

**MAPS, COLONIAL VISION, RACE AND SCIENTIFIC LEGITIMACY OF  
BRITISH RULE IN MALAYA, 1860-1924**

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**Abstrak**

The maps drawn by the British colonial administrators in Malaya places pre-colonial understanding of territories into colonial boundaries; boundaries that were, on many aspects, defined by the economic, political and social interests of the colonial entity. Underlying this colonial cartographic vision of Malaya is an implicit rationale built under the banner of science. Mapping was understood by the British as a scientific pursuit, and maps as scientific artifacts. The maps of Malaya were construed through British scientific rationale, and in turn, this allowed the British to not only politically impose their vision of Malaya onto its inhabitants, but additionally, through the production of scientifically ideal (here read as ‘reasonable’, ‘empirical’ and ‘rational’) methods and artifacts had made colonial boundaries as legitimate, neutral and acceptable divisions. Therefore, other elements that has been directly or indirectly affected by British maps, such as racial distribution and notions of economic development can be argued as equally legitimate and neutral as well. While maps inform us of the socio-political order of British Malaya, it can also provide a new terrain for analysis—the relationship between science, colonialism and the objectification of colonial territories and peoples. This paper focuses on this line of analysis by looking at the visual imagination of Malaya through maps created by the British, particularly on the population, i.e., racial categorization and distribution, and how colonial ideals and imagination found indisputable grounds through science.

**Keywords:** Map, Cartography, British Empire, Malaya, Colonial Science

**Introduction**

This paper is part of an early study on maps and mapping of Southeast Asia, with an emphasis on the construction of racialized understandings of territories. The line of inquiry in this instance investigates Malaya during the British occupation up until 1924. I argue that the mapping of Malaya was not an objective pursuit. Specifically, this paper reifies the matter of colonial vision and racialization, alternatively defined as setting racial perimeters in policies, as largely influencing the illustrations of maps of Malaya.

There are several questions that could be asked along the lines of mapping subjectivity and the concepts just stated, such as what are the implications of internalizing a subjective colonial vision onto an empirical object that represents the country? And what could be the repercussion of mapping based on implicit or direct application of racialization? I demonstrate that racialization through maps perpetuates contemporary understanding of racial lines. Furthermore, it affectively augmented boundaries of culture and socio-economic activities as being exclusive. This, if examined closely could bring forth another question into the discussion, that of mobility and fluidity of identity. However, the breath and scope of this paper will solely examine the relationships between maps, scientific and subjective colonial notions of Malaya and the imposition of boundaries on and out of the maps of Malaya.

In 2011, a doctoral thesis by Yeh Er-Jian underlined key observations on mapping and scientific activities done by the British in Malaya. According to Yeh, colonial authorities defined and demarcated colonized territories by utilizing “natural units”—rivers, mountains, and human geographical features such as settlements and group boundaries. Identification and categorization of the environment provided the British a guide on the extent of their possessions and the potentials that can be developed from it. Yeh argues that while mapping was perceived to be objective and scientific, its efforts were construed based on varying modes of inquiry of the surveyor or traveler, and their individual interests and expertise.<sup>1</sup> This argument forms a critical foundation to this paper, which is to re-interpret maps of Malaysia and argue on the features which may infer these maps were as much a political and social construct, as it was deemed scientific by the colonial authorities.

The aim of this paper can be surmised as to form an understanding that first, maps seemed objective, but it was as much a product of colonial imagination, despite the acceptance by British administrators for generation of its objectivity; secondly, maps reveal not only geographical, but cemented ideas of racial lines when analyzed with additional texts.

### **Methods of Research**

The data gathered for this paper consists of maps and textual evidences. The primary sources for this period are vast. British imperial documentation ensured that each operating bureau or government department in each colony materialized their objectives and findings in black and white. Among the sources included in this category are travelogues, government survey reports and scholarly expeditions with information on geographical layouts, population density and locations of villages.

