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Director's Note

The proliferation of fake news isn't a recent phenomenon. Fictitious accounts of how Agnes Joaquim stumbled upon her namesake orchid in her garden began circulating several decades after she was credited for creating the hybrid by crossing two orchid species. Writers Nadia Wright, Linda Locke and Harold Johnson separate fact from fiction in their search for the truth.

Similarly, not enough people know that Singapore was a base for nefarious experiments in biological warfare during the Japanese Occupation. Between 1942 and 1945, a laboratory was set up to breed bubonic plague-infected fleas and other deadly pathogens for use as biological weapons. Cheong Suk-Wai finds out more from Singaporean war history researcher Lim Shao Bin.

Covert operations is also the subject of Ronnie Tan's essay, as he recounts the fascinating story of Lee Meng, a Malayan Communist Party agent who headed its network of secret couriers during the Emergency and the elaborate efforts hatched to trap her. Against this same backdrop of anti-British sentiment, Meira Chand pays tribute to the Rani of Jhansi Regiment. These intrepid women soldiers were recruited by Indian freedom fighter Subhas Chandra Bose during the Japanese Occupation in Singapore to fight for independence in the motherland.

Singapore's quest for water began when Stamford Raffles ordered his troops to dig a well when he landed in Singapore on 29 January 1819. Just a day earlier, his fleet of ships had docked at St John's Island. Lim Tin Seng tells us how far the nation has come in its quest for water, while Marcus Ng documents the history of St John's Island – a corruption of its early Malay name, Pulau Sekijang, or 'barking deer island'. At various times St John's has been used as a quarantine, opium treatment and detention centre, and, today, as a recreational spot.

Chinese Renaissance architecture originated in China in the 1900s and later sank its roots in Taiwan, Hong Kong and Singapore. Julian Davison charts the history of this architectural style and provides shining examples of Chinese Renaissance buildings in Singapore. Still on the subject of Chinese heritage, Chua Chee Lay provides valuable lessons gleaned from the teaching of Classical and Modern Chinese in China and Taiwan.

The Lee Brothers Studio Collection of some 2,500 images forms the largest single collection of photographic portraits in the National Archives of Singapore. Gretchen Liu recalls the glory days of Lee Brothers Studio, a prominent landmark on Hill Street before World War II.

One of the statutory functions of the National Library is Legal Deposit, which mandates that two copies of every work published in Singapore must be deposited with the library. Barbara Quek showcases a selection of first issues of magazines and journals from the Legal Deposit Collection – many of which have ceased publication.

Finally, Lu Wenshi interviews Eric Khoo and finds out what inspired his latest film, *Ramen Teh* – scenes of which were shot at the Former Ford Factory in Bukit Timah.

We hope you enjoy reading this edition of *BiblioAsia*.

Mrs Wai Yin Pryke
Director
National Library

Editorial & Production

Managing Editor
Francis Dorai

Editor
Veronica Chee

Editorial Support
Masamah Ahmad
Jocelyn Lau

Design and Print
Oxygen Studio Designs
Pte Ltd

Contributors
Barbara Quek
Cheong Suk-Wai
Chua Chee Lay
Gretchen Liu
Harold Johnson
Julian Davison
Lim Tin Seng
Linda Locke
Lu Wenshi
Marcus Ng
Meira Chand
Nadia Wright
Ronnie Tan

Please direct all correspondence to:
National Library Board
100 Victoria Street #14-01
National Library Building
Singapore 188064
Email: ref@nlb.gov.sg
Website: www.nlb.gov.sg

On the cover:
Portrait of Agnes Joaquim and a colourised rendition of the original drawing of the *Vanda* Miss Joaquim as featured in the 26 June 1897 issue of *The Gardeners' Chronicle*.

Errata:
In the article, "Living it up at the Capitol", published in *BiblioAsia*, Vol. 13, Iss. 4, we incorrectly stated that the construction cost of Capitol Theatre and Namazie Mansions was 1,250 Straits dollars when it should have been 1.25 million Straits dollars. The online edition has been revised. We apologise for the error.

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Blooming Lies

THE VANDA MISS JOAQUIM STORY

Is the Vanda Miss Joaquim a human-made hybrid or a happy accident? In this cautionary tale, **Nadia Wright**, **Linda Locke** and **Harold Johnson** recount how fiction becomes truth when it is repeated often enough.

