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Pre-European Māori Pā as a Model for Traditional Hilltop Fortresses in Wider World Context

Hong-Key Yoon

School of Environment, University of Auckland, Auckland, New Zealand
Email: hk.yoon@auckland.ac.nz

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Abstract

The two types of pre-European settlements of the Māori people are pā—a palisaded fortress, and kainga-unfortified settlements on flatland. Pā are normally located on strategically chosen sites where natural defence conditions, such as the top of a cliff or steep slope, headland or hilltop, are available. A well palisaded pā and unfortified or crudely palisaded kainga nearby are mutually dependant on each other for security and resources. The crops cultivated and wild food resources collected by the people of the kainga supplied both themselves and the pā, which offered protection during times of conflict. This paper examines how the relationship between pā and kainga in Māori culture can serve as a model for understanding the relationships between traditional fortified hilltop fortresses and nearby unfortified settlements in various regions, including Europe, Korea, and the Pacific Islands.

Keywords

Pā-Kainga, Māori, European, Hilltop Fortress, Korean

1. Introduction

To a cultural geographer, an inherent characteristic of a geographical investigation is to compare the cultural landscape of "A" with "B" or others. This paper compares and contrasts the locational characteristics of fortresses in different cultures: pre-European New Zealand Māori, the Pacific Islands, Europe, and Korea. The aim of this paper is to support a hypothesis developed from the earlier hints and comments made by the early navigators and ethnologists such as Captain James Cook, Raymond Firth and Elsdon Best that Māori pā sites are ingeniously chosen defence locations showing great engineering skills and strategies of war

games. By going a step further from Best's comments, I explain how we can use the relationship between pā and kainga as a model to explain other cultural contexts, such as European hilltop fortresses, Korean sansŏng or mountain (hilltop) fortresses, and traditional fortresses in Pacific Island nations.

This paper argues that the Māori model of pā-kainga relationships is applicable to the interpretation of the relationships between the early Koguryŏ-Korea hilltop fortress-capital and some scattered smaller settlements on flatland. This paper is based on and developed from my earlier paper in Korean that discussed the origin of early Korean mountain (hilltop) fortresses (Yoon, 2024a, 2024b).

Marvin W. Mikesell presented his presidential address "Tradition and innovation in cultural geography", at the meeting of the Association of American Geographers in 1978. In it, he commented that anthropologists often asserted that "the purpose of their discipline is to offer generalizations about relatively primitive societies that may serve eventually as a foundation for studies by other scholars of more complex societies." (Mikesell, 1978: p. 5). Mikesell's comment can be interpreted as a study of how a so-called "primitive" or "indigenous" society in a less developed non-western culture can eventually be a foundation for the study of more complex societies in a modern (western) world. It was a plausible suggestion and had practical value in it. As a historical-cultural geographer, I, however, would also like to draw the readers' attention to how such a study of an indigenous society can also enlighten study of one culture to another at a comparable historical stage, regardless of the current characteristics of their culture.

Elsdon Best made probably the most significant contribution to the ethnographic study of pā māori, the traditional Māori palisade fortress settlement. Best's book, *Pā Māori* includes detailed explaining of the features of a pā and discusses in a descriptive narration style the fortified settlements in Polynesia, Melanesia and Micronesia, and sometimes compares them with pā māori in New Zealand. Best suggests that the locations of pre-European Māori pā are so ingeniously strategic that they can be compared with some of Europe's fortresses and citadels, declaring that "it would be possible to collect accounts of primitive forts resembling the pā māori from many countries, including England and Ireland" (1975 [1927], 431). Firth (1927: p. 67) also suggested that the pā māori and British hillfort has some resemblance, when he declared that "the earthworks of the Māori stronghold are strongly reminiscent of the British hill fortress of the Stone, Bronze and Iron Ages".

2. Some Important Literature on *pā māori* for This Paper

There are limited published research works on the study of *pā māori* in historical-cultural geography. Most significant contributions come from ethnologists and anthropologists, while K B Cumberland and G. Lewthwaite are among the few geographers who have studied Māori pā in geographical literature.

One of the earliest papers on a Māori fortress in an academic journal was by Sir Raymond Firth, "The Korekore Pā" *Journal of the Polynesian Society* 34: 1-18

(1925). This paper is about an abandoned old Māori pā near Murawai Beach, Northwest of Auckland. Based on his own ethnological fieldwork and archaeological excavations at the pā site, Firth argued that the Korekore pā was a defensive stronghold with a strategic location on a high ridge with an impregnably steep slope on three sides (Firth, 1925: p. 1). While he suggests that in peace time the majority of the pā people would have lived in a flatter unfortified lowland nearby, Firth argues that trenches in the three rows were evidence of the pā being mainly used for defence against invading enemies (Firth, 1925: pp. 4-5). He also found in the pā site the existence of subterranean storage chambers, several distinct terraces (rengarenga) and wāhi tapu (sacred burial ground) on the gentler slope side. In his article he made an important report on his intriguing discovery of carvings or "the cutting of designs or figures in the walls of dwelling-pits" (Firth, 1925: pp. 14-16).

Firth wrote another paper on Māori pā, "Māori Hill-forts" in 1927. This article introduces and describes the general features of the construction of pā with palisades and tranches on a strategically chosen site in the Māori culture. His 1927 article may well be the first substantial discussion of Māori fortifications for the British academic audience, and he suggested that the Māori pā was strongly resonant of the British hilltop fortresses (1927, 67).

