that visitors are embracing a more integrative and dynamic experience that involves a variety of natural and cultural elements. Two important concepts of "authenticity" and "interpretation" has been discussed both through the perspectives of heritage conservation and tourism experience, allowing managers to realize both the constraints and opportunities afforded by the current route corridor.

Chapter 7 General Discussions and Conclusion

The last chapter concluded this thesis with discussion of how the research findings in previous chapters contribute to heritage management of the Nakahechi Route as linear type of cultural landscape. It starts with a discussion about some challenging theoretical issues of cultural landscape and heritage route that links heritage and tourism and proceeds further with some practical management implications. In the summary part of this chapter, brief conclusions will be drawn on those specific research questions raised in Chapter 1.

7.1 Theoretical conclusions on cultural landscape characters of the Nakahechi Route - Issue of change

An understanding towards the Nakahechi Route corridor as a cultural landscape is never simple, since the relationship between the route environment and people is always diverse and changeable. A cultural landscape is formulated over a long time through history. In the case of Nakahechi Route, a ceratin historic focus point related to the noblemen, historic composition of pilgrimages seems to be regarded as particularly important. However, if we consider the route corridor as the outcome of continuous interactions between people and the physical environment, the issue of change needs to be discussed introducing a time scale and the major subjects involved in it. Cultural landscape is never static. That brings the issue of change to the heart of discussion when considering the route corridor as a type of cultural landscape.

7.1.1 Issues of change: Dimension of time

The dimension of time in interpreting the cultural and heritage meanings of the Nakahechi Route is of a particular concern in Chapter 3, where both the historic and modern tourism development for the Nakahechi Route were discussed. Through the lens of history, we found out that traveling to the Kumano area along the routes that include the Nakahechi Route has organically evolved to satisfy visitors' various needs either spiritually or secularly, or a mixture of both under different temporal context. It provides a demonstration of how pilgrimage journeys transformed in modern Japan into tourism activities under the umbrella of heritage tourism and how the journey implies a spatial relationship between places, at least between point of origin and the destination, supplemented in a pilgrimage by the fact that the route itself is an important component of the experience. While recognizing the natural course of change, there does exist a question regarding the speed and the forces pushing behind the transformation of the route into a tourist destination.

The Nakahechi Route has been utilized actively for play and pray for centuries, only entering the end of 20 centuries have involved major transformation that takes on its current form in heritage tourism. Perhaps the most obvious and drastic change happens to the physical route. As elaborated in Chapter 3, back to the ancient until the early modern times, the physical transformation of the route has accompanied the historic and religious transition processes of the sacred sites they connect with from both inside and outside the Kumano area. Physical change that included changing of route, construction of journey-related facilities such as roadsign, teahouse, resting spot along the route corridor have laid the foundation for the fabric of the current route utilized in heritage tourism. While entering the Meiji era, it receives more

influences from the local livelihood of the surrounding villages. The Nakahechi Route took on modernization process of accommodating vehicle use and "natural selection" for its still functioning part. Nevertheless, the process can still be considered "organic" as different stakeholders had been involved and the route itself was still functioning as the major transportation route connecting the coast to inner mountainous area of the Kii peninsula. The changing route of the Nakahechi Route as a transportation line had resulted disappearing of villages on the mountain passes and prosperity of the local community along the newly built motor way, shaping the pre-industrialized cultural landscape that has been sustained for a long time.

Entering the 21st century, however, the excavation and restoration of the Nakahechi Route as a national historic relics and its further development under the influences of World Heritage endorsement rather seemed to deprive the route from its local context. Although the status as a WHS ensures great amount of interest from domestic and international tourists, management of the route became a complete top-down process that somehow detached local communities' involvement. Although the purpose might be to protect the historic value of the route, much of the transformation has been rushed off and the development of the route as a tourism product is very much deprived of its surrounding and functional past. While the Nakahechi Route in the beginning of the 20th century may face the risk of becoming a forgotten mountain path, the current route corridor may facing bigger challenges from becoming a relic that needs great maintenance that funded entirely by government, or to back to a forgotten mountain path, abandoned and devoid of tourist facilities and commercial activities, a failure of tourism development and cultural landscape conservation in terms of presenting the spontaneity and genuine lifestyle of the villagers.

Recognizing the transformation of the Nakahechi Route as dynamic, rather than pretending that its static and unchanging like an object displayed behind the museum window, it is not the intention of this paper to criticize either the recent large scale restoration project nor the promotion of the route in tourism. In fact, discussed under the history context, the project did save the route from extinction to some extent and developing the route corridor in promotion of regional economy and national identity also seems to be a natural path taken under the then political, economic and social context. Yet, the findings of the paper do suggest that it is the time now to slow down and take some retrospection on its tourism development and where this path is leading. If this route with its long linear area is still to be considered a type of cultural landscape, there should be a reconsideration of its "authenticity" and "integrity" that incorporates the discussion regarding the dimension of time.

7.1.2 Issue of change: Dimension of people

What makes a "cultural landscape" cultural is the human dimension that are included. However, little attention has been given to the changing nature of the visitors and how it could affect the very nature of the cultural landscape under a heritage context. Literature regarding visitors' influences on landscape has been largely found for beach resorts, and other kinds of so-called "tourism landscape" (O'Hare 1997; Russo 2002). Such landscapes have been considered relatively new or "landscape of consumption" transformed by tourism (O'Hare 1997). As any landscape is potentially a tourism landscape, heritage sites and historic cities also becomes susceptible to the transformation to become construed as tourism product. However, for a pilgrimage route, how this transformation is perceived by the visitors whose walking experience

is an essential part of the pilgrimage experience has often been ignored. There has been criticism that traditional management that has focused on the heritage resources is "deficient because it generally takes inadequate account of the human element in heritage management and especially the significance of visitors" (Hall & McArthur 1993:13) Recognizing the human factor as important in interpretation of the cultural landscape of a pilgrimage route, Chapter 5 and 6 explored the human dimension of the cultural landscape of the Nakahechi Route under the contemporary context.

Although the demarcation line between pilgrims and tourists has always been blurred for Japanese sacred sites (Chapter 3), it is not irrational to say that modern visitors have been leaning more towards the casual and enjoyable side of being a traveler with convenience brought by modern tourism development (e.g. convenient access to different sections of route in Chapter 5). And the iconic Nakahechi Route has attracted visitors that take on casual walk which are most likely to prevent them from making observations that would convey the full cultural history of the route corridor. Compounding this situation were stereotypical images some participants held before visiting, which led to misinterpretations of cultural elements along the trail (Chapter 6). Freeman Tilden (2007) stated that "interpretation should aim to present a whole rather than a part," no matter how interesting the specific part may be. The current emphasize of the management of the Nakahechi Route on physical appearance of the route and the narrower interpretation of the history associated with the aristocrats could be an expedient measure under the current biggest challenge of scarce funding for heritage managers. However, considering the sustainability of the Nakahechi Route as a cultural tourism resource, interpretation of the route corridor must address the education and entertainment needs of the contemporary visitors who are seeking a deeper understanding of what they are witnessing and experiencing. However

differences and variation in terms of visitors' motivations and depth of experience could be, heritage managers should always aim for satisfying the most serious heritage tourists, who "come to learn about a place, experience their own personal associations to that place or otherwise desire to be edified by a visit to a site that they sincerely find interesting or have a personal association with." Those visitors, while combining the traits of both recreationists who seeks pleasure, nature-based tourists whose caring are only oriented towards the natural setting, can still seek out for more personal connection with the route. These visitors might be the modern pilgrims who bear the unchanging spirit of traveling along the Nakahechi Route.