The analyses emphasize on finding idiosyncrasies between British vision of Malaya as displayed in the textual evidences and the maps, and how these images and visions evolved over time. Subsequently, these extractions of conflicts and multiple visions of Malaya is absorbed into discussions about science of cartographies and surveys of British in Malaya. The underlining discourse is to seek an explanation to the way maps formed under colonial influence, and how these visions evolved and contrasted between discovery, native knowledge and pre-conceived notions of Malaya.

This paper will briefly describe three maps by British surveyors in two stages of the occupation. Following, each map will be triangulated with textual evidences from journal articles, government reports and commentaries on censuses to explain how socioeconomic status, migration patterns and illustration of maps correlate. This study is currently at an inchoate stage, but the desired outcome is to de-objectify maps of Malaya, and eventually Southeast Asia. The proceeding discussion will first look into a brief description of scholarship on maps and mapping in historical studies. Then, I will delve into the analyses of maps of Malaya before moving on with the outcome of the study and conclusion.

### **Theoretical Considerations: Maps as Tools to Re-interpret Colonial History**

Colonial cartography was used for various matters that benefited the colonial government—identify land resources, concentration of population and useful geographical features such as rivers and mountains. What mapping encapsulates, in this sense is not just pragmatism. It equally represents a colonial worldview on the universality of science in defining a particular locality.<sup>2</sup> The early 20<sup>th</sup> century brought about a new wave of scholarship on maps, one that discusses not the techniques and modes of mapping per se but concerns itself with the ideas behind maps and what it can

tell us about the creators and the objects in the maps. Wright calls mapping a form of scientific visualization that is saturated with subjectivity and are propagandistic.<sup>3</sup> This makes map an adequate medium of interpretation in studying colonial perceptions and visions of rule.

Colonial visions, perceptions and administration has been discussed extensively over the course of the twentieth century to understand post-colonial dilemmas and despairs. Mapping adds to this line of enquiry by providing additional arguments on how empirical evidences left by colonial encounters are susceptible to the objectification, continuous subjugation and prolonged notions of the ‘others’—and this can mean geographically and racially. The maps of Malaya embody conflicted perceptions but were created through the silence of portions of historical past and reformed to suit contemporary developments that included settlements based on race and economic activities.

### **Imagined and Realized Boundaries in the Maps of Malaya**

The British vision of Malaya was an accumulation of perspectives from various European sources and an internally constructed views of the British (or arguably, English) vis-à-vis ‘Others’. Vision here constitutes visual imaginations of place and peoples, built from knowledge and experiences, and expectations of economic, political and infrastructural possibilities.<sup>4</sup> Malaya, in a discussion such as this, is a geographically specific entity which could be abstracted into various understandings of territorial boundaries, racial or cultural elements and history. In form of questions, Malaya encapsulates questions like ‘what are the boundaries of British colonial Malaya?’; ‘What were the dynamics that formed the boundaries of Malaya?’ ‘Has Malaya changed, time and place, over the course of various European occupation, and if it has, how?’ or more fundamentally, ‘In the context of British occupation of the Malay peninsula, what exactly can be known as “Malaya”?’ These questions bring forth the notion of territories, and territorialization created by colonial imaginations and colonial tools. Specifically, territories were marked by lines and edges via colonial understanding of governance and politics of a particular territory, and this does not necessarily entails looking at natural boundaries (rivers, seas, mountains and swamps, for instances), but boundaries that were also formed through demarcation of one area from another based on a legacy of traditional and usually, mutually agreed royal recognition of domains.<sup>5</sup> Moreover, territories were construed by the external perspective of a colonial government, and the subjectivity of colonial visions plays a large part in imposing delineations of territories. Visions can therefore be translated into administrative necessities, ambitions and goals that were there to guard colonial interests.