Nadia Wright, a historian, **Linda Locke**, a great grand-niece of Agnes Joaquim, and **Harold Johnson**, an orchid enthusiast, collaborated in this historiography of Singapore's national flower, the *Vanda* Miss Joaquim. Locke is a former advertising CEO and the co-author of the recently released children's book: *Agnes and her Amazing Orchid*. Johnson and Wright's second edition of *Vanda Miss Joaquim: Singapore's National Flower & the Legacy of Agnes & Ridley* will be published in late 2018. Locke and Johnson are Singaporeans, while Wright is an Australian.

Joaquim.² Intrigued as to why Ridley's account had been replaced by a tale of chance discovery in various stories about the flower in Singapore, Wright decided to investigate.

The Birth of a Bloom

In 1893, Agnes Joaquim, or possibly her brother Joe (Joaquim P. Joaquim), showed Henry Ridley a new orchid. After carefully examining the bloom, having it sketched, and preserving a specimen in the herbarium of the Botanic Gardens, Ridley sent an account of the orchid's origin and appearance to *The Gardeners' Chronicle*, a respected English horticulture periodical founded in 1841. He wrote:

"A few years ago Miss Joaquim, a lady residing in Singapore, well-known for her success as a horticulturist, succeeded in crossing *Vanda Hookeriana*, Rchb. f., and *V. teres*, two plants cultivated in almost every garden in Singapore. Unfortunately, no record was kept as to which was used as the male. The result has now appeared in the form of a very beautiful plant, quite intermediate between the two species and as I cannot find any record of this cross having been made before, I describe it herewith."³

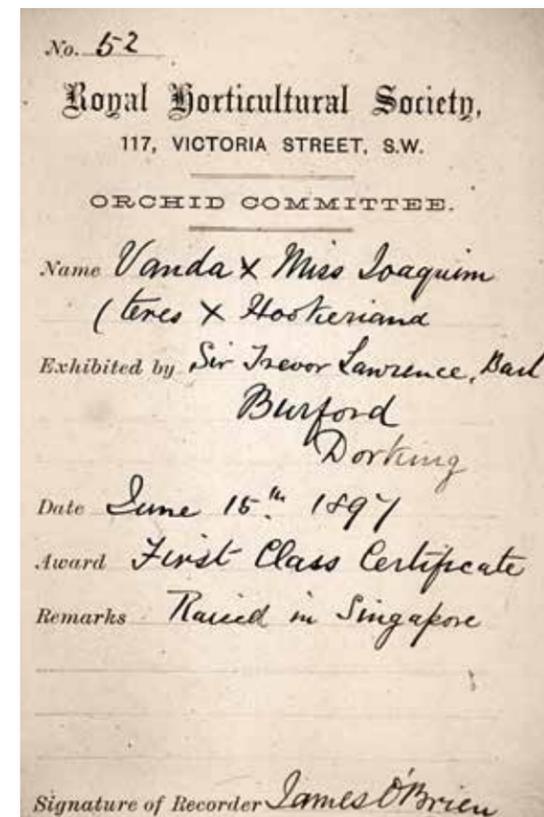
W While doing research on the Armenian community in Singapore back in the 1990s, Australian historian Nadia Wright read an account of how the daughter of a prominent Armenian family in Singapore, Agnes Joaquim (Ashken Hovagimian), had stumbled upon a never-before-seen orchid bloom by accident in the family garden.

In the authoritative *The Gardeners' Chronicle*, published on 24 June 1893, however, Henry Nicholas Ridley, the first Director of the Singapore Botanic Gardens (1888–1911) stated unequivocally that Agnes Joaquim had crossed two different orchids, the *Vanda Hookeriana* with the *Vanda teres* and produced the orchid which he later named *Vanda Miss*

(Facing page) *Vanda* x *Miss Joaquim*. Image source: Linden, J., & Linden, L. (1897). *Lindenia Iconographie des Orchidées* (Series 2, vol. 13).

(Right) The First Class Certificate awarded to Sir Trevor Lawrence, President of the Royal Horticultural Society, at the 1897 Royal Horticultural Flower Show for his *Vanda* Miss Joaquim hybrid. Image source: RHS Lindley Collections, The Royal Horticultural Society.