7.2 Conclusions on Nakahechi Route as a heritage route

Both the understanding for the cultural landscape characters of the Nakahechi Route regarding the dimension of time and changing nature of the visitors are bonded to the discussion towards two very much debated concepts in heritage management: authenticity and integrity. These are also important criteria for judging whether or not the Outstanding Universal Value of the site is under protection of the World Heritage system. Previous discissions on the cultural landscape characters of the Nakahechi Route will help the following consideration of how the linear cultural landscape, as a conceptual framework can help conserving the route's heritage value under the World Heritage system.

7.2.1 Authenticity

Developing heritage tourism inevitably accelerates the social and cultural change of a destination. Hence, conservation versus change seems to become a dilemma for heritage tourism, which poses a paramount problem for maintaining the authenticity of a place. When it comes to a pilgrimage route that has been functioning and actively used for centuries, the problem could be more complicated that firstly revolves what should be protected. However much discussed in both heritage and tourism literature, there seems to be an irreconcilable gap as Swain (1990) stated that the inherent contradictions between conservation and change associated with the process of heritage tourism development is due to the fact that viable cultures evolve through time. "We enter society in the middle, and culture is always in process."

Under the World Heritage context, being able to maintain authenticity of the site is one of the most important criteria for judging the outstanding universal values (OUVs) of a designated site. However, unlike built environment of traditional cultural heritage of which the manifestations of heritage is obvious, it might be difficult to grasp the "authentic" element for a cultural route, apart from archaeological techniques to provide accurate chronological information of the properties. For example, during the field survey in Chapter 4, even thought the stone pavement and step construction assumed to date back to the Edo era (Figure 4.5a), its maintaining history is much longer and was undertaken on a smaller scale, such as replacing old stonework with new stones. It is difficult, however, to confirm when these practices occurred, just by viewing the surface of the route. Under the constructive point of view, authenticity is context-bound. There is no absolute and static original or origin on which the absolute authenticity of originals relies (Wang 1999). The cultural landscape character of the Nakahechi Route, however, provide a solution by incorporating the time dimension that associate the element with its function in evaluating the authenticity of landscape

elements. For example, stone pavement believed to be constructed from the Edo era can be maintained during a long temporal span that some of the missing stones or damaged part could be replaced by stones of other material. However, as long as the period of such maintenance work was associated with its function as protecting the route from intensive use of transportation and in compliance with original craftsmanship, the authenticity could be considered retained. On the other hand, the restoration project in the 1978-1982 which restore the "appearance" of the route by constructing stone steps and stone pavement that are made of cobble stone fixated by concrete on the bottom could hardly be considered as "authentic," since the five year restoration project was conducted with a purpose of restoring the physical path instead of restoring the relationships between the route and its former users.

The theoretical conclusions on the dimension of time in section 7.1.1 suggest that heritage management should embrace the natural course of change and recognize the route corridor as the outcome of people's continual use. As "authenticity" connotes that which is genuine, unadulterated, without hypocrisy and honest to itself, not just in terms of superficial characteristics but in depth (Relph 1976), embracing the natural course of change could help to achieve a better interpretation and representation of the Nakahechi Route in contemporary tourism.

7.2.2 Integrity

Integrity is defined as "a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes" in the Operational Guidelines for the Implementation of the WHC (2013). It was an implicit quality for many cultural properties even before it was formally named in 2005. However, this issues has not

been discussed for the type of cultural landscape of a route corridor given the very different extensions and levels of complexity for these routes. The Nakahechi Route as an inscribed WHS property is a linear feature that is not self-contained like any other WHS properties. One of the most obvious issues regarding integrity for the pilgrimage route is its continuity. As reviewed in Chapter 2, the buffer zone method, although criticized for its arbitrary and cursory determining style, was applied to reconcile the problem. However, this method should be understood as a management strategy to allocate resources on the more vulnerable section of the route susceptible to drastic transformation rather than determination of significance. The paved sections categorized as "buffer zone" take on just as much purposes of maintaining the continuity of the route corridor as those inscribed section categorized as "core zone." Just as the stone pavement constructed in the Edo era to accommodate more traffic , modernization of the road section to accommodate the traffic of motor vehicle is an inevitable part of history and also might be the very reason that the route remains its usage in local communities' life until now (Chapter 3). However, the zoning method provide an opportunity to acknowledge that there are degrees of significance for heritage conservation. But the determination method should not simplified as whether or not the route surface is paved. As discussed in section 7.1.2, the interactions between the contemporary visitors and the route is still on a superficial stage. Recognizing the human factor as important in understanding and conserving the heritage value of the route help us to face the challenge in modern heritage tourism management which is not the quantity of visitors but the quality of their experiences. Protecting the "integrity" of the route with the purpose of protecting the route within its functional context can help to achieve a more balanced tourism use which attracts more repeat visitors who seek deeper understanding and connection with the route. Some more concrete suggestions based on the philosophic framework of a cultural

landscape approach to bridge heritage tourism and conservation will be provided in section 7.3.

7.3 Management implications

Heritage management intercepts with tourism management but the successful management of the heritage of the route involves sensitivity to the requirements of the heritage resources, the demands of all kinds of visitors as well as the local community. The theoretical discussions on the Nakahechi Route as a type of cultural landscape and an important resource in heritage tourism have risen following suggestions on practical management implications.

7.3.1 Scientific researches and professional staff

Under the master management plan, there should be a detailed plan for the route corridor that includes an inventory of the scope and extent of the cultural heritage resources. As a unique type of cultural landscape, the Nakahechi Route is clearly the work of man designed as a means of communication and transport. The human influence overlaid on the natural landscape is obvious with the presence of the tangle elements such as the physical path and the vestige of the human work related to the transportation and communication function of the route. However unfortunately, most of the tangible heritage have often been destroyed or lost due to some sort of effect from anthropogenic reasons, natural causes or the two reasons combined. The climate of the Kumano area with heavy precipitating especially during the Typhoon season and the steep grades of the mountains result in sections of the route susceptible to

severe damage from soil loss or disappearing from landslide. Despite the result in Chapter 4 that over one-quarter of the trails have competitive grades of more than 11.3 degrees and 9.4% of the trails are steep in grade (>=16.5 degrees) and require effective drainage, steps, and tread armoring, historic stonework was only spotted 6.6% of the trails from all the sampled areas of the main route of Nakahechi Route and was facing severely damage at many sites. Morphological studies, archaeological excavations and further analysis for identifying the time period for the construction of these stonework are in urgent need in order to help define the evolving process of the cultural route and its authenticity under an accurate temporal context. Staff with professional knowledge in archaeology, folklore, religious studies and landscape planning and management could be incorporated into the teams that supervising the revising of conservation principles and guidelines.