Racialization occurs when the population is categorized and defined by colonial authorities through this mode of understanding. Racialization in this context can be approached as a process that encourages racial formation and recognition of racial differences<sup>6</sup>. The pattern of scholarship concerns discerning the ‘native’ from the ‘foreign’. Late to post-colonial literature reveals this persistent direction which places Malaya at the hub of trade and commerce. At the same time, this entails placing Malaya as a vacuum absorbing cultures from ‘foreign’ entities, i.e., India and China. The first connection between maps and racialization is the scientific understanding of the population via anthropology. Anthropological studies of colonized population supported racialized policies by colonial authorities and encouraged the demarcation of population based on the native-versus-migrant narrative.<sup>7</sup> Theories of migration permeated ethnological studies in Southeast Asia, and consequently binds these nations together as having overlapping history and common roots. Theories of migration

commonly hypothesizes that there is a single indigenous race in a locality—in Malaya and the Philippines, it was the *negritos*—and that there were waves of migration from neighboring islands and kingdoms—Celebes, Sumatra, Funan—which infiltrated territories and pushing the indigenous race inwards, away from the coasts. The theory then infers that developments and commercial activities usually took place at the coast, and colonial interactions were most intense with racial groups that reside along or near the coasts. Theory of migration was also used to form a linear trajectory of human development. Succinctly, this means that new waves of immigrants were usually more civilized, hence more successful at absorbing the “new” cultures introduced by the Europeans.<sup>8</sup>

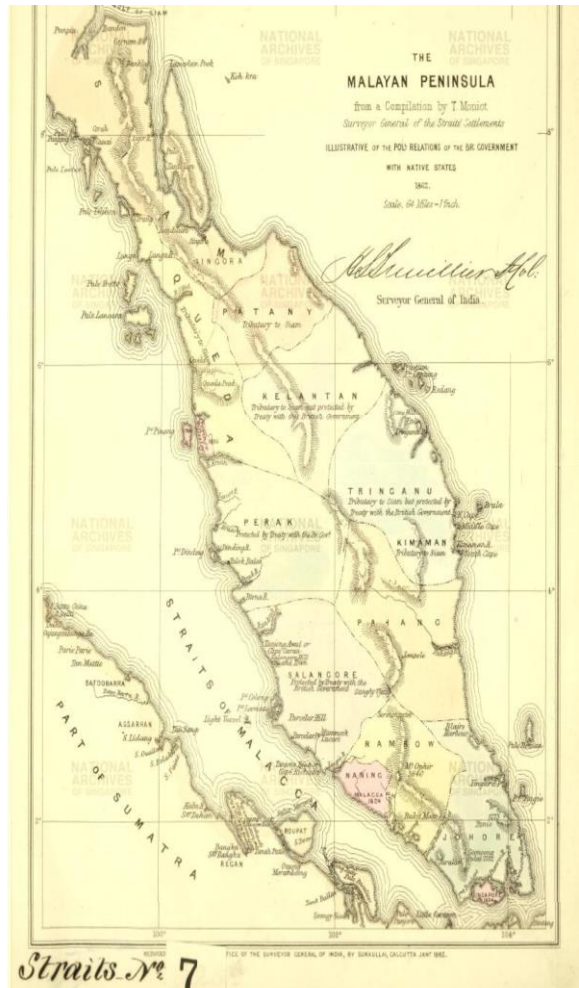
Theory of migration fell short on popularity by the nineteenth century as the British administrators invested more time and energy studying economically lucrative migrations that were quickly changing the racial landscape in Malaya. The Chinese, Indians, Sumatrans and Javanese were new terms in ethnology and administration. While ethnological parlance was soon replaced with more or less nuanced understanding of race and migration, the discussions on inferiority of the indigenous versus efficiency of the migrants resurfaced with a fresh batch of subject matter. This is what Collin E.R. Abraham argues as a manifestation of power of the British, whereby the economic interests of the colonizers engineered a narrative of race that somehow manipulated the populations’ understanding of their place and mobility in Malaya.<sup>9</sup> Another evidence which links maps to racialization process are colonial censuses. Census and statistical evidences indicate that there were correlations between place and concentration of race or ethnicity.<sup>10</sup> British divide-and-rule policy ensured that each racial group was assigned to a specialized industry. While readings of reports from 1931 onwards shows that there was a minimal level of mobility that raised the numbers of participations of one racial group in an industry not previously ‘assigned’ to them, generally from 1860 to 1924, racial groups belonged to specific areas, which consequently affected and was affected by urbanization and developments introduced by the colonial government.<sup>11</sup> Such is one example of how territorialization affected racial grouping in Malaya.