(Far right) A detail from the *Vanda* Miss Joaquim specimen sheet of the first spike of flowers received in April 1893 by the Singapore Botanic Gardens. The flower was the same one described by Henry Ridley in *The Gardeners' Chronicle* in June 1893. The label beneath the specimen is Ridley's handwriting. Courtesy of the Singapore Botanic Gardens Herbarium.



In an 1894 paper delivered to the prestigious Linnean Society in England, Ridley reiterated that *Vanda Hookeriana* had been "successfully crossed" with *V. teres*, Lindl., "producing a remarkably handsome offspring, *V. x Miss Joaquim*." This paper was published unaltered in 1896.⁴ Ridley, who lived to be 100 years old, never wavered in his statement. When Isaac Henry Burkill (Ridley's successor at the Botanic Gardens) checked all of Ridley's herbarium specimens and redid the labels, he saw no reason to dispute Ridley and recorded Joaquim as the creator.

Ridley sent cuttings of *Vanda* Miss Joaquim to Sir Trevor Lawrence, President of the Royal Horticultural Society and one of the world's leading orchidists, where it was nurtured in his orchid house at Burford Lodge, in Dorking, England. Flowering for the first time in Europe in 1897, *Vanda* Miss Joaquim was displayed at the Royal Horticultural Show in London, winning a First Class Certificate. In describing the event, *The Gardeners' Chronicle* noted that "the plant was obtained from a cross between *V. teres* and *V. Hookeriana* some years ago by Miss Joaquim at Singapore".⁵

In Singapore, Joaquim's orchid debuted at the 1899 Flower Show. *The Straits Times* commented that "one of the most noticeable flowers was the

orchid *Vanda* Miss Joaquim, named after Miss Joaquim and raised by that lady".⁶ The *Singapore Free Press* confirmed Joaquim's achievement, reporting that "Miss Joaquim showed a hybrid which has been named after her, that she has, after repeated trials, succeeded in cultivating".⁷

From 1893 until 1981, the orchid was accepted, with few exceptions, as a hybrid bred by Joaquim. Robert Rolfe, editor of *The Orchid Review* and an authority on orchid hybrids, placed *Vanda* Miss Joaquim among the 106 cultivated hybrids created in 1893. Subsequent issues of *The Orchid Review*, *The Gardeners' Chronicle* and other leading contemporary horticultural journals reiterated the fact that Joaquim had crossed the parent orchids, as did all the editions of the authoritative *Sander's Complete List of Orchid Hybrids*.

Sowing the First Seeds of Doubt

In 1931, *The Straits Times* announced that a new hybrid orchid – the *Spathoglottis Primrose* – had been produced in Singapore. It was the first orchid raised using the new technique of germinating seeds in a sterile culture. This orchid was described as the second hybrid to be produced in Malaya or, as the newspaper playfully added in parentheses, "the first if *Vanda* Miss Joaquim came into being as the result of a happy accident".⁸ No reason was offered for this speculation and the mischievous aside was not taken up.

Richard Eric Holttum, who was Director of the Botanic Gardens between 1925 and 1942 and again from 1946 to 1949, accepted Ridley's description, as did his later successors Murray Ross Henderson (1949–54) and John William Purseglove (1954–57). In Hawaii, Harold Lyon (the

first Director of Honolulu's Foster Botanical Garden), who was involved with the propagation of *Vanda* Miss Joaquim there, believed Ridley.

Agnes Joaquim's nephew Basil J.P. Joaquim, a prominent lawyer in Kuala Lumpur, corroborated Ridley's view and was cited in *The Straits Times* in 1951 as saying "this hybrid was not discovered in the garden... [but was the result of [an] artificial pollination... performed by my unmarried aunt, Miss Agnes Joaquim".⁹ Articles published in local newspapers also regarded the orchid as an artificial hybrid created by Joaquim.

However, at the 1963 World Orchid Conference held in Singapore, Humphrey Morrison Burkill, who was appointed Director of the Singapore Botanic Gardens in 1957, sowed the seeds of dispute, alleging that artificial orchid hybrids were not produced in Singapore until 1928. He added that among the plants used in creating hybrids was the "natural hybrid *Vanda* Miss Joaquim" which he described as a "delightful accident of nature".¹⁰

Burkill's claims not only contradicted those of his father Isaac Burkill (Director of Botanic Gardens, 1912–25) and other

former directors, but also cast doubt on Ridley's character. Ridley had not only officially reported the genesis of the *Vanda* Miss Joaquim in 1893 but also successfully created orchid hybrids himself, in 1896 and 1902. Yet, the younger Burkill gave no supporting evidence for his puzzling assertion.