7.3.2 Monitoring

Monitoring the condition of the cultural heritage resources is an important process for its protection. For a heritage route, the physical fabric, such as the physical route, sculptures, man-made structure that link to its function and religious meaning as well as other intangible elements that are integral part of the interrelationship between the route and its users should be included in the process. One of the key indicators for measuring state of conservation is the effect of the affecting factors, such as visitor/tourism pressures, environmental pressures, natural disasters, development pressures etc. Chapter 4 and 5 shed some light on some technical challenges for implementing periodic and systematic monitoring program on the Nakahechi Route. Assessment of the physical conditions of the route involves adapting techniques sensitive to the requirements of significance and integrity of the route corridor. For

example, evaluation for the conditions and influential factors on trail conditions of Nakahechi Route should take account of the particular artifacts of trail design, maintenance factors from their context and, of a broader scale, the economic, social and political conditions of the surrounding area. Visitors/tourism pressure comes from a unbalanced used of the route. Concentration of traffic can pose dangers to the physical path, result in unbalanced distribution of management resources. Thus, monitoring program should address the characteristics of each section, each route and enforce stakeholder collaboration for implementation. Recreational studies on trail management and monitoring can be of helpful references but only when adapted catering to the conservation needs of the heritage values of the route.

7.3.3 Interpretation and representation

The central challenge to linking cultural heritage and tourism is how to reconstruct the past in the present through interpretation in order to satisfy the needs of tourist consumption (Li 2003). Effective communication and interpretation of significance are the essential elements of using the heritage places effectively while still protecting them. In Chapter 6, information boards, steles and signboards written with "*Kumano Kodo*" etc. have proven contributive to visitors' experiences in conveying the symbolic values of the path to visitors. However, are theses enough to stimulate feelings of personal bonding with the place and a special sense of belonging and of continuity that is different for each person? Complemented with the lack of on-site interpretation might be the overexposure of before hand influences from brochures, TV programs and guidebooks that portrayed the Nakahechi Route from inevitably partially of its history and in comparison with other famous iconic sections of the pilgrimage network. This could worsen the situation for over-concentration of visitors

on certain spots and detract visitors' experience of the significancy and special qualities of some not well known sections of the route (Chapter 5).

Interpretation and representation for a heritage route faces similar but also different challenges from other built structure in heritage tourism. Compared to museum, the resources of a heritage route are more spatially scattered and the visitors might be more explorative to discover by themselves. Yet, confined by the linear path and different level of involvement with the landscape, it also proves difficult to display the whole picture of the area to the visitors. However, protecting the "integrity" of the route corridor can help to solve the problem. For example, in some places, where the cultural landscape fabric is relatively dense, the relationship between one and another can be easily understood by the casual observer. In other situations, where fewer artifacts exist or where pieces are missing from the landscape fabric, the elements can still be understood as being interrelated if integrity was preserved. In many places throughout the route, the fabric of cultural artifacts are deteriorated so that only isolated artifact remain such as house remains, stonewalls and derelict fields. Such features, although out of context also serve greatly to stimulate questions in the mind of the visitors. The single stonewall within woodland, for example, provides them with several clues to the history of that landscape. It says, that the woodland was not always as it is - that was once a farmland and habilitated by people that spent a great deal of effort to adapt to the environment and make a living. It also says that the field was abandoned many years ago for reasons. Even though not every single village, house-hold can be maintained along the route, which is also out of the modern context, experiences with the single elements connects conceptually to the experience of stonewall, household elsewhere in the route corridor, where the fabric is more intact.

Managers and planners can also make better use of some important views that can provide more hints than others. Such views are of particular importance both from the visual and scenic aspect and the aspect of cultural meanings that could facilitate a deep understanding for the route, proving to have significant contributive effects on visitor experience. Important views could be the *meisho*, place of fame (Chapter 3, section 3.2), where stories were told, poets were written and recorded in literature refined and cherished through time. Or it could be views that reveal variations in underlying geology relating directly to a discernible land use pattern in the cultural landscape. Most of the respondents from the survey in Chapter 6, Japanese and people of other nationalities alike could appreciate and understand the views of villages scattered on the slope of mountains. Beyond aesthetic values, such views provided readable clues for them to understand how much efforts people put into living in this area (Figure 6.7). If views like these could be kept in good quality and fully developed along the route, the route corridor have better chances to survive and to be maintained as a "living route." As repetitively mentioned in previous chapters, a heritage route like Nakahechi Route cannot be easily re-routed for the sake conserving its "authenticity." Yet, detours, bypassing or circuit route in a predefined area could be added to places where visitors concentrate. Such landscape approach of incorporating a broader area beyond the fixed route into planning and managing would also provide opportunities that create a sense of adventure and exploration to the journey and promote interactions between visitors and local residents (Figure 7.1).

Another tool of interpretation that can be utilized for Nakahechi Route is community interpretation. Community interpretation involves telling the "stories" of a community to its residents and visitors. This method encourages an awareness of, and pride in, the natural and cultural heritage of the community and at the same time enables that

community to be pro-active in developing what it sees as unique in terms of developing an appropriate tourist strategy for the area (Millar 1989). Currently, there are the *Kataribe* guided tours along the Nakahechi Route. However, study results in Chapter 5 found out that walking with *Kataribe* guides accounts for only a small portion of the total visits and concentrated only on busy seasons of spring and autumn. However, those guided tours, especially those with smaller size of group, can be very educational and entertaining at the same time to help visitors achieve an deeper understanding of the route corridor. Besides guided walk, interactions with local people can also be rewarding if opportunities could be provided for both visitors and local people.

Bi- and multilingual interpretation is still inadequate and at the most primary level of providing baseline information. Considering the number of the visitors from foreign countries and their increasing interaction with the route corridor, there should be better interpretation including signboards, pamphlets, exhibition, english speaking guide and staff at tourist center catering to the needs of foreign visitors. Since many foreign visitors also expressed satisfaction to the route environment as not too touristy, and a nice change from the big cities,the balance between simplified interpretation and intrusion should be kept carefully.

7.3.4 Stakeholder collaboration

Stakeholder participation in decision-making is one of the most important actions in sustainable planning, particularly in the realm of cultural heritage (Timothy 1999). As a pilgrimage route geographically spread-out, cooperation between the “upstream” and “downstream” of the route corridor is needed to enhance a wholistic conservation

and interpretation of the route corridor. Compares to about 1.5 million visitors to Hongu district where the Kumano Hongu Taisha shrine locates in a year, visitors coming to walk the route ranges from about 7,000 to 30,000 with highly unbalanced spatial and temporal distribution (Chapter 5). Tourism partnership that covers the entire corridor of the Nakahechi Route can be established to develop high-quality tourism product in order to take into account of those less favored local communities, to ensure a sustainable level of visitors, to enhance visitor experience and to coordinate access, transportation and facilities.