The perception and colonial imagination which ‘created’ the vision of Malaya beyond the fundamental division of the native from the ‘outsiders’ and the census data can also be acquired from the writings of colonial officials and travelers. Diaries, memoirs, reports, travelogues and research papers are among the remaining evidences that can inform contemporary historian how the British perceived Malaya.<sup>12</sup> This information tells as much about the way maps were illustrated as it did on British administration. The Straits Branch of Royal Asiatic Society (1878-1923) and later, the Malaysian Branch of Royal Asiatic Society, along with few private enterprises provided a glimpse to the contemporary and developing knowledge of the Malay Peninsula and how it eventually formed the maps of British Malaya.<sup>13</sup> The knowledge of the environment played a part in the administrations’ decision to allocate each racial category into specific locality and economic ventures. The policy of ‘divide-and-rule’ in this case, can be argued as being realized through British understanding human settlements, concentration of resources and its accessibility.

Maps from 1860s to 1920s largely reflect and may even support theorization of racial groups and policies of racialization. For instance, concentration of the *negritos* in Perak and Pahang can be compared with the sparsity of villages and towns in these areas on the map. Moreover, the absence or lack of data on the population outside of racial categories mentioned in the census not only show the difficulty of acquiring such data from the *Orang Asli* communities, but additionally, it reflects the understated but potent notion of what was Malaya according to the British. This vision was translated onto maps of 1920 and 1924 and can be contrasted with the map of 1862 that was

created when much of Malaya was still unchartered territories to the British as demonstrated in the following discussions.

*Map 1: Map of the Malay Peninsula 1862<sup>14</sup>.*



Source: H.S. Hullicrue, Surveyor General of India, 1862. From the online collection of The National Archives of Singapore. CO 700/Straits Settlement 7, no. 3. URL: [http://www.nas.gov.sg/archivesonline/maps\\_building\\_plans/record-details/b5364041-57a3-11e6-b4c5-0050568939ad](http://www.nas.gov.sg/archivesonline/maps_building_plans/record-details/b5364041-57a3-11e6-b4c5-0050568939ad), accessed on 2<sup>nd</sup> August 2019.

*The Map of the Malay Peninsula* published in 1862 provided a general information on the Malay States and individual state's relationship with the British, such as including dates of annexations of each territory as Straits Settlements<sup>15</sup>. The sovereignty of Siam over Kedah (spelled Queda), Patani, Terengganu (Tringanu), Perak and Kelantan were acknowledged. Across the middle of the peninsula, the mountain range of Titiwangsa was a discontinuous line which implies that the interior of the peninsula was mainly unexplored at the time. The map clarifies British position in Malaya. The delineation between areas under British influence and those that weren't highlights the emergence of colonization. Yet, what does this map tells us of what constitutes the 'Malay States'? This geographical and political inquiry brings about a reflection on British knowledge of the race and peoples of Malaya and their

relationships with their neighbors.

On the north, the boundary of Malaya was separated by recognition of Siamese domain. The northernmost Malay states that was still under Siamese protection, yet Patani and Kedah was included in the map. What was the distinguishing criterion which separates these two Malay states from the rest of Siam in this map? British vision of Malaya is a critical factor for this delineation. Prior to the eighteenth century, when the British began their formal occupation of Malaya through the annexation of Penang, which was formerly part of Kedah, various information of the peninsula was acquired from Greek, French, Spanish and Portuguese sources. Paul Wheatley's extensive study on the origin of knowledge on Malaya discussed how the peninsula was known to the west.<sup>16</sup> Reference to Heraclitus, Martianus and Ptolemy by nineteenth century British and Dutch scholars formed fundamental ideas of boundaries and territories in the region. Early cartography by the Greeks disappeared from western literature during the Dark Ages and resurfaced in the sixteenth century when the Portuguese produced a map which reconciled Greek maps with their up-to-date information of the peninsula.