References to *Vanda* Miss Joaquim's origin decreased in the late 1960s and during the 1970s, reflecting declining interest in the orchid. While some in Singapore referred to it as an artificial hybrid, others began to repeat Humphrey Burkill's allegation that it was a natural hybrid. Like him, none gave any reason for doubting Ridley's official account.

The Discovery Myth

On 15 April 1981, *Vanda* Miss Joaquim was declared Singapore's national flower. While fame was assured for the orchid, Agnes Joaquim's true role was tossed aside when newspaper reports of the day described the flower as a natural hybrid which she had chanced upon in her garden. When a nephew of Agnes Joaquim, Basil E. Johannes, was invited to Singapore for the launch of the National



Flower Week in July 1981, he further contributed to the confusion by claiming that Agnes Joaquim had discovered the flower – not only contradicting what his cousin Basil J.P. Joaquim said in 1951, but also Ridley.

Arriving at Changi Airport on 21 July from Perth, Australia, where he had been living for over two decades, the 88-year-old Johannes declared to the reporter who interviewed him that "Aunt Agnes found the flower one morning [in 1893] when she was loitering in the garden. She was so excited that she took it to the director of the Botanic Gardens straightaway".¹¹ Local newspapers ran with Johannes's story, alleging that *Vanda* Miss Joaquim was a natural hybrid and making no mention of Ridley's original account.

In his book on the *Vanda* Miss Joaquim published in 1982, Teoh Eng Soon further enshrined Johannes's story in print, embellishing it with more detail: "One morning while Agnes was loitering alone in the garden she came upon a new orchid flower nestled in a clump of bamboo... Agnes could not contain her excitement. Straightaway she took it to the Director of the Singapore Botanic Gardens."¹²

Arshak Galstaun, President of St Gregory's Board of Trustees, which looked after the affairs of the Armenian Church in Singapore, and an old friend of Johannes's was dismayed by this turn of events. In fact, he said so at Teoh's book launch and wrote to the media refuting it.

Galstaun regarded Ridley's statement in 1893 that "no record was kept as to which of the plants was used as the male" as evidence that Joaquim had been experimenting with orchid hybrids for some time. He was certain that Ridley would not have made that comment if the hybrid had been created naturally.¹³

Believing Johannes's recollections to be based on hearsay and pure conjecture, Galstaun reasoned that the "positive written record of a scientist of Mr Ridley's

stature" should hold sway over the reminiscences of an elderly person. But his views published in the *Malayan Orchid Review* in 1982¹⁴ were brushed aside, and again it was claimed that the orchid was a natural hybrid.¹⁵

There was no further opposition to this fictitious story: an example of when something is repeated often enough, it sometimes becomes accepted truth. Subsequent newspaper mentions of the orchid said it was a natural hybrid. Even when the centenary of the orchid took place in 1993, there was no reference to Ridley's account.

A diorama at the Singapore History Museum and a brochure on the National Orchid Garden stated that the orchid was discovered by Miss Agnes Joaquim, as did a display board at the Singapore Botanic Gardens as recently as 2016. All of that reinforced the view that Singapore's national flower had popped up serendipitously in Joaquim's garden one day.

Debunking the Myth

In 2000, Nadia Wright wrote an article in the *Malayan Orchid Review*, maintaining that Agnes Joaquim had crossed the orchid as Ridley had recorded. Explaining why the discovery story was false, she declared it was time to set the record straight.¹⁶ Although Wright based her reassessment on publicly available historical evidence, her article was criticised by those who believed that the orchid was a natural hybrid discovered by chance.