One of the first and most significant contributions to the study of Māori pā was by New Zealand born ethnographer, Elsdon Best. He was born at Tawa Flat, New Zealand in 1856, and had only 5 and half years of schooling before entering the workforce as a farm labourer then a Constabulary Field Force man, among other occupations. He had a long association with the traditional Māori people, especially in the Urewera District, and his writings are rich in details on the traditional Māori culture due to his experience of living with the Māori people and his interviews with Māori elders.

Among many publications by Best, *Pā Māori* is probably the most important work for the study of Māori fortresses and settlements. The book, first published in 1927, is a collection of valuable and detailed information on Māori fortified settlements. The book consists of 6 pārts: introductory remarks, description of the pā Māori, method of construction (attack and defence), a detailed description of old fortified villages, the modern pā Māori, fortified villages of Polynesia (and others).

Another helpful publication by Best for the study of pā māori is *The Māori as he was* (1924, reprinted in 1974). The book describes traditional Māori culture and distinguishes between two types of Māori settlements: fortified (pā) and unfortified (kainga) (Best, 1924: p. 254).

Another work including Māori fortresses by Best is *Notes on the Art of War* (Reed, 2001), which is a collection of Elsdon Best's articles first published in the *Journal of the Polynesian Society* between 1902-1904. Here, Best classified pā into pā maioro (a pā of earthworks and palisades), and pā tuwatawata (a pā that employs palisades only). Best also noted in the book that the Māori people had lately

been using the term pā to denote an unfortified settlement as well (Best, 2001: p. 225). In this book, readers can learn different aspects of Māori battle tactics and fortresses of pā.

The Māori battle tactic of sieging enemy pā is somewhat similar to the ancient Korean tactics used from the hilltop fortresses during wars between China and Korea. For instance, when the Han dynasty of China invaded the Koguryŏ dynasty of Korea, the Chinese sieged the Korean capital-hilltop fortress during King Taemusin-wang (28AD) for a lengthy period. In the end the Koreans defeated their enemy by making them believe that the besieged Koreans had plentiful provisions and therefore no need to surrender (Yoon, 2024b: p. 240). In Māori tribal wars, sometimes a battle campaign also went on for a long period including the lengthy siege of a particular pā until it fell. These campaigns with the siege of a pā are richly described in "the Siege of Operiki", a subsection of Part VIII of the book (Best, 2001: pp. 234-240).

Ian Knight recently wrote in 2009 a brief and condensed but clearly conceptualised book on *Māori Fortifications*. Knight (2009: p. 13) suggests there are two types of pā design: 1) pā tuwatawata, with largely wooden palisades, and 2) pā whakairo, with combinations of deep trenches, ramparts and palisades. The author's discussion of the pre-colonial pā is most relevant for our topic and provides insightful comments, because this paper focuses on pre-European fortresses in the Māori culture.

K. B. Cumberland, the foundation professor of the Geography Department at the University of Auckland, was an adherent of the Hartshornean approach to historical geography and in 1949 he published the first research paper on Māori geography, "Aotearoa Māori: New Zealand about 1780," in the *Geographical Review*, Vol. 39, No. 3 (Jul., 1949), pp. 401-424. The article took the form of synchronic cross section that discussed Māori people in 1780s in terms of their crop cultivation, forest resource, trade, settlement patterns and size of population. In the settlement section of the paper, he discussed the morphological patterns of pā māori, centring on marae (traditional meeting house complex), pataka (traditional Māori food storage cabin often raised upon posts) and whare (dwelling/house). He argued that most pā māori were in the coastal zone of the North Island and in the later 1700s most Māori people lived mainly in pā (Cumberland, 1949: p. 414).

In 1965, Cumberland published a series of sixteen booklets on New Zealand geography intended for secondary school use covering the three parts: 1) the people, 2) the economy and 3) the land. The series is a systematic (topical, not regional) approach to the geography of New Zealand. Within Part 1 is the Booklet 1a "The Moahunter" that discussed the life of Moahunters and contrasted the changes in vegetation coverage before and after their arrival (Cumberland, 1965b). Booklet 1b "The Māori" includes an illustration of Māori farming with palisaded pā on a hilltop in the background. In this booklet his discussion of the Māori settlement pattern is brief but more specific, by identifying the unfortified settlement

type, kainga, and fortified settlement type, pā. He also perceptively pointed out that pā were built on "ridges, spurs, coastal headlands and peninsulas, cliffed (sig) islands and river-terrace edges (Cumberland, 1b, 1965a: p. 18).

Professor Gordon Lewthwaite is a New Zealand born historical-cultural geographer. He published a paper on two Māori pā in Auckland, "Maungawhau and Maungakiekie: Reinterpreting the Cultural Landscape," in the *Yearbook of the Association of Pacific Coast Geographers*, volume 45, in 1983. One Tree Hill (Maungakiekie) and Mount Eden (Maungawhau) are two significant volcanic hills in Auckland that feature ancient Māori pā sites with valuable archaeological remains. He suggested that the earliest Māori fortifications might have involved terracing and palisades, and only later were trenches and banks included, evolving to "ring-ditch pā" (Lewthwaite, 1983: p. 39). Interestingly both geographers, who have contributed to the study of pre-historical Māori pā, focussed their discussion on the ecological aspects of human-environment relations such as agriculture, forest use and settlement patterns, while not giving much attention to the social and defence conditions of pā or intertribal warfare. Their research focus may well reflect the nature of their academic discipline.