There are several hypotheses which may collaboratively contributed to the division of the map on the north. One hypothesis by Wheatley was in the name 'Khersonese' or 'Chersonese', a term derived from a Greek word which means 'peninsula'.<sup>17</sup> This feature stood out in Ptolemaic maps from second century CE, as did many other well-known places such as the Bay of Bengal and the Indo-Chinese river network. Yet, Khersonese, according to Wheatley, was inclusive of southern Siamese territories. The jutting peninsula today is construed from modern boundaries which may infer other factors were at play, such as the political hold Siam had over the Malay states up until the Anglo-Siamese Treaty of 1909.<sup>18</sup>

Malay states were a cluster of polities. Siam had from time to time, held varying degree of power over these states. The British had to negotiate with the Siamese kingdom from the eighteenth century in order to stabilize their hold over territories in the Malay Peninsula. The East India Company (EIC) wanted to ensure that their settlement in Penang and Singapore as re-occupation by Siam was plausible given the unstable circumstances and the disunity between Malay states. Siam was defeated by the Burmese in 1782, but from the ashes of defeat Bangkok rose into a formidable enemy. By the nineteenth century, the administration of the Straits Settlements changed hands from the EIC to the Colonial Office in India. British policy was initially promulgated on vested colonial interests and had taken little interest the concerns of the Malay sultans. Simply put, Siam was viewed as an ally, and not a threat. As long as the British can negotiate terms to ensure that their interests do not overlap, Siam was not provoked. The idea was to protect the Straits Settlement, not the entire peninsula. This changed in 1850's when the British adopted a different approach whereby Siam was viewed as a threat. The signing of the Anglo-Siamese Treaty wrapped up centuries of conflicts and uncertainties Malay sultans had over their position vis-à-vis Siamese diplomacy. More importantly, it finalized the Siam-Malaya boundary as states of Kedah, Perlis, Kelantan and Terengganu were permanently given British protection.<sup>19</sup>

It can be surmised that archaic maps of the Golden Khersonese enlightened Europeans on the existence of the peninsula, but an understanding of what actually constitute Malaya was created through almost two decades of diplomacy with Siam. What these two factors lack, however, is how such lines were drawn on the map of 1862, which brings forth the final hypothesis in this paper on the creation of boundaries on the northern Malay Peninsula—the congruity of Malay culture across the peninsula and the archipelago. Geographically, the Malay Archipelago is defined by Alfred Russel Wallace to go as far north as Tenasserim (*Banjaran Tanah Seri*). The northwestern point of this mountain range extends to the border between Siam and

Burma.<sup>20</sup> However, the consistency of the Malay culture was what Anthony Milner alludes as to the core of the Malay world. British, Dutch and other European travelers noticed similarities of dress, legal code, religion, and village-life across the regions known as the Malay Peninsula.<sup>21</sup> This explains the earlier mentioned vision of the Malay world concocted by the British through literature and encounters, and this is evident in the map of 1862. The illustration of individual Malay states was crystallized by the use of color. The vision was that the Malay states were governed each by a different sultan and despite overlaps of culture and religion, it was not a coherent unit. Therefore, the northern boundary in map 1862 was perhaps drawn based on converging arguments of British vision and knowledge of Malaya, and of the subsequent diplomatic relation with Siam.

Drawing boundary between Malaya and Siam was equal to drawing the boundaries of 'Malay-ness'. This boundary may be logical through the observations made by officials, but it was augmented and rationalized through series of ethnological studies done in the peninsula. R. O. Winstedt acknowledged that language, physiology and culture were key in identifying the Malays who originally came from Mon-Khmer in 1500 BC. K. G. Tregonning further elaborated that the assimilation of 'aboriginal' Malays of the peninsula along with the Orang Asli, with the Malays from the north make-up the population in Malaya at the time.<sup>22</sup> Sandra Khor Manickam argues that the categorization undertaken by anthropology during the nineteenth century has established Malay-ness as being exclusive to the archipelago, and the peninsula was a threshold for Malay culture between the cluster of islands in the south and the Indochinese culture in the north.<sup>23</sup> It can be surmised that the northern boundary in the map was accepted as part of the observations made by officials and scholars, and perpetuated due to the consistency of cultural attributes displayed by the inhabitants of the peninsula.