Inter-sectoral collaboration can also be important when facing the setbacks in financial funding, staff and resources shortage. Since visitor monitoring could benefit heritage conservation and tourism goals, collaboration between the management staff, tourism sector and the local NPOs could be considered. For example, the local *Kataribe* guides could be involved for patrolling and collecting visitor volume and use data on the route. A platform for sharing these information could be built among conservation, tourism sector and local communities. As the concept of stakeholders is becoming increasingly important in heritage management and planning, especially the community as owner and custodian of heritage, fundamental to developing a successful symbiotic relationship between tourism and heritage is the need to involve all stakeholders in the development of the cultural resource, as there is a recognition that many of the problems are due to a lack of interaction.

7.3.5 Detailed management plan for the route corridor

As a World Heritage property, the route corridor is currently under protection from the Law for the Protection of Cultural Properties for partially of its physical path,

various laws (e.g. The Natural Parks Law, the Forest Law etc.) and local governments' ordinances for the adjacent buffer zone area. The complexity of applying a cultural landscape concept to a linear route and a vaster area surrounding the route has gained difficulty with the complex governance system. Although the management governance system of the route corridor has not been thoroughly examined in this study, empirical examination of the heritage tourism revealed challenges that cannot be effectively solved under the current management system.

One of the challenges is related to the "visual integrity," which has been repetitively discussed under the World Heritage context (UNESCO World Heritage Center 2009). Cameron (2015) stated that for most World Heritage properties, the protection of

Figure 7.1 Derelict fields located in the village of Fushiogami, about 2 minutes' walk away from the designated route. Despite the feelings and emotions aroused from the sight of such scenes, such views in the adjacent villages could tell stories of how people has been lived along the route, shaping the landscapes and because of certain effects had to abandon their traditional lifestyle. The panoramic view does not necessarily locate on the designated route. Yet they can still become important recreational resources if the the whole village could be incorporated into the buffer zone area.

important views within the sites and in buffer zones can be difficult. In particular, large scale cultural landscapes present special challenges because of the distant views they usually enjoy. For the Nakahechi Route, the importance of those important views has already been discussed in the previous section for interpretation and presentation. To conserve these views, it is important to come up with detailed plan to identify and conserve those important views as if kept in good quality and fully developed along the route, both the tourism goal of enhancing visitor experience and conservation goal of protecting underlying human-nature interrelationships could be achieved. At the same time, alternative spots that are beyond the boundary of the current buffer zone area could be developed as well to meet the same purposes (Figure 7.1). With a newly defined and stratified buffer zone area, detours, bypassing or circuit route in those predefined area could be added to provide opportunities that create a sense of adventure and exploration to the journey, promote interactions between visitors and local communities and encourage multiple use of the route corridor.

The pilgrimage route system, including the Nakahechi Route, has layered values both on spatial and temporal dimensions, active social and cultural roles. Rossler (2003) pointed out some general issues in management of cultural landscapes under the WHS system and clearly stated that integrated management of cultural landscapes not only requires a clear long-term vision for the site but also consideration of the social, economic and ecological sustainability for the property. Describing the route's Outstanding Universal Value and the attributes that carry these values proves to be a challenge. ICOMOS (2004) pointed out in evaluating the site that "... in view of the vast scale of the nominated site and its complexity, covering both cultural and natural assets, it is suggested that a more sophisticated management system is required to address these challenges." More detailed and complex strategies for evaluation and

conservation of those values need to be developed for sustainable heritage tourism development and preventing the heritage route becoming a "mono-culture" tourist route.

7.4 Summary for conclusions and directions for future work

7.4.1 Conclusions of the thesis

Nakahechi Route is a heritage route that is included in the WHS of "Sacred Sites and Pilgrimage Routes in the Kii Mountain Range" as an important component of the site's cultural landscape. However, actively used in heritage tourism today, management of the route corridor still needs improvements to incorporate the cultural landscape concept for both conservation and recreational goals. The empirical findings of this research on a Japanese pilgrimage route on how to bridge heritage with tourism can be comparable to other linear route corridor around the world with adjusting of scales and local context.

Research question 1: How does the Nakahechi Route play a changing role in heritage tourism of the Kumano area?

Chapter 3 describes how the Nakahechi Route has organically evolved to serve a dynamic role that could be relevant to heritage tourism today. However, interpretation of the route's heritage value in contemporary tourism has a particular focus on the ancient religious journey of the aristocrats, especially after the top-down initiated restoration program from 1978-1982. Recognizing the dimension of time as an important character that differentiate a heritage route from a tourist one, evaluating

the heritage values of the Nakahechi Route should encompass as profound the people's interactions with the physical route as possible. The cultural landscape approach requires accepting the natural course of change through time.

Research question 2: What is the state of conservation for the physical path of the Nakahechi Route under its world heritage route context?

According to Chapter 4, the state of conservation for the physical path is relatively good for tourism use. However, the physical path of the heritage route remains important as a comparatively intact fabric that stores the information about people's relationship with the route in the past. The difference of the route from a recreational trail requires that it should be managed under professional guidance from archaeologist, folklorist, religious scholars and landscape planners to be able to take into consideration the different characteristics of different sections of the route and be monitored for its condition in relation to various managerial practices and use-related factors. References can be made from recreational trails in wilderness setting but the interacting effect among the maintaining and designing factors that may influence the conditions of the route has to be taken into consideration under historic context.

Research question 3: How could enhancing the contemporary visitors' interaction with the Nakahechi Route contribute to the conservation of its heritage value?

From the perspective of visitor distribution and visitor flow, the uneven distribution of the visitors along the route corridor both spatially and temporally reflect the impacts of physical environments such as access to the trailhead, car parking facility, distance to promoted cultural features, total length of walks, seasonality and work and school

schedules have on choice of visitation. On the other hand, when these physical variables become determinate for those least walked sections of the route, it also reflected that growing resemblance of pilgrimage and tourism. Studies on visitors' motivation certified that modern day travelers to Nakahechi Route are diverse in visit patterns, which are influenced by diversified, and multiple desires. Nevertheless, heritage conservation should adapt to the change of nature in visitors and cater to the needs of those most "series" traveler who - while combining the traits of both recreationists who seeks pleasure, nature-based tourists whose caring are only oriented towards the natural setting - might be the modern pilgrims seeking out for more personal connection with the Nakahechi Route

From the visual perspective of the landscape surrounding the route corridor, it has been proved that the spiritual aspect of visitor experience is contributed by the pursuit of the perceived authenticity of the visitors reflected by not only a substantial amount of photographs of landscape elements such as statues, symbols, and the physical path, but also of a combination of cultural and natural elements that included a sense of nostalgia. And usually, it was the holistic and contextual meanings of landscape elements that visitors care the most. The study also revealed that visitors' interactions with the route are greatly related to the geological location of the physical path and its adjacent land use. Lookout views and dotted villages in mountains contribute to visitors experience which links to conservation of those important views and ordinary landscape for better interpretation and presentation of the route corridor.