Fox (1976), a British academic, published a book in 1976, *Prehistorical Māori Fortifications in the North Island of New Zealand*, as New Zealand Archaeological Association Monograph No. 6. It is a perceptively written book that compared and contrasted the Māori pā and British hillforts. She noted that the Celt and Māori forts were similar (Green, 1976: pp. 1-2).

Fox also published a booklet, *Maungakiekie, the Māori Pā on One Tree Hill*. This booklet intended to be a guidebook for visitors to One Tree Hill to enjoy and understand the heritage of Auckland from "the Māori past". This booklet includes a quality aerial photograph and a topographic map showing the plan of the Māori pā and covers brief introduction to the cultivation, burials, the defences, traditional Māori history and recent history. The author, as an archaeologist, commented that the defence system of One Tree Hill is elaborate and almost certainly constructed and modified several times (Fox, 1978: p. 9).

In 1980, Nigel Prickett published "Māori Fortifications of the Omata and Oakura Districts, Taranaki", in *Records of the Auckland Institute and Museum,* mapping 32 Māori fortifications (pā) in the Districts in November and December 1979. He reported that the majority of pā surveyed have ring-ditch defences, but a high proportion of pā enclose only a small occupation area (Prickett, 1980: p. 1). This paper reports that Taranaki pā in the survey area are generally very small in size and prefer inconspicuous locations, although they took advantages of natural defence conditions such as cliff-top situations or precipitous slopes. Prickett noted that over half of the sites of the fortifications on a knob or rise are below the general level of the surrounding countryside (Prickett, 1980: p. 47). The way Prickett described the size of pā and their environmental conditions suggest that these settlements probably functioned as kainga in association with a large and strong pā where people can retreat when invaded by an enemy.

Ethnologists and anthropologists have made the most significant contributions to the study of pre-European Māori pā, while geographers' contributions are modest. Since studying pā māori involves both human and physical geography, historical geographers should take more active research interests in this field.

3. What Is pā, What Is Kainga and What Is Their Relationship?

Māori pā are found on strategically chosen sites where natural defence conditions such as a steep slope, headland or hilltop are available. These location qualities are somewhat like many European hilltop fortresses or the fortresses on some Pacific islands. A well palisaded *pā māori,* and unfortified villages, *kainga*, nearby are mutually dependant on each other for their securities and the supply of resources. While a pā is considered a stable and permanent fortress-settlement, a kainga as a less stable and semi established settlements. Kainga were often abandoned due to other tribal attacks or poor harvest of resources, such as edible berries or fish and birds. The residents in kainga would produce resources (mainly food) in their villages during peace time but would take refuge in pā during wartime.

This arrangement of Māori settlement inspires us to review the relationship between the early Koguryŏ dynasty era Korea hilltop (mountain) fortresses with well-fortified stone walls and scattered unfortified villages on flatland below the mountain fortresses. I will examine the Māori pā palisades and the chief's house inside, then discuss how understanding the Māori settlement system aids in comprehending the Koguryŏ settlement system. Before reviewing Koguryŏ hilltop fortress in light of Māori pā, I will briefly list and comment on some examples of European hilltop fortresses and Pacific Island fortresses in order to emphasise the strategic importance of Māori pā sites. In examining hilltop fortresses across these four cultures, I propose considering pā maori as a model for hilltop fortresses within a broader global context.

Elsdon Best is probably the most esteemed ethnologist on the research of traditional Māori culture. He writes about Māori settlements before the arrival of European migrants as follows (Best, 1924: p. 254):

> "Native villages in former [pre-European] times were of two kinds. The pā was a fortified village, while the kainga was an unfortified village. The fortified villages were, in most cases, built in commanding situation on hills, bluffs, and terraces. Near such places there might, however, be an open village situated, wherein many of the people would live, except in times of danger."

He also commented on pā and kainga relationships in one of his major ethnological report, *Pā māori* (1975 [1927], 433):

> In the North Island of New Zealand the custom of living in fortified villages was practically universal. In times of peace the people might live outside their fort, as when working at their crops, or engaged in collecting food supplies,

but the pā was there as a refuge in case of danger.

Another more recent ethnological description of the traditional Māori settlement is the one by a geographer turned anthropologist, Joan Metge. Her description of the traditional Māori settlements is along similar line to Best, but she referenced an earlier explorer's comment on the Māori settlement (Metge, 1967: pp. 8-9):

> "The most conspicuous features of the Māori cultural landscape were fortified strongholds known as pā. Strategically located on hill or headland, they were protected by palisades, ditches, earthworks and fighting platforms. Inside the fortifications, houses were crowded closely, often on artificial terraces.
>
> When not living in pā, the people lived in unfortified settlements called kainga. These are usually described as villages, but the early records suggest these were typically hamlets of five or six houses scattered over the countryside with the pā as focus. Large villages may, however, occurred fertile lowland areas, especially in the north.

Prior to the arrival of European immigrants, the Māori constructed large fosses (moats) using wooden and stone tools within the wooden palisades surrounding their pā. These moats were typically not intended for water storage but served as a defensive barrier, making the pā more difficult to attack. One surviving example of such fosses exists in One Tree Hill pā below the largest tihi (flat summit) which is thought to be the house site for Te Rangatira (Māori chief).