The southern boundary is easier to discern, but it dismisses previous argument on cultural similarities. This is because the southern western boundary was built on a different set of diplomatic relations, one that concerns one colonial power with another. The peninsula and the rest of the western islands of the Malay Archipelago was conceived through the Anglo-Dutch Treaty of 1824, dividing the Riau-Johor kingdom into two, whereby the Dutch acquired the south-western islands while the peninsula was handed over to the British. Barbara Watson Andaya and Leonard Andaya argue that this division affected scholarship of the region as British orientalist collected texts that were exclusive to the peninsula and leaving studies on Sumatra to the Dutch.<sup>24</sup> Academic pursuit re-aligned the definition of boundaries of the 'Malay world', but as British rule evolved over the nineteenth century, mapping was more concern with drawing boundaries of Malaya—signifying a new political entity with a broader demographic focus.

The inter-state boundaries were used to racialize the population within the peninsula. Anthropological studies corroborated with theories of migration and data obtained from travelers into the Malay interior seem to highlight that racial differences were scientific, and that settlements further provided evidence of their disparities. Publication of the SBRAS in the 1870's and 1880's on journeys into Malaysian hinterland acknowledged state boundaries and racial differences, thus drawing geographical-racial parallels. The map of 1862 was one early example of how the scarcity of information at the time attested to the remoteness and backwardness of certain racial groups. In states like Kedah, Perak, Pahang, Kelantan, Terengganu the population of aboriginal groups such as the Semang and Sakai were reportedly higher.<sup>25</sup> Coincidentally, as indicated in the map of 1862, these states scarcely had any of their villages or settlements in the interior recorded. Yet, the population of the states of Kelantan and Terengganu between the 1870s to the 1900s varied from 30 thousand

to 60 thousand people total. A majority of those who were enumerated were the Malays in villages. Many of the aborigines were recorded to be nomadic, hence difficult to enumerate.<sup>26</sup>

By the 1880's, British influence grew in Malaya. Consequently, so did the explorations into the interiors. The increasing British presence also made it accessible for women traveler. One of the most notable female figures that had ever made observations on Malaya during the era was Isabella Bird. In 1879, Bird spent five weeks exploring the peninsula. Bird's observation often contextualized a racial group to the economy and the locality. It can be seen from the passage below:

*Crime of any kind in the Malay districts is very rare. The "village system" works well, and the courts of law conduct their business with an efficiency and economy which compare favorably with the transactions of our colonial courts... Various difficulties remain to be settled; the large Chinese element, with its criminal tendencies, requires great firmness of dealing...*<sup>27</sup>

Bird's commentary, which carried a paternalistic and authoritative tone throughout, was largely political. It decisively designated characteristics to racial groups, and in the passage above, assigned a deterministic description on the type and feature of settlement for each race. The Malay lived peacefully and were happy with the village life, while the Chinese engaged in criminal activities. Two pages earlier, Bird also mentioned Taipeng (Taiping) being a Chinese mining town, and railroads and roads were being built to allow easier access from Taipeng to Kuala Kangsar and Larut.<sup>28</sup>

The localization of the aborigines, the Malays and the Chinese are not stated in the map. There are no ethnological details to demarcate racial groups accordingly in map of 1862, or any other map of Malaya during the nineteenth century. However, textual evidences can be used to infer that knowledge production and scientific pursuits were aligned to the data on the map. The map of 1862 was not only produced through a perception formed from available data, but it suggests that future maps were built up from it. More importantly, it highlights how the British took note of areas with economic potentials in a way that was parallel with how they assigned economic activities to each racial group. The outcome was a map which may be re-interpreted as informing succeeding officials of the places that were economically significant, and who populated them at the time.

The map of 1862 is consequential to colonial history in how it presents an early colonial vision of Malaya through British lens. Its political potential is highlighted in relation to the British. The next few decades witnessed an escalation of British intervention in Malayan politics, and maps had to be reconsidered in order to incorporate newly discovered frontiers and new relations. Implicitly, this also entailed viewing maps as corresponding to racialization and the idiosyncrasies of British scientific practice.