In conclusion, bridging tourism with heritage conservation has not only become a global trend but also a necessity for the sustainability of our cultural heritages. To incorporate heritage tourism into management of WHS and properties, in particular

those with a cultural landscape nature, the conceptual framework has to be discussed first in relation to how to incorporate a time dimension for interpreting the heritage values of the sites and properties, recognizing their changing and dynamic nature. Under the World Heritage system, this conceptual framework is directly linked to the two important criteria of the Outstanding Universal Value, authenticity and integrity. If the cultural and heritage resource is a route corridor, a cultural landscape approach can be applied in its management system to conserve not only the physical fabric of the route, such as the path, route-related facilities and other man-made structure, but more importantly multiple and diverse meanings for people who have been actively used the route, such as for pleasure and closely related to local livelihood, and accepting the changing values and meanings from both visitors and local communities. Practical management implications of to incorporate tourism goals into management of the Nakahechi Route suggest scientific researches from a multi-disciplinary perspective, a long-term monitoring programs for both the route and its current visitors, identifying and involving different stakeholders in making a detailed and more complex management plan for the route corridor. A better interpretation and presentation can be the key for meeting conservation goals of the "organically evolving landscape" of the route corridor including recognizing the important role of heritage tourism in it.

7.4.2 Future study

The Nakahechi Route has been used as a vehicle for demonstrating how the route, although considered a part of larger religious landscape, can be managed by a cultural landscape approach by empirically investigation. It is "typical" in terms of representing a Japanese context of pilgrimage and some cultural landscape characters

of the route corridor. However, as every type of landscapes has their own history and evolving process, economic, cultural and natural conditions, it is not wise to copy any of the management plan and government system without introducing a local text. Further comparative studies on Nakahechi Route with other pilgrimage routes in the Kii Mountain Range and other cultural routes across the world are needed for developing more comprehensive and complex strategies for conserving the multiple values and meanings of these routes, filling the gap in landscape researches on utilizing routes as an innovative field of cultural heritage conservation.

Apparently, although the Nakahechi Route represents a value system with many relationships, the relationship of the current route corridor with the local communities is not discussed in this thesis. It was only briefly mentioned in Chapter 5 that there is a group of local guide, *Kataribe guide*, being active in the current heritage tourism of the Nakahechi Route. Despite the general understanding that local villagers are not using the route, especially those soil-substrate one in the forest and grow less attached with the route, the WHS designation, increasing popularity of the route as a tourism destination will certainly have social and cultural affects on the local communities who should be the most important safeguards of the route. In order to introduce more profound and systematic discussion on the value systems of the route, more detailed surveys on local communities should be incorporated in future work. Nevertheless, this thesis leads to another critical question stemming from the approach to landscape as process is how do we create strategies for management and system of governance that acknowledge the leadership role of local communities and their ways of life.

NOTES

1 Global governance, defined by Aurelie Elisa Gleller (2013) by borrowing Oran Young's characterization in his work on global governance as viewed from the environmental sector is "sets of rules, decision - making procedures, and programmatic activities that serve to define social practices and to guide the interactions of those participating in these practices'. In the 1960s and 1970s, European (primarily continental) experts played the leading role in devising international conservation standards and heritage norms and concepts. The criteria designed in 1992 for World Heritage cultural landscapes, by contrast, largely reflected values and ideas developed outside continental Europe.

2 The Annex 3 of the said text (Guidelines on the inscription of specific types of properties on the World Heritage List) says: "The World Heritage Committee has identified and defined several specific types of cultural and natural properties and has adopted specific guidelines to facilitate the evaluation of such properties when nominated for inscription on the World Heritage List. To date, these cover the following categories, although it is likely that others may be added in due course: a) Cultural landscapes; b) Historic Towns and Town Centers; c) Heritage Canals; d) Heritage Routes".

3. The "Nihon-shoki" (completed in 720 CE, Nara era) is the oldest chronicle of Japan, covering a period from its mythical origin to the reign of the Empress Jito (686-697 CE).

4. Even though the journey of *Kumano Mode* means visiting three major shrines in different places, the destination of the pilgrimage is considered a single sacred place of Kumano *Sanzan*, representing the trinity deities of Kumano, revered as *Kumano Sansho Gongen*. Thus the journey has to follow the same way back after visiting the three shrines for religious purposes. In some of the historic documents, *mairi* is also used for the pilgrimage to Kumano for the case of *Ari no Kumano Mode,* as *Ari no Kumano Mairi*, as mentioned in Koyama (2000, pp67)'s book "*Kumano Kodo*".

5. *Hatago* means economic inn. The two Chinese characters forming *hatago* mean 'travel' and 'basket' respectively and refer to the origin of this type of inn: fodder carried in a basket and then food for the journey, among which the *hirahatago* are those friendly to women.

6. *Uta makura* (pillow words) are place names associated with certain standard images and feelings in classical Japanese poetry.

7. The word for 'hermit' pronounce the same with "thousand people" in Japanese as *sen'nin*, and the bath was made by a bulldozer in a large area of the river itself.

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WEB ADDRESSES

Kumano Hongu Kataribe no Kai (熊野本宮語り部の会)
http://www.hongu-kataribe.jp/

Rekishi Kaido (歴史街道)
http://www.rekishikaido.gr.jp/

The Way in Japan (日本の道１００選)
http://japan.mania.cx/road100/

UNESCO
http://www.unesco.org

UNESCO World Heritage Center
http://whc.unesco.org

Appendix A: General condition classes developed for heritage trails of Nakahechi Route, Kumano pilgrimage network developed based on work of Nepal (2003)

Condition classes	Description
Class I Barely damaged	Not more than one impact feature can be seen for trails under this category. The historical pavement features is functioning effectively. Tails under this category can be recently repaired or under constant maintenance.
Class II Lightly damaged	Either one or a combination of several impact features is present. No more than two treads apparent; Incision is < 0.15 m; Organic litter pulverized within the center of the tread or long where the water flows in raining days. Early signs of sheet erosion such exposed stones and roots. Historical pavement features can be seen with slight damage signs of displacement of stones. Overall, a trail under this classification is stable and does not require any maintenance as long as the conditions do not deteriorate further.
Class III Moderately damaged	Either a single impact feature with significant damage, or a combination of more than two impact features is present: Incision between 0.15 and 0.3m; Second tread are present sometimes; Some exposed roots and gravels may be present on trail; If with historical pavement features, surface damage is obvious with stones missing. Obvious soil erosions such as rills can be seen. The degree and magnitude of trail damage is significant enough to prescribe some management actions.
Class IV Highly damaged	This is a potential hotspot, showing either one type of impact feature or a combination of several features. Basic impact features include trail incision and multiple treads. In certain cases, several treads can be seen. Incision between: 0.3 and 0.45m (incision of 0.45m in the absence of any other features will satisfy the condition itself). Frequently exposed bedrock and roots, widespread bare soil and gullying are present in addition to other impact features. Historical stone features are barely distinguishable and pulverized stones from the original surface can be seen scattered along the trail.
Class V Severely damaged	Either a single criterion or a combination of several impact features qualifies this category. The basic parameters are trail incision and multiple treads, and are significantly damaged in extent and magnitude compared with Class IV. If the basic parameters show heavy damage, it is considered as severely damaged. A trail under this classification exhibits trail incision > 0.45 m, multiple treads. It may also exhibits signs of downhill sliding. Soil on the trail surface is unconsolidated, and no organic layer is present; exposed bedrock is frequent; trailside is highly eroded, sometimes with berm formed on the down slope side; root exposure is excessive. Deep gullying. Sometimes, when hits the bedrock, the erosion rate slows down or stopped. Overall, a trail under this classification requires urgent repair.