The core members of pā residents are assumed to be the leaders of the local communities including the immediate families of rangatira (chiefs), tohunga (priests and experts in carvings, tattooing, etc.) and other able warriors. Often it was not possible to accommodate all members of a Māori community (a whanau, hapu or iwi) in a pā, and some members had to live outside a pā in a hamlet or a village for various reasons. These villages may normally have been used for gardening (especially kumara growing), fishing, hunting birds or collecting wild foodstuff until they became unsafe to do so due to impending enemy attack. Elsdon Best (1975: pp. 3-4) described this as:

> At certain times, when not threatened by enemies, these people spent much of their time in unfortified hamlets, merely retiring to their pā when expecting to be attacked. Such hamlets might be surrounded by a fence or palisading but could not be termed fortified places. A close observation of Wellington and Porirua districts has convinced me that the native population of those places in former times lived much of their time in places that could scarcely have been defended against an enemy.

In Wellington and Porirua districts as Best noticed, kainga settlements were most common but did not have strongly fortified pā nearby to retire for protection during the time of enemy attack (Best, 1975 [1927]: p. 4). However, most kainga

in other parts of New Zealand had a strong pā nearby where they can retire for protection and fought against the enemy during the time of danger. Even the core residents of a pā did not spend all their time there, often engaging in various activities such as fishing, gathering and gardening during peace time.

Before the existence of New Zealand was widely known to the Europeans, the French explorer Jean Francois Marie De Surville, (1717-1770) voyaged to the islands in the South Pacific and New Zealand in 1765-1770. His exploration notes were published as Journal of Surville's Voyage by L'Horn. Best, in his *Pā Māori* (1975 [1927], 27) cites from L'Horn's notes as the following account of the fortified villages of the Māori:

> "Their villages contain only five or six huts, but their towns which I shall call their strongholds and citadels are composed of a larger number. They have their towns on the steepest point of access that they can find. The huts are arranged in terraces, and it is there they take refuge against the aggressions of their enemies and their attacks. On these occasions all the huts scattered in the country are abandoned, and everybody falls back on the citadel."

Best commented that L'Horn's further remarks in addition to the above quotation on Māori forts are so misleading as not to be worth quoting. Best's remark implies that what he quoted above from L'Horne's Journal is reliable and trustworthy.

We can assume that the important members of a Māori community such as the chiefs (Rangatira) and priests (tohunga) resided in pā, and those who lived in kainga may have envied this. My conjecture is partly prompted from a story saying that once a person named Tapuae asked politely Taharakau of Turanga, a famous Māori Chief of Wairoa in North Island what food he consumes and what he thinks is the emblem of Rangatira (Kohere, 1951: pp. 21-22). The great chief disparaged question and uttered as follow:

> He whare tu ki te paenga, he kai na te ahi
> He whare tu ki te pā tuwatawata he tohu no te Rangatira
> A house in the field is likely to be devoured by fire,
> But a house in a stronghold is the emblem of a Rangatira (Chief).
> (Reweti T. Kohere, 1951, *He Konae Aronui, Māori proverbs and sayings*, Wellington: A.H. A.W. Reed, pp. 21-22).

Reweti T. Kohere, commented that the great chief of Wairoa ridiculed and disapproved Tapuae's question and reproachingly uttered a maxim in manner similar to Socratic rhetoric. At that time Tapuae was not living in a palisaded pā, and his house can easily be burned down when an enemy attacks.

As the famous chief pointed out, the chief's residence is on the tihi (the flat summit) of a hilltop pā. The tihi enjoyed a commanding view of around area and the best protected position from an enemy's attack. The chief's residence which later developed into a marae (community meeting house complex) had a superior site and size compared to other commoners' houses. Such a big house on a supe-

rior position is the emblem of a Māori Rangatira.

Māori pā Site Selection

The site selection of a pā was an especially important matter in Māori culture, since the wellbeing of a pā was one of the most critical aspects of Māori life. When a pā was overrun by an enemy, the pā was abandoned and a new pā was built on a carefully chosen site. When a new pā site selection is needed, all possible conditions were considered, and the business of choosing a new pā site was handled by a revered tohunga (priest) and his assistants. On the need for careful consideration of a new pā site selection, Best wrote:

> Repeated inquiries of old natives have convinced the writer that the Māori of yore was extremely careful in his selection of a site for a permanent fortified village, while examination of many old forts has served to uphold the belief. (Best, 1975 [1927]: p. 23).

The selection process of a new pā site was a critically important stage of the construction work that required a comprehensive location analysis in Māori culture. Therefore, only a carefully chosen high-priest or a tohunga with high mana (psychic power or authority) choose a pā site. Elsdon Best introduced the selection process more in detail as follows (Best, 1975 [1927]: p. 33):

> The leading man of a clan, or gens, would decide on the site for a new pā, and there was usually one or more persons who possessed some skill in the selection of such a site, and in planning its defences. Such adepts would carefully examine the site and, by means of rods stuck in the ground, mark out the positions, from, and extent of the various earthworks, escarpments, ditches, stockades, entrances, fighting stages, etc. Not until such planning and marking off was completed did the labour of construction commence.