Aiming to discredit Wright's research, the detractors echoed Teoh Eng Soon's spurious claim that "nearly every orchidist since [1893] believed that [Joaquim] had discovered a natural hybrid".¹⁷

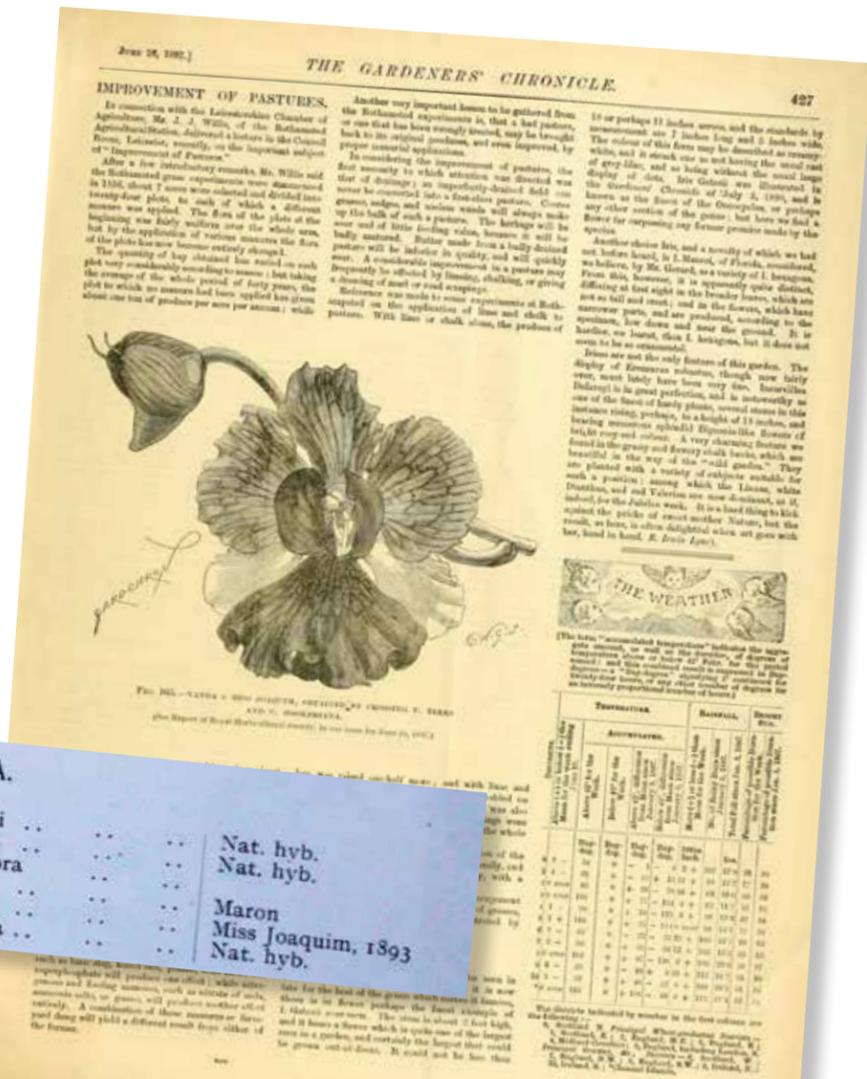
The debate continued until 2007. In her book on Singapore's Armenians published in 2003, Wright reiterated her stand, adding that Joaquim was the first woman in the world to breed an orchid.¹⁸

(Left) Henry Ridley, first Director of the Singapore Botanic Gardens (1888–1911), was described as "a genius", "a keen observer and a great naturalist", and "a botanist of exceptional capability". His article published in *The Gardeners' Chronicle* on 24 June 1893 unequivocally states that Agnes Joaquim had bred the *Vanda* Miss Joaquim. Image source: *Makepeace, W., Brooke, G., & Braddell, R. S. J. (Eds.). (1921). One Hundred Years of Singapore* (p. 78). London: J. Murray. [Call no.: RCL05 959.91 MAK]

(Middle) Richard Eric Holttum, Director of the Singapore Botanic Gardens (1925–1942 and 1946–1949), was an orchid hybridiser himself and he regarded the *Vanda* Miss Joaquim as Singapore's first artificial hybrid orchid. Courtesy of Singapore Botanic Gardens.

(Above) Humphrey Morrison Burkill, Director of the Singapore Botanic Gardens (1912–25), alleged that artificial orchid hybrids were not produced in Singapore until 1928. He said that among plants used in creating hybrids was the "natural hybrid *Vanda* Miss Joaquim" which he described as a "delightful accident of nature". Image source: *Sharp, I., & Lum, S. (Eds.). (1996). A View from the Summit: The Story of Bukit Timah Nature Reserve* (p. 29). Singapore: Nanyang Technological University and the National University of Singapore. [Call no.: RSING 333.78095957 VIE]

(Below) Issued on 10 March 1963, this stamp with a face value of 30 cents features the *Vanda* Miss Joaquim. It is one of the stamps in the *Fishes, Orchids & Birds Definitives series*. Image source: *Stamp Community Forum*.