Appendix B: Survey manual for trails of Nakahechi Route

Trail Condition and Surrounding Environment Monitoring Manual for Nakaheji, Kumano Pilgrimage Route in Nakaheji and Hongu-District (Cho)

(Version 09/10/2013)

Materials (Check before leaving for the field)

☐This manual in waterproof bag ☐Field forms in waterproof bag

☐Topographic and illustration guidance maps ☐Clipboard and compartment for forms ☐Colorful ball pen and pencil ☐Tape measures (50meters)

☐White-red pole with maker indicating the height of eyes ☐GPS

☐Tape measures (5.5meters) ☐Abeny hand level

☐Clinometer ☐Spare batteries for GPS device

Point Sampling Procedures

Trail Segments: During the description of amount of use be sure that the use characteristics are relatively uniform over the entire trail segment. Sampled trails may have substantial changes in the amount of use over their length. For the Nakahechi Route, one portion of a trail may have better access then other portions due to bus and parking situation. In these instances where substantial changes in the amount of use occur, the trail should be split in two or more segments and assigned separate names and forms, upon which the differences in use can be described. This practice will be facilitated by ArcGIS and information from experienced trail managers and users.

Also collect and record any other information that is known about the trail history, original construction, past uses, historical maintenance, vegetation type, plantation history, forest management practices and etc. about the pilgrimage routes.

General Trail Information

1) Trail Segment Code: Record a unique trail segment code (can be added later).

2) Trail Name: Record the trail segment name and describe the segment begin and end points.

3) Surveyors: Record names for the trail survey crew.

4) Date: Record the date (dd/mm/yr) the trail was surveyed.

5) Use Level (UL): Record an estimate for the amount of use the trail receives (high,med.,low), relative to other forest trails, from the most knowledgeable staff member and experienced nature guide (Kataribe-San). Work with them to quantify use levels on an annual basis. (can be done later for analysis)

Starting/Ending Point: Record a brief description of the starting and ending point of the trail survey. Choose identifiable locations like trailhead signs, bridge, intersections with other forestry roads.

Measuring Procedures:

A point-sampling method using a systematic interval will be used to locate transects along each trail where trail condition were assessed. Trails were collected as linear feature using a Garmin 62SJ GPS. All GPS data were post-processed using Kashmir(?) and were converted to shapefile to be corrected and cleaned up in ArcGIS base on the map of 保存管理基準対応図 to improve accuracy. Using ArcGIS, GPS data were further processed to generate sampling points of 100 meter intervals. The prepared sampling points were reloaded back to GarminGPS with proximity alarm setting turned on.

Auxiliary information such as digital photos and maps are used to help visualize and document local environment.

A census-based method will be used to locate and measure the distance of the trail sections under different condition.

6) GPS Location:

Using the prepared sampling point to decide the location. Using digital photos, maps and averaged GPS to record the location to guide field stuff in replicating procedures at approximately the same transect locations during further monitoring cycles.

7) **Trail Type:** soil trail(S); stone pavement in Edo era(E);stone pavement in modern times(M)

8) Slope position-relief:

Ridge slope (RS), plain hillside slope (PS), convex hillside slope(CVS),concave hillside slope (CCS) and valley slope (VS). Sometimes, it will be hard to identify whether the slope is convex or concave. Record hillside slope (HS) and check later with topographic map.

9) Slope Inclination:

Transect 中心から道沿いで 5m上方地点を臨む仰角（°）と、5m下方地点を臨む俯角（°）を Abeny hand level を用いて測量して、両者の平均値を斜面の傾斜とした。（Concave or Convex 場合は斜面の凹凸として記録した。

10) **Landform Grade**: Assess an approximate measure of the prevailing landform slope in the vicinity of the sample point. (Or use the topographic maps later)

11) Trail Slope Alignment Angle (TSA)

Assess the trail's alignment angle to the prevailing land-form in the vicinity of the sample point. Position youself about 1m downhill along the trail from the transect and sight a compass along the trail to the point about 1m past the transect; record the compass azimuth(0-360, not corrected for declination) on the left side of the column. Next face directly upslope, take and record another compass azimuth - this is the aspect of the local landform. The slope alignment angle (<90°) is

computed by subtracting the smaller from the larger azimuth (done after data entry).

12) **Secondary Treads (ST):** Count the number of trails, regardless of their length, that closely parallel the main tread at the sample point.This step will facilitate the step 17, trail condition class later. (main tread not included)

13) **Tread Width (TW):** From the sample point, extend a line transect in both directions perpendicular to the trail tread.Trail tread boundaries are defined as the most pronounced outer boundary of visually obvious human disturbance created by trail use (not trail maintenance like vegetation clearing). These boundaries are defined as pronounced changes in ground vegetation height (trampled vs. Untrampled), cover, composition, or, when vegetation cover is reduced or absent, as pronounced change in organic litter (intact vs. pulverized). The objective is to define the trail tread that receives the majority (>80%) of traffic, selecting the most visually obvious boundary that can be most consistently identified by you and future trail surveyors.(Take photos to illustrate different types of boundary determinations for future use)

Also pay attention to the post construction tail surface in step 14.

14) **Cross Section Area (CSA Type):**

The objective of the CSA type here is to estimate the condition class for the sample point.

Carefully study the area in the vicinity of the sample point to judge what you believe to be the post-construction/post-unacquaintance tread surface. Pay attention to the tree roots, rocks or more stable portions of the tread to help you judge the post-construction tread surface. (Figure1 for the cross sectional area diagrams illustrating the alternative judgment of the post-construction tread surface for normal treads and for treads underwent maintenance construction during the 1950s)

15) **Maximum Incision, Current Tread:** (To help define the condition class of the sample point) Stretch a string or stick a pole to make a transect line between two points which define the tread boundaries. This transect line should reflect your estimate of the post-construction (including the construction work in the 1950s), pre-use land surface, serving as a datum to measure the tread incision caused by soil erosion, displacement and/or compaction. Measure the maximum incision (nearest centimeter) from the line to the deepest portion of the trail tread. (Also refer to figure1,noting the differences in MIC measures for side-hill vs. Non-side-hill trails.

16) Tread Substrate Characteristics

Along the trail tread width transect, estimate to the nearest 10% (5% where necessary) the aggregate lineal length occupied by any of the muturally exclusive tread surface categories listed below. Be sure that your estimates sum to 100%.

S-Soil: Sand,Cambisol（森林褐色土）, excluding organic litter unless it is highly pulverized and occurs in a thin layer or smaller patches over bare soil.