### **Presenting a Vision of Colonial Domain: Map of 1920 and 1924**

The maps of 1920 and 1924 were part of a series of maps produced by Federated Malay States Surveyor from 1916 to 1924. At the time, the colonial office had obtained massive data of the peninsula through surveys. The names of places (states, rivers, mountains) were revised and more towns and villages were included in the maps. Another feature of these two maps which makes it distinct from the map of 1862 is the inclusion of Klang Valley, evidently a development from the large-scale mining from the nineteenth century.



*Map 2: Map of British Malaya 1920.*



Source gallica.bnf.fr / Bibliothèque nationale de France

Source: Federated Malay States Surveyor Department, “Map of British Malaya, including the Straits Settlement, Federated Malay states and Malay states not included in the Federation 1920”, Kuala Lumpur, 1920.

URL: <https://gallica.bnf.fr/ark:/12148/btv1b530645902>, accessed 19<sup>th</sup> September 2019.

Map 3: Map of British Malaya 1924.



Source: Federated Malay States Surveyor Department, “Map of British Malaya, including the Straits Settlement, Federated Malay states and Malay states not included in the Federation 1924”, Kuala Lumpur, 1924.

URL:

[https://raremaps.com/gallery/detail/43586/Map\\_of\\_British\\_Malaya\\_Including\\_The\\_Straits\\_Settlements\\_Federated\\_Malay/Federated%20Malay%20States%20Surveyor%20General.html](https://raremaps.com/gallery/detail/43586/Map_of_British_Malaya_Including_The_Straits_Settlements_Federated_Malay/Federated%20Malay%20States%20Surveyor%20General.html), accessed 19<sup>th</sup> September 2019.

Cartography during the early twentieth century consisted revisions as well as additions of existing data from previous century.<sup>29</sup> The maps produced were now more concerned with creating a blueprint for the administration and not merely to expose potentials. There is a denser concentration of villages and towns across the peninsula, and it extends beyond the Straits Settlement. This suggests the expanse of British influence and the mushrooming of new and developing towns that were lucrative to the British. Cartography was being pushed forward as a means to present a permanent

picture of British possession in Malaya. At this stage, boundaries were uncontested, but the scientific premise from which mapping was constructed in during the last century began to significantly serve the legal and economic functions of the empire. The Trigonometrical Department that administered the previous surveys was gradually incorporated into the Land Office, and finally the Survey Department was formed to serve land administration and cartography.<sup>30</sup>

The maps of 1920 and 1924 shows stability of international boundaries (with the Dutch Indies and Thailand) and internal boundaries (between states). The resident system had somewhat ripened, and British administration embraced the sultanate system efficiently in order to ensure Malay support for the regime, and at the same time systematically monitor and report revenue of every state.<sup>31</sup> British interest influenced the number of settlements recorded on these two maps. Overland surveys commissioned by the colonial authority only began in the 1910s and 1920s, and this encouraged exploration into states that were not under direct control of the British, such as Kedah, Perlis, Kelantan, Terengganu and Johor. However, the maps clearly show that these states had the least number of settlements recorded. The density of names on the maps are mainly on the Straits Settlement. There exist two possible, complementing explanations: first, economic activities drew more people to settle thus establishing more towns and villages in the British controlled states such as Penang, Perak and Selangor; second, explorations into Unfederated Malay States were scarce, leaving perhaps a large portion of the areas unchartered by economic activities and even unknown to British officials.