The process of selecting a new pā site in the Māori culture can be compared with the selection of a new qanat site in the Middle East, e.g. in Iran and Iraq. Qanat refers to the underground horizontal tunnel well in desert-like arid environments of the Middle East and is a lifeline for the local inhabitants of a settlement in a dry desert. Professor Paul Ward English's study suggests that prior to the commencement of construction work, various factors such as local slope conditions, groundwater supplies, and the proposed location of the new settlement were thoroughly examined by an expert. This expert is typically well-regarded among professional underground tunnel diggers known as muqannis (English, 1968: p. 171). The site selection and laying down the line of proposed horizontal tunnels that will carry water to a village is the most important stage that requires an expert's knowledge and wisdom. Although the nature of the construction works of pā in the Māori culture and qanat in arid environments of Middle East are different and unrelated projects, both consider the site selection and planning stage of the construction work utterly important by examining the geomorphological conditions of the new site that requires an experienced expert's wisdom and skill.

Since a new pā in Māori culture must endure any possible attack by enemies, a pā site selection expert (tohunga) must choose a strategical site that is easy to defend themselves against any enemy attacks. The site is normally on a hilltop, headland, or cliff with good natural defence conditions. Both tohunga choosing a new pā site or expert and famous muqannis choosing a qanat site were old, knowledgeable, and respected expert in the communities they belong to.

In addition to these two cases of site selection, geomancers in East Asia are employed for choosing auspicious gravesites or settlement sites, done by wisely interpreting the local environmental conditions (Yoon, 2006; Yoon, 2011: pp. 243-260). For all three cultures, the initial site selection was the most critical stage of the construction process. In fact, in any important construction works, the site selection and planning stage of constructing the structure must be an important stage of any construction projects.

4. European Citadels in Comparison with Pā Māori

The strategic quality of pā māori impressed Captain James Cook (11 November 1769) so much that he commented on a pā at Mercury Bay (quoted in Best, 1975 [1927]: p. 36):

> A little within the entrance of the river, on the other side, is a high point or peninsula jutting out into the situation is such that **the best engineer in Europe could not have chosen a better for a small number of men to defend themselves against a greater; it is strong by nature, and made more so by art**. It is only accessible on the land side and there have been cut a ditch and a bank raised on the inside. From the top of the bank to the bottom of the ditch was about twenty-two feet, and depth of the ditch on the land side fourteen feet; its breadth was in proportion to its depth, and the whole seemed to have been done with great judgement. There had been a row of pickets on the top of the bank, and another on the outside of the ditch; these last had been set deep in the ground and sloping with their upper ends hanging over the ditch. (**the emphasis in bold is mine**)

In Captain Cook's opinion, the Māori pā site had such excellent natural defence qualities that the best European engineer could not have chosen a better one. Comparing a Māori pā site with a European castle is significant here. On this issue, Elsdon Best commented on Māori pā having some site qualities resembling traditional fortified settlements in European countries and declared that (Best, 1975 [1927]: p. 431):

> "Indeed it would be possible to collect accounts of traditional European forts resembling the pā maori from many countries, including England and Ireland."

As above Cook and Best implied, the strategic location qualities of Māori pā can be compared with citadels in England, France and other parts of Europe. Follow-

ing is a list of some well-known European fortresses, revealing their locations in terms of natural defence qualities. I have chosen some of these traditional European castles (hilltop fortresses) as a result of my internet search for castles and citadels in England, Ireland, France, Germany, Italy and other countries. The main sources of information used in this section are medieval European fortress homepages and Wikipedia introducing the castles with photos (accessed between 20 October-27 December 2024). I have observed that many European fortresses, similar to Māori ones, are situated on elevated positions such as hilltops or promontories with steep slopes. My selection is influenced by my familiarity with various Māori pā sites and my intention is to compare these European fortress locations with those of the Māori.

1) Fortresses in Italy
(https://archaeology-travel.com/fortresses-castles-pālaces/italy/)

a) Cly Castle: A typical medieval fortress built on a hilltop (like Māori pā tihi) to exploit natural defensive conditions. The fortress is surrounded by a citadel wall and is thought to have been built in 1027 AD in the Aosta Valley.

b) Aragonese Castle of Baia: Built on the hilltop overlooking the gulf of Baia. The castle construction beginning in 1495 has been expanded and fortified.

2) Fortresses in France

a) Mont Saint-Michel (https://en.wikipedia.org/wiki/Mont-Saint-Michel), Le Mont-Saint-Michel in Normandy, France; "Saint Michael's Mount" in English) is a tidal island where a Benedictine abbey is built on the hilltop of the island. This famous place is a holy as well as strategically important site.

b) The fortress of Beynac,
(https://en.wikipedia.org/wiki/Ch%C3%A2teau_de_Beynac) has a heavily fortified defensive wall and located in the commune of Beynac-et-Cazenac, in the Dordogne département, France. This 12th century-built fortress is standing on top of the headland with a limestone cliff.

3) Fortresses in England

a) Dover castle (https://en.wikipedia.org/wiki/Dover_Castle) is a large medieval citadel founded in 11th century. It enjoys commanding position on strategically defensive high ground. Described as the "key to England" because of its strategic location.

b) Tintagel Castle (https://en.wikipedia.org/wiki/Tintagel_Castle) is a medieval fortress located on elevated coastal slopes on the peninsula of Tintagel Island, North Cornwall, England. Its strategic location makes a good comparison with a pā māori.