(Right) This is the first published image of the *Vanda* Miss Joaquim. Image source: *The Gardeners' Chronicle*, 26 June 1897, p. 427, Biodiversity Heritage Library. Digitised by UMass Amherst Libraries.

(Bottom) An extract of the list of *Vanda* orchids showing natural and artificial ones published by Sander & Sons. All rights reserved, *Orchid Hybrids: Sander's Complete List, Containing the Names and Parentages of all the Known Hybrid Orchids Whether Introduced or Artificially Raised...* (p. 81). (1915). St Albans; Sander & Sons.

VANDA.	
amœna	.. cœrulea × Roxburghii
Charlesworthii	.. Bensoniæ × cœrulea
confusa	.. cœrulescens × parviflora
Marguerite Maron	.. suavis × teres
Miss Joaquim	.. Hookeriana × teres
Moorei	.. cœrulea × Kimballiana
	.. Nat. hyb.
	.. Nat. hyb.
	.. Maron
	.. Miss Joaquim, 1893
	.. Nat. hyb.

AGNES JOAQUIM

Agnes Joaquim's lineage can be traced to the diasporic Armenian community who sank roots in Singapore soon after the settlement's founding in 1819. Joaquim's grandparents were Isaiah Zechariah, one of the founders of Singapore's Armenian Apostolic Church of St Gregory the Illuminator – more simply known as the Armenian Church – and Ashkhen Arathoon, after whom Agnes Joaquim was named.

Her parents were Parsick Joaquim, an Armenian from Madras, and Urelia Zechariah, a Singapore-born Armenian. Parsick Joaquim arrived in Singapore around 1840 and worked as a merchant and trader. Together with Simon Stephens, he founded Stephens & Joaquim in 1849.

In 1852, Parsick Joaquim married Urelia Zechariah and lived on Hill Street near other Armenian families and the church. His business thrived, and in 1861, the family moved to a mansion overlooking Tanjong Pagar, which he named Mt Narcis, after his eldest son. When the mansion was demolished in 1901, the carriage-way leading to the house was named Narcis Road.

Parsick Joaquim died unexpectedly in 1872, leaving his wife to raise 11 children, the youngest of whom was three years old. Fortunately, he left the family well provided for.

Agnes Joaquim, born on 7 April 1854, did not marry and was no doubt an immense help to her widowed mother, although their workload eased when the four youngest sons were sent to boarding school in England. Joaquim led a busy social life, attending various balls and festivities. However, it appears she was a strict woman in her later years, shooing her young nieces and nephews out of sight whenever guests arrived at the house.

Joaquim was a skilled and artistic needlewoman. She embroidered a beautiful altar cloth for the Armenian Church, and at the 1891 Flower Show, she was complimented for her most



(Top) Photo of Agnes Joaquim on a locket that once belonged to her, with an inscription of her name on the reverse side. The locket is now in the possession of Linda Locke, her great grand-niece. Courtesy of Linda Locke.

(Right) Agnes Joaquim died of cancer on 2 July 1899 at the age of 45. Her tombstone is found within the grounds of the Armenian Church in Singapore. It was originally located at Bukit Timah Cemetery. Her tombstone bears the inscription "Let her own works praise her". Courtesy of Prem Singh.



attractive bouquet composed of orchids and delicate grasses.

However, it was in the garden that Joaquim excelled, putting her fingers and mind to work. She won an impressive number of prizes in the annual flower shows before finally making her mark in history with her hybrid, *Vanda Miss Joaquim*. Exhibited at the annual Flower Show in April 1899, the *Vanda Miss Joaquim* won First Prize for the rarest orchid, and more importantly, recognition for her years of work.

However, Joaquim was not destined to live long. She developed cancer and her condition took a turn for the worse when she contracted pneumonia. She died on 2 July 1899 at the relatively young age of 45.

Local newspapers reported Joaquim's death, describing her as the sister of "respected townsman" Joe Joaquim, her younger brother, and an eminent lawyer and Municipal Commissioner.