An expedition into Pahang by J.E. Nathan in 1915 insinuates the difficulty of engaging in a large-scale mining in the state due to ‘transportation setbacks’. The impenetrable jungle and formidable mountains that forms the bulk of the state of Pahang meant that ventures had to be re-calculated.<sup>32</sup> Another exploration was recorded by botanist, John Waterstadt on his trip from Kelantan to Gunung Tahan in 1901. The trip was scheduled to take three months but due to the complexity of the river networks and the inaccessibility of the jungle, it took Waterstadt six months to complete the mission.<sup>33</sup> While these areas were underdeveloped, the towns in Perak, Penang, Selangor, Melaka and Singapore were developing rapidly. Vlieland reported that in 1931, urban population in Singapore and Kuala Lumpur was mainly Chinese, with eleven percent Malays.<sup>34</sup>

The period between 1920 and 1924 bore the burden of sudden shortage of rubber supply. Malaya, being one of the largest exporters of rubber worldwide suffered a setback as the industry momentarily collapsed. This affected the tide of migration. Since the 1800’s, migration into Malaya from India, China and neighboring islands in the archipelago escalated due to opening of mines, rubber estates and business opportunities.<sup>35</sup> As had been pointed out earlier, the concentration of the population, and inadvertently, migration, was focused on areas of considerable wealth and economic potentials. The migratory waves affected localization and consequently racialization. Since the nineteenth century, the concentration of immigrant settlement was on the west coast of the peninsula. Vlieland summarized the settlement on the east coast consisted mainly of Malays, and that the central range of Titiwangsa acted as a barrier to west-east migration.<sup>36</sup>

Boundaries on maps seem to be unaffected by these changes, and it can be disputed how influential migration had on establishing international and inter-state borders. However, the density of population across Malaya allows for a different argument—that British influence and explorations did affect how maps were illustrated.

## Conclusion

The creation of boundaries based on diplomatic design and archaic data tells of a pre-conceived notion of Malaya which boundaries were guarded and fought for based on an understanding of where cultural similarities circulated and ends. This brings forth a question of identity, of the racial constitution of a place and how physical lines on an image can suggest there were deterministic and innate characteristics of its peoples.

Maps are not only source of geographical understanding. In this paper, I have used maps to argue on racializing policies of the British administration. The scientific approach associated with cartography cemented the notion that maps are objective and neutral artefacts, but as I have argued, it also exposes conflicted ideas of place and people. Today, we accept and disseminate the map of Malaysia without question, and this brings about a silent but potent approval to the legitimacy of colonial constructed boundaries and their claims to the pursuit of science.

Malaysian boundaries were shaped in relative to regional developments as much as it relied on the internal politics which formed state boundaries. The formidability of Thailand as a kingdom and the advent of colonial forces in the Malay Archipelago were primary agents of boundary formation that worked externally. Therefore, it is crucial to not limit the study of mapping and its history to one country but to treat it as a critical piece in a larger puzzle of colonial exploits and local politics in Southeast Asia, or even Asia as a whole.<sup>37</sup>

Finally, it is vital that historians are careful and aware of the evolving nature and definition of objectivity, empiricism and scientific methods. This is especially true as demonstrated in this paper on the potential subjectivity of scientific findings in the context of colonial endeavor.<sup>38</sup> Map is a useful tool of analyses to investigate in depth the changing nature of colonial science over a certain period. The study of maps as a historical narrative may further opens discussion on the nature of colonial science, inter-colonial trade and political networks and the extend of colonial knowledge on colonized territories.

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### Note

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<sup>2</sup> David Wade Chambers and Richard Gillespie, "Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge," *Osiris*, vol. 15, Nature and Empire: Science and the Colonial Enterprise, 2000, pp. 223-4.

<sup>3</sup> John K. Wright, "Map Makers are Human: Comments on the Subjective in Maps" in Martin Dodge, Rob Kitchin and Chris Perkins (eds.), *The Map Reader: Theories of Mapping Practice and Cartographic Representation*, Wiley Online Library, 2011, p. 304.

<sup>4</sup> Daniel P.S. Goh, "The Ideological Fantasy of British Malaya: A Postcolonial Reading of Swettenham, Clifford and Burgess," *Social Studies in Asia*, no. 19, 2008, pp. 190-110.

<sup>5</sup> Mohd Firdaus Abdullah, Arba'iyah Mohd Noor, "The 20th Century Domestic Water Supply In Alor Setar, Kedah", *Jebat: Malaysian Journal of History, Politics & Strategic Studies*, Vol. 46 (2), 2019, p. 240-271.

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