4) Fortresses in Ireland

a) Dunluce Castle in Northern Ireland
(https://en.wikipedia.org/wiki/Dunluce_Castle): A 13th century medieval castle in Northern Ireland near Belfast. Its location is strategic on a promontory with steep slope to the sea. A coveted fortress site for the early Irish, Christians, and Vikings. A difficult place to attack from the sea.

b) Adare Castle in Ireland (https://heritageireland.ie/visit/places-to-visit/adare-castle/): A medieval fortress built for defence and is strategically located on the banks of the River Maigue.

5) Castles in Belgium

Walzin Castle, Belgium (https://en.wikipedia.org/wiki/Walzin_Castle) is located in the city of Dinant, Wallonia, Belgium over the river Lesse. This military stronghold of a 13th century origin majestically stands on the rock cliff of the riverbank.

6) Castles in Slovakia

Spis Castle in eastern Slovakia (https://en.wikipedia.org/wiki/SpišCastle) is on extensive grounds on a hilltop with a commanding view of the surrounding rural area, built in early 12th century. It was the defending frontiers of the Hungarian feudal state.

7) Fortresses in Germany

a) Hohenzollern Castle (https://en.wikipedia.org/wiki/Hohenzollern_Castle) is a hilltop fortress located on the mountain Hohenzollern. It is a medieval castle with rich history in central Baden-Württemberg, Germany.

b) Königstein Fortress (https://en.wikipedia.org/wiki/K%C3%B6nigstein Fortress: the name meaning "The King's Rock") is one of the largest hilltop fortresses in Europe, located about 240 metres above the River Elbe near Dresden, Germany. This medieval castle dates back to the year 1233 is now a tourist attraction site.

Many European traditional fortresses have obviously chosen strategic sites that are easy to defend against invading enemies. Europeans shared similar views on strategic sites with Māori. The hilltops, headlands and high grounds with steep slopes were some of their favoured strategic considerations. In order to support and sustain these fortresses, they must have had to maintain close relationships with people who live outside the fortresses for the supply of manpower and other strategic resources including foodstuffs.

5. Fortresses Resembling pā Māori in the Pacific Islands

I will now turn to Pacific Island countries' site selections of their fortresses or fortified villages. My discussion in this section is based on Elsdon Best's work in Part V of his book, *The Pā Māori* (1975 [1927], 414-434). There, Best discusses some traditional fortified villages in a number of Pacific Islands including Fiji, Tonga, Samoa, Solomon Isles and New Caledonia. The following are a brief discussion of fortresses in the Pacific Island countries based on Best's study (Best, 1975 [1927]: pp. 414-434).

1) ***Rapā Island* (*Easter Island*) *fortresses***

Best cites early missionary records on the strategic locations of the fortresses in the Rapa Island: Rev. W. Ellis visited Rapa Island in 1817 and declared that well-built fortifications cap the summits of many of hills in Rapa and it will be impregnable for any assailants to siege them (Best, 1975 [1927]: p. 415).

2) ***Tongan fortresses***

Best (1975 [1927]: p. 417) declared that Tongan forts represent their learnings from the Fijians and they closely resembled the pā māori in terms of the locations and characteristics. Tongan fortresses are large in size and well situated on hilltops with steep slopes. Mariner (quoted in Best, 1975 [1927]: p. 418) describes:

The fortress, on the top of a steep rising ground as seen from the canoes, presented a most formidable and warlike appearance; its extent seemed enormous, and the tops of the white reeds, which were seen at a distance above the banks of red clay.

Best commented on the importance of Tongan fortresses in understanding the settlement patterns of Pacific Island countries (Best, 1975: p. 432).

3) *Tahitian fortresses*

Secure enclosures called pā were created by planting trees in some of the Harvey Islands (Best, 1975 [1927]: p. 420). Best quoted Teuira Henry's remarks on Tahitians: "Their fortifications were intricately made of stones and earth heaped over boughs of trees." (Best, 1975 [1927]: p. 420). Seemingly, they are rather different from and unrelated to *pā māori*.

4) *Marquesas Group fortresses*

Porter who visited Marquesas in 1813 commented, "Gattanewa, was at a fortified village, which was pointed out to me, on the top of the highest mountains" (Best, 1975 [1927]: p. 420). Elsdon Best (1975 [1927]: p. 421) pointed out that the Marquesan strongholds had fighting stages and a narrow protected entrance, but no earthwork was involved unlike the Māori pā.

5) *Samoa fortresses*

Best (1975 [1927]: p. 423) quoted W.B. Churchward's statement made during his trip to Falelatai: "On arriving at the top [(sic)of a steep hill we found evident traces of a parapet and ditch, no doubts the work is the days of old(sic) of the Tongans, who at one time held entire possession of Samoa." Captain Erskine in 1849 remarked that the Samoan forts resembled somewhat a New Zealand pā with upright wooden posts and an external ditch (Best, 1975 [1927]: p. 424).

6) *Fiji fortresses*

The fortresses in Fiji are somewhat simpler compared to Māori pā and are fortified with an earth rampart and a stockade of reed or cocoanut trunks surrounded by a muddy moat, according to Basil Thomason (Best, 1975 [1927]: p. 424). Rev. A.J. Webb in 1890 wrote on Vitilevu that their villages were mostly perched on most inaccessible peaks and precipices. These eyries were skilfully fortified with their well-chosen strategic positions, rendered some of them traditionally impregnable (Best, 1975 [1927]: p. 426). Like Māori pā or Korea's Koguryŏ sansŏng, some important hilltops in Fiji are often crowned with fortresses.