Joaquim was buried in Bukit Timah Cemetery, and when the grounds were acquired by the government, her tombstone was one of those rescued and moved to the Armenian Church grounds. Today, it rests in the Garden of Memories in the church grounds, with a pot of orchids – the *Vanda Miss Joaquim* naturally – on either side. The epitaph on the tombstone reads: "Let her own works praise her", a reminder of the enduring legacy Agnes Joaquim left behind.

have grown in the shade of a bamboo clump as alleged.²²

The book repeated Teoh's claim that Johannes was right, declaring that he was "the only living person to have met her [Agnes Joaquim]".²³ The authors, however, failed to mention that the 88-year-old Johannes was born in 1893, the year *Vanda Miss Joaquim* originated, or that Johannes had spent his infancy in Java, only coming to Singapore to live in 1901 when he was eight years old: two

years after Joaquim's death. Johannes would have met Joaquim only when the family was visiting Singapore and when he was very young (he was only six years old when she died). Members of the extended Joaquim family were stunned by Johannes's remarks to the press.

Whatever the case, these facts cast serious doubt on the credibility of Johannes's testimony, as does an oral history interview he gave to the National Archives in July 1981 which showed that his recollections were neither consistent nor accurate.

Basil Johannes's older brother John, who was born 10 years earlier in 1883, told a very different story. In the 1890s, John Johannes attended Raffles Institution and no doubt lived with his grandmother and Joaquim at the family home. He was 16 years old in 1899 and more likely than his younger brother to have had first-hand knowledge of the orchid. In later years when John Johannes walked past a flower shop displaying *Vanda Miss Joaquim* orchids, he would cross his two forefingers and proudly tell his daughter Hazel that her grand-aunt had bred the orchid.

Hazel Locke's (nee Johannes) account of her father's actions was scathingly dismissed by various people who insisted that Johannes's claim that the orchid grew in a clump of bamboo was "a report of an observation".²⁴ How the proponents of the discovery theory reached these conclusions is unknown.

It is likely that Basil Johannes was confusing Agnes Joaquim's "discovery"

with a much later event. One day in the 1930s while walking in Malaya, his cousin Basil Joaquim came across an unusual orchid, which he sent to the Director of the Botanic Gardens to see if it were a new orchid.

Discrediting Ridley

To push for acceptance of Basil Johannes's account, its supporters turned on Ridley. They suggested that Ridley's statement about Agnes Joaquim crossing the orchid was "allegorical rather than factual", or that it was based on an "assumption".²⁵

But Ridley was known to be a careful observer and recorder. Had Joaquim found the orchid, Ridley would have written it up accordingly as he had done with other natural hybrids. Besides, the wording of

WHAT IS HYBRIDISATION?

The hybridisation of a plant involves two steps. First, pollination takes place during which pollen is transferred from the male flower to the female flower to create a seed. Second, germination occurs in which the seed develops into a plant. Whether a hybrid is artificial or natural depends on how the pollination occurred. If the transfer of pollen is done by a person, the resulting hybrid is termed "artificial". If it is done by agents of pollination such as insects, birds or by the wind, it is termed "natural".

Ridley's article reinforces the fact that Joaquim had produced the orchid. Had she just stumbled upon it by chance, there would be no need for Ridley to mention the fact that she had failed to record the pollen parent. Ridley would gain nothing by concocting a false claim; indeed, his reputation as an orchid expert would have been at stake, not to mention his position as the first Director of the Botanic Gardens.

Critics tried to discredit Ridley by claiming that he did not know how to hybridise orchids. They questioned his specific expertise as his interests ranged "from agriculture to ghosts", implying that he had only a superficial knowledge about many subjects. They dismissed Ridley's expert account in *The Gardeners' Chronicle* because it was written after he had lived "in Singapore only 4–5 years and before acquiring the expertise he had in later years".²⁶

In truth, Ridley was an orchid expert when he arrived in Singapore in 1888. As a Fellow of the Linnean Society, his prolific output covered 10 papers on orchids. These included his detailed observations of orchid self-pollination and an influential paper on "The Nomenclature of Orchids" presented at the 1886 British orchid conference. Indeed, England's leading orchidists of the time, such as Frederick Burbidge and James Veitch, turned to Ridley with queries on orchid fertilisation. Yet his account was rejected in favour of that of Basil Johannes who admitted that he knew nothing about growing plants.