L-Litter: Surface organic matter including intact or partially pulverized leaves, needles, or twigs that mostly or entirely cover the tread substrate.

V-Vegetation:Live vegetation cover including herbs, grasses, mosses rooted within the tread boundaries. Ignore vegetation hanging from the sides.

R-Rock:Naturally-occurring rock (bedrock, boulders, rocks, cobble, or natural gravel). If the rock or native gravel is embedded in the tread soil estimate the

percentage of each and record separately.

M-Mud: Seasonal or permanently wet and muddy soils that show imbedded foot or hoof prints from previous or current use (omit temporary mud created by a recent rain). The objective is to include only transect segments that are frequently muddy enough to divert trail users around the problem.

G-Gravel: Human-placed (imported)gravel.

RT-Roots:Exposed tree or shrub roots.

W-Water:Portions of mud-holes with water or water from intercepted seeps or springs.

WO-Wood:Human placed wood (water bars, bog bridging, cribbing).

O-Other: Specify. (eg.human placed wood,stone steps nearby)

17) **Trail Condition class**: Refer to Appendix A (condition class)

Census Sampling Procedure: (problem assessment)

Select trails of heavy visitation to perform a complete census of six impact problem-types that are linear in form. These impact-types were quantitatively defined in consultation with the managers of the heritage sites here, and were considered to be significant with respect to their negative effects on various trail value, including function, safety, aesthetic, recreational and ecological elements. This research is restricted to the following impact-types:

1. Tread incision - the erosional lowering of the trail tread of more than 0.3m.
2. Trail lowering by renovation of the historical roads in 1950s - Renovation of the historical roads
3. Exposed roots - tops and sides of many tree roots exposed on the trail tread.
4. Trails with paved stone of Edo era on surface

Appendix C: Survey sheet for trails of Nakahechi Route.

Point Sampling Form1

Point Sampling Form1

Trail Segment Code: ______________ **Trail Name:** ______________ **Surveyors:** ______________

Date: ______________ **Use Level:** ______________

Starting point: ______________ **Ending point** ______________

GPS Location	TT	TL	Slope inclination(forward/backward)	LG	Alignment (Slope/Landform)	ST	TW	CSA	MIC	Tread Substrate Characteristics						
			/		/					.	.	.	.	.	.	.
			/		/					.	.	.	.	.	.	.
			/		/					.	.	.	.	.	.	.
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			/		/					.	.	.	.	.	.	.
											0	10	20	30	40	50

TT = Trail Type(S.E.M) Trail Location: R(RidgeTrail), H(HillsideTail)「CCT(ConcaveTail)CVT(ConvexTrail)HD(Deep)」, VT(ValleyTrail) CSA(Type)=Cross Sectional Area S = Soil L = Litter V = Vegetaion R = Rock O = Other (Specify 横オ

ST = Secondary Treads LG=Landform Grade(A.<20,B.20~30,C.30~40,D.>40) MIC = Max, Incision (Appro) G = Gravel RT = Roots W = Water WO = Wood, Human placed

TW = Trail Width(Original Trail Width/Post S50 Construction Width) TCC = Trail Condition Class M = Mud

Appendix D:Sample of Questionnaire Survey for Visitors on Nakahechi Route (English)

_____Date/Month/Year

Section A About you

1. General information

Sex: F ・ M Age: _____s Nationality: _____

Residency: _____(If you live in Wakayama Prefecture, Japan, please specify the city/district. The length of residency: _____years.)

Occupation: _____

Education completed: Junior highschool・Highschool・Business/Technical school・ College・ Graduate School・ Other ( )

Section B About your trip

2. Who you are walking with? (please *circle **all*** that apply)

Your family (with children) ・Your family (without children) ・Relatives・Friends・
Family & Friends・Alone・Organized group ・Guide ・Other ( )

Number of people in your group (including you): _____

3. How often do you come to use the Nakahechi route?
(please *circle **one option only***)

a) This is my first time
b) My second time
c) More than 2 times (please specify how many times you came here before:____ times)
d) I am a regular user (_____times/month, or _____times/week)

4. What are the reasons you decided to walk the Nakahechi route? (Please circle ***all*** that apply)

a) To learn about the history and myth relating to this trail

b) To pay pilgrimage to the sacred sites of "Kumano"

c) To observe the beauty of nature

d) To observe wild life, such as birds, butterflies or plants

e) To sense the beauty of seasonal change in nature

f) To enjoy some local food

g) To interact with the local people

h) To observe how people live in rural areas

i) To escape from pressure and stress

j) To challenge myself

k) To promote physical fitness

l) To get some fresh air

m) To be with the people who came with me

n) To tell others about it at home

o) To buy souvenirs

p) To visit a UNESCO Heritage Site

q) Other (please specify: _____

5. Time spent on the Nakahechi route. Please pick the situation that ***suits*** your purpose. (please *circle* ***one option only***)

a) I intend to use the Nakahechi route **for one day only**.
(Approximate time spent on walking _____:_____ ~ _____:_____)

b) I intend to use the Nakahechi route for **more than one day**.
How many nights? (_____night(s) ;

6.How did you ***first*** hear about this route?(please circle ***one option only***)

a) Magazine stories/articles b) Book c) Internet d) TV

e) Family f) Relatives g) Friends h)Tourism agency in your home country

i) Tourism agency in Japan j)The local tourism/information center

k)Other (Please specify:_____)

Section C About your experience

7. Please ***circle all*** the numbers of the sections you used (e.g.walked).
(Please refer to the map)

1 2 3 4 5 6 7 8 9

8. Evaluation for the sections of the Nakahechi route ***you used (e.g.walked)***.
Please circle the appropriate number for each statement.

Statement	Strongly disagree	Disagree	Agree	Strongly agree	I don't know
In terms of the physical condition of the trail, it is easy to walk.	1	2	3	4	5
There are enough convenient facilities (e.g. toilet).	1	2	3	4	5
The trail is very scenic.	1	2	3	4	5
The view (e.g. vista, panorama) from the trail is really beautiful.	1	2	3	4	5
There are many species of wildlife and plants along the trail.	1	2	3	4	5
I feel the sacredness along the trail whilst walking.	1	2	3	4	5
The shrines and statues create a unique atmosphere.	1	2	3	4	5
The trail seems to be a part of the livelihood of local people.	1	2	3	4	5
The trail is difficult to access.	1	2	3	4	5
The trail is very crowded.	1	2	3	4	5
I am satisfied with my experience on the trail.	1	2	3	4	5
I would like to use this trail again.	1	2	3	4	5

9. What did you like the ***MOST*** about the Nakahechi route? (Free writing).

10. What things did you ***LEAST*** like about the Nakahechi route? (Free writing)

Section D. About your perceptions

11. Please pick the appropriate number for your level of agreement or disagreement with each statement.

Statement	Strongly disagree	Disagree	Agree	Strongly agree	I don't know
I identify strongly with the Nakahechi route	1	2	3	4	5
I am very attached to the Nakahechi route	1	2	3	4	5
Nakahechi route means a lot to me.	1	2	3	4	5
I have a favourite place along the Nakahechi route	1	2	3	4	5
I get more satisfaction out of visiting Nakahechi route than from visiting any other route	1	2	3	4	5
I enjoy using Nakahechi route more than any other route	1	2	3	4	5
Nakahechi route is the best place for what I like to do for leisure time.	1	2	3	4	5
I feel that I can really be myself while using the Nakahechi route	1	2	3	4	5
The reason that Nakahechi route is important is because of it's status as a UNESCO heritage site	1	2	3	4	5

12. Would you like to contribute to the restoration and maintenance work of Nakahechi route?

a) YES (**IF "YES", GO TO NO.14-1**)
b) NO

14.1 What kind of contributions you would like to make?

a) Volunteer to work towards trail restoration and maintenance.
b) Donate to a fund towards restoring and maintaining the trail.
c) Other (Please specify:_____)

If you have any ***additional comments*** or suggestions concerning the Nakahechi trail, please feel free to share with us in the space provided below.