After comparing Māori pā with European citadels and fortified settlements in the Pacific Islands, I suggest that the pā-kainga relationship in traditional Māori culture could help explain the dynamic relationships between fortified and unfortified settlements worldwide. This concept is particularly relevant for interpreting the early Koguryŏ-Korean hilltop fortresses and their surrounding flatland settle-

ments.

6. Implications of Pā-Kainga Relationships in Understanding the Early Koguryŏ Hilltop Fortress Capital in Korea

The tools used in pre-European Māori culture were mostly made of stones or wood, and the wooden palisades were the main defence wall against the invading enemies for a pā or a fortified settlement. Korean kingdoms around the time of Koguryŏ (37BC - 668AD) used tools made of bronze or even iron and built their fortresses with stone defence walls. Although both societies had no direct contact and were separated by the vast Pacific Ocean, I had some studies done on both cultures and found that the ways they organised and built their fortresses (fortified settlements) demonstrate some resemblances and can be compared. Both Koguryŏ-Koreans and New Zealand Māori people employed hilltop fortresses (pā in Māori and sansŏng in Korean) as their main defence system. Both societies used their hilltop fortresses during wartime as the place for taking refugees (and to resist against the invaders) of the people who have lived in unfortified flatland settlements nearby. That is why the pā-kainga relationships in Māori culture can throw a new light in understanding the Koguryŏ hilltop fortress's relationship with unfortified smaller settlements nearby on flatland.

Unlike the Chinese capital cities on flatland with rectangular city walls, the history of Koguryŏ began with its first capital on the mountain top fortress with its irregular shape defence wall adjusted to the surrounding landform at the West of Cholbon (Holbon) (沸流谷忽本西城山上, 而建都焉) as inscribed on the Stone Stele of the Great King Kwanggyeto. On this hilltop fortress of Mount Onyŏsan (五女山: Wunu Shan in Chinese, 821m high) in Cholbon area (卒本), there is sizeable flatland for building houses, a drinkable water well, and a substantial sized pond (Yang, 2013: p. 49; Yang, 2020: pp. 133-157). The hilltop fortress of the first capital of Koguryŏ dynasty was their defence citadel as well as the administration centre for governing the nation. On the flatland below the first capital-hilltop fortress area, there were smaller scattered settlements, but none of them could have functioned as the capital city judging from their sizes or archaeological evidence.

When we interpret Koguryŏ's first capital from the viewpoint of the relationship between the Māori culture's palisaded pā and unfortified kainga settlements on flatland nearby, it is very likely that Koguryŏ's first capital on hilltop citadel was like *pā* in Māori culture, and the smaller settlements on flatland below the mountain fortress was like kainga. The unfortified settlements below the mountain fortress-capital were the living space for the commoners engaged in farming, hunting and other activities for producing resources. It is also likely that during the cold wintertime, the king and his close staff at the hilltop citadel-capital might have come down to these villages on flatland for some time to avoid the miserably cold winter weather on the hilltop fortress (the capital).

The Koguryŏ rulers must have considered the mountain fortresses to be more effective in fighting against foreign invaders than the fortresses on flatland, alt-

hough the space and resources on the mountain fortress-capital was limited (Ki, 2017: p. 55). That must be, in my view, why they insisted on having a mountain fortress as its capital. This Koguryŏ heritage was handed down to subsequent Korean dynasties and there are numerous hilltop fortresses or sansŏng in Korea throughout Korean history. The hilltop fortresses evolved to include valleys within the fortresses. However, for securing the manpower and resources required, cooperation with people who lived outside the hilltop citadel must have been developed between the elite-ruling class in the mountain fortress and commoner-producers of resources in the flatlands. We can infer such relationships from the examples of the pā-kainga relationships in Māori culture.

In *Samkuksagi (Historical Records of the Three Kingdoms)*, one of the most important remnant history books on ancient Korea, it is recorded that King Yuri (19 BC - 18 AD), during his reign established, five yikung 離宮 or detached auxiliary royal palaces (second homes). We can interpret this document as the establishment of several settlements (e.g., villages) similar to Māori kainga, because a detached auxiliary royal palace would require a considerable workforce attached to the king. The king's detached auxiliary palace would require facilities for the king and queen, their servants, and their security guards, among others. Thus, one yikung or king's detached auxiliary palace would require a significant population. A scholar commented that the establishment of these villages could suggest that the residence of the king at that time was not fixed to a particular place but frequently moved from place to place (Ki, 2017: p. 57). Of course, such a conjecture or interpretation is possible, but the nuance of the historical records imply that they built several yikung (literally meaning "detached royal palaces") in addition to the king's main palace at the hilltop fortress. As if the Māori case of pā-kainga relationships, the main palace on the hilltop fortress and scattered villages were complementing each other. The king and his party would have visited yikung or detached auxiliary palace and stayed certain periods there from time to time at the newly established settlements. From the historical record that appeared in *Samguksag*i or *Historical Records of the Three Kingdoms*, we can identify 5 yikung in four different places as follow:

1) In Autumn of the Seventh Moon of the third reigning year of King Yuri (BC 17), the king bult yikung at Kolch'ŏn 作離宮於鶻川. (*Samguksagi*, the Chronicles of Koguryŏ dynasty, Yi (1987 [1983]) trans. & annotated, vol. 1, 255, 262)

2) In Winter of the Tenth Moon of the third reigning year of King Yuri (BC 17), the king established two yikung separately and placed one yikung at the east of Yanggok and the other at the west of Yanggok. 王於凉谷造東西離宮各置之. (*Samguksagi*, the Chronicles of Koguryŏ dynasty, Yi (1987 [1983]), trans. & annotated, vol. 1, 255, 262)

3) In Autumn of the Seventh Moon of the 29th reigning year of King Yuri (AD 10), the king built yikung at Tongkok 作離宮於東谷. (*Samguksagi*, the Chronicles of Koguryŏ dynasty, Yi (1987 [1983]), trans. & annotated, vol. 1, 259, 263)

4) In Autumn-Winter of the Tenth Moon of the 37th reigning year of King Yuri

(AD 18), the king died at the yikung of Tugok and is buried in the Eastern field of Tugok. 薨於豆谷離宮 葬於豆谷東原. (*Samguksagi,* the Chronicles of Koguryŏ dynasty, Yi (1987 [1983]), trans. & annotated, vol. 1, 260, 264)

As I have argued above, the five yikung or detached auxiliary palaces (second homes) in the above historical record can be interpreted as 5 settlements in small or large sizes. The king's liking of those second homes (or at least one of them) must be a reason why he often stayed there for a lengthy period, judging from the document saying that the king died at one of the yikung and a funeral was carried out by burying him in a nearby field (*Samguksagi*, 260, 264). The document suggests that at least one yikung or detached auxiliary palace was large enough for the king to spend his last days before his death. Based on these reasonings, we can interpret the historical record of building five detached auxiliary palace as the establishment of five settlements in varying sizes at the capital district. It is reasonable to postulate that these newly established settlements (or yikung, the second homes) may not have had proper defence walls as in the hilltop fortress-capital. These yikung are thought to be similar to Māori kainga, while the hilltop fortress-capital were like pā (palisaded settlement). As such, villages of varying sizes existed below the hilltop fortress capital of Hŭlsŭnggolsŏng 紇升骨城 on the summit of Mount Onyŏsan , where the King and his companions may have spent some time during the colder winter months (Ki, 2017: p. 57).

Koguryŏ's primary defence strategy at their hilltop fortress-capital was known as ch'ŏngya-ipbo, which translates to "leaving no food in the villages and the field before entering the hilltop fortress for protection." This involved removing resources, particularly food, that could aid the enemy before retreating to the hilltop fortress for protection and prolonged resistance. Onyŏsan hilltop fortress, with its strong defensive wall, was ideal for guerrilla warfare, unlike flatland fortresses. Their strategy involved stockpiling resources at mountain fortresses to endure a long siege until the enemy retreated from exhaustion. Then, the army would chase and destroy the fleeing enemy. The Māori also employed similar tactics during prolonged sieges lasting months (Best, 2001, p. 234; Knight, 2009: p. 21).

Koguryŏ often relied on hilltop fortresses and the strategy of ch'ŏngya-ipbo for defending themselves against invading enemies. Over time, some hilltop fortresses of the Koguryŏ dynasty evolved to include adjacent valleys inside their fortified defence walls. These extensions enabled them to make their military operations more flexible, have less exposure to the enemy, easier access to water and easier transportation of food and other resources to mountain fortress. The hilltop fortress was called in Korean "t'emoesik sansŏng (테뫼식산성: 山頂式 山城)" which means top-hat style mountain fortress and had advantages of detecting enemy attacks more quickly, while the disadvantages were more difficulty in hiding themselves against enemies and having to transport resources to a higher ground. The enlarged mountain fortress including the mountain valley is called pogoksik sansŏng (包谷式山城), which literally means "fortress including mountain valley". This enlarged mountain fortress can provide space and facilities for station-

ing larger military units and effectively react to foreign invasions. This Koguryŏ tradition of building hilltop fortresses (including both types of mountain fortresses) became the legacy for subsequent Korean dynasties and a historical and cultural identity of the Korean people. To be a capital for the early Koguryŏ dynasty, one hilltop fortress was sufficient and those who could not be accommodated there lived in flatland settlements nearby where agriculture, fishing and hunting supported both settlement areas in peace time. If the residents of flatland settlements sensed an enemy attack, they would all move up to the hilltop fortress for protection and prolonged resistance. These situations can be compared with the pre-European period Māori culture's pā-kainga relationship, as a hillfort alone cannot function well without drawing resources and manpower from the cooperative settlements nearby.

7. Conclusion

The model of Māori pā-kainga relationship can be successfully applied to explain the early hilltop Koguryŏ fortress capital. European hilltop citadels in England, Germany, Italy and France, for example, are strategically located in positions that are difficult for enemies to attack, and easy to defend, as are Māori pā sites. A number of Pacific Islands have fortified citadels similar to Māori pā. At same time, these pā, or citadels cannot function by themselves in isolation; they require settlements like Māori kainga to support them, while the people residing in the citadel that can provide protection to the kainga during war time. Navigator Captain James Cook and ethnographer Elsdon Best hinted at some locational resemblance between European hilltop fortresses and New Zealand Māori pā. Building on their insights, this paper proposes the Māori pā-kainga relationship as a model for understanding the connections between traditional fortified hilltop fortresses and nearby unfortified settlements in Europe, Korea, the Pacific Islands, and other global contexts. We need to test this idea by documenting more examples from different cultures.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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