If you are interested in receiving the results from this survey, please let us know your information below.

Name：_____

Address：〒_____

Email：_____

Thank you very much for your time!

Appendix E: Sample of Questionnaire Survey for Visitors on Nakahechi Route (Japanese)

平成　　年　　月　　日

１．　お答えいただくご本人について

問 1. 性別、年齢、お住まい、ご職業と最終学歴をお教えください。

性別: 男　・ 女　年齢: 10 代　20 代　30 代　40 代　50 代　60 代　70 代　80 代以上

お住まい：_____（都道府県）
（和歌山県在住の方は、町までお教えください　和歌山県_____市_____町;

居住年数_____
年）

ご職業: 会社員・公務員・自営業・学生・無職（年金生活も含む）
その他（　　）

最終学歴:　中学校・高校・短期大学・大学・ 大学院以上・ その他
（　　）

２．今回の中辺路ルートのご利用について

問 2. 今回、中辺路ルートを歩かれた際の同行者についてお教えください。

グループの人数 （あなたを含めて）：_____名

一緒に歩いた同行者（あてはまるもの**すべてに**○を付けてください）
ご家族 （子供連れ）　・ご家族 ・ ご親戚・ご友人 ・ご家族とご友人・
おひとり・ツアー団体・ガイド(語り部）・その他
（　　）

問 3. どれぐらいの頻度で中辺路ルートをご利用されていますか? （***一つのみ***）

1)今回が初めて
2)今回が２回目
3)３回以上利用したことがある （利用回数：_____回）
4)定期的に利用している　　（月_____回　もしくは、週_____回）

問 4. 今回はどのような目的で**中辺路ルート**を歩きましたか？ (*複数回答可*)

1) 歴史や神話を知るために
2) 参詣道として利用するために
3) 美しい自然風景を見るために
4) 野生動物や植物を観察するために
5) 季節の移り変わりを感じるために
6) 地域の食文化を体験するために
7) 地域の人々と交流するために
8) 地域の人の生活を感じ取るために
9)精神的な緊張やストレス等から解放されるために
10) 自分自身への挑戦のために
11) エクササイズ（健康）のために
12) 新鮮な空気を吸うために
13) 同行する人と一緒にいる時間を作るために
14) ここに来たことを他の人に伝えるために
15) お土産を買うために
16) 世界遺産を見るために
17) その他(_____)

問 5. 中辺路ルートでの滞在時間について、ご自身に当てはまるものに○をつけてください。（*一つのみ*）

1) 一日だけ中辺路ルートを利用する　（_____時から_____時まで)

2) 宿泊して中辺路ルートを利用する　（_____泊)

問 6. あなたが中辺路ルートを知ったきっかけを教えてください。（*一つのみ*）

雑誌 ・本・インターネット・ テレビ・ご家族・ご親戚・ご友人・居住地の旅行会社
・現地の旅行会社・世界遺産熊野本宮館・滝尻王子古道館・その他
（　　）

３．中辺路ルートの感想について

問 7. 中辺路全ルートの地図があります。その中で、**今回歩かれた部分の番号にすべて**○をつけてください。

1　2　3　4　5　6　7　8　9

問 8. あなたが***今回歩いたルート***について、以下の評価項目に５段階でお答えください。（当てはまる数字に○をつけてください）

	全く思わない	あまり思わない	思う	とてもそう思う	わからない
道として歩きやすい。	1	2	3	4	5
トイレが十分に設置されている。	1	2	3	4	5
道に趣がある。	1	2	3	4	5
道からの眺望が良い。	1	2	3	4	5
いろんな植物、動物を観賞することができる。	1	2	3	4	5
神聖な感じがある。	1	2	3	4	5
沿道の王子社や地蔵が独特な雰囲気を醸し出している。	1	2	3	4	5
地域の生活感や風土などを感じられる。	1	2	3	4	5
交通の便が悪い。	1	2	3	4	5
混雑している。	1	2	3	4	5
今回歩いた体験に満足している。	1	2	3	4	5
また中辺路ルートを歩きたい。	1	2	3	4	5

問 9. 中辺路ルートで一番魅力的に感じた点についてご自由にお書きください。

問 10. 中辺路ルートについて改善してほしい点をご自由にお書きください。

４．中辺路ルートに対する意識について

問 11. あなたにとって、中辺路ルートはどういう場所ですか？５段階でお答えください。（当てはまる数字に○をつけてください）

	全く思わない	あまり思わない	思う	とてもそう思う	わからない
中辺路ルートは自分のアイデンティティーを感じている。	1	2	3	4	5
中辺路ルートに愛着を感じている。	1	2	3	4	5
中辺路ルートは私自身にとって、大切な存在である。	1	2	3	4	5
中辺路ルートには一番お気に入りな場所がある。	1	2	3	4	5
中辺路ルートを利用することによる満足感は他のどの道よりも大きい。	1	2	3	4	5
中辺路ルートを利用することは、他のどの道を利用することよりも楽しい。	1	2	3	4	5
中辺路ルートは自分の余暇活動に対して、最高な場所である。	1	2	3	4	5
中辺路ルートを歩いていると自分らしくいられると感じる。	1	2	3	4	5
中辺路ルートが大切な理由は、世界遺産だからである。	1	2	3	4	5

問 12. あなたは**中辺路ルートの修復と維持管理**に対して、協力したいと思いますか？

1) はい**.....問 14-1 へ**
2) いいえ ↓

問 12-1. どのような形で協力したいですか？（***一つのみ***）

1) 修復と維持管理などのボランティア活動に参加したい。
2) 修復と維持管理などに使う資金の募金に協力したい。
3) その他　（_____）

中辺路ルートについて、その他ご意見等ありましたら、ご自由にお書きください。

質問は以上です。ご協力ありがとうございました。

このアンケートは**無記名式**ですが、本調査結果の送付を希望される方は、
「お名前」「住所」「メールアドレス」を以下にご記入ください。

お名前：_____

住所：〒_____

メールアドレス：_____

Appendix F: Map used for questionnaire survey for visitors on Nakahechi Route (Japanese and English), corresponding to Figure 5.1.