Ridley's account was further dismissed because Joaquim had not kept close records of her work. The aforementioned Robert Rolfe lamented that earlier hybridists too had not kept records as to which was the seed parent. However, their work has not been dismissed because of this supposed failing.

It has been claimed that because Ridley did not describe how the seeds were germinated in his report, Joaquim could not have made the cross. But then, such information was not included in other articles on hybrids in *The Gardeners' Chronicle*; they simply gave the names of the hybridiser, the parent orchids, and a detailed botanical description of the new flower. This was exactly what Ridley's article did.

Indeed, biologist Joseph Arditti, a strong supporter of the discovery myth, noted that William Herbert, a pioneer in hybridisation, had given "no details regarding his germination method".²⁷ Yet, inexplicably, Arditti accepted Herbert's hybrid as genuine, but not Joaquim's.

That book and Wright's subsequent article in 2004 came under fire, but no credible evidence to refute Ridley's findings was offered in return.¹⁹

Although Wright explained why the account of the orchid's origin written by a respected botanist and orchid expert, and accepted by other experts should be believed over confused and unsubstantiated speculations, her views were summarily dismissed by the authors of a book on *Vanda Miss Joaquim*.²⁰

The authors accepted Teoh's reconstructed account as factual, declaring that Teoh was right simply because he "described the event" in detail.²¹ Yet Teoh could not provide concrete proof of how he became privy to his information, including details such as Joaquim was "alone" when she found the orchid "nestled in a clump of bamboo". The *Vanda Miss Joaquim* needs "full sunlight and plenty of air movement" in order to thrive, and thus it was most unlikely to



Agnes Joaquim succeeded in crossing *Vanda Hookeriana* (left) with *Vanda teres* (right) to create the hybrid *Vanda Miss Joaquim*. Photos by David Lim. Courtesy of the National Parks Board.



(Above) *Vanda Miss Joaquim* orchids in bloom. Courtesy of Linda Locke.

(Middle) A close-up of a *Vanda Miss Joaquim*. Courtesy of National Parks Board.

(Right) A painting of the *Vanda Miss Joaquim* that won Sir Trevor Lawrence, President of the Royal Horticultural Society, the First Class Certificate at the 1897 Royal Horticultural Flower Show. Drawn by artist Nellie Roberts in 1897, it is simply titled "Miss Joaquim Agnes". FCC/RHS. Image source: RHS Lindley Collections, The Royal Horticultural Society.

The Plot Thickens

It has been suggested that Agnes Joaquim would not have known how to germinate seeds and that successful methods of germination had been developed only after her death. This is far from true. In fact, *Vanda Miss Joaquim* was one of 106 artificial hybrids created in Britain in 1893. Joaquim's achievement was not an anomaly – she was doing in Singapore what others were already doing in Britain and elsewhere.

Information on germination was readily available in books as well as in horticultural journals. Besides, it has been suggested that Joaquim had sown the seeds onto a base of coconut dust, from where they germinated.²⁸ Curiously, it was inferred that if the pollination was done by a bee, then the seeds could germinate, but if the pollination was done by Joaquim, the seeds could not have done so.

There was no end to the efforts to disparage Joaquim. Her critics pointed out that Joaquim did not breed any other orchids, apart from the one she had been falsely credited with. Claiming that hybridisers tended to make several crosses in their lifetimes, they concluded that she could not possibly have created the *Vanda Miss Joaquim*. But the fact is all hybridisers start with one cross. What further weakened the critics' spurious claims is that the very source they cited reported that half of all breeders in that study produced only one hybrid.²⁹

As they did with Ridley, Joaquim's detractors doctored quotations to belittle

her role. For example, they quoted *The Straits Times* of 12 April 1899 as reporting that Joaquim "succeed [sic] in cultivating" the *Vanda Miss Joaquim*, but downplayed the word "cultivating" in this context to mean merely "growing".³⁰

Elsewhere, they omitted Ridley's reference to Joaquim by claiming that he "only wrote that the cross was between *Vanda Hookeriana* Rchb. f. and *V. teres*" when in fact he had specifically reported that Joaquim had "succeeded in crossing" these two orchid species.³¹

They also misquoted Singaporean pioneer breeder John Laycock, who said the question as to how Agnes had succeeded in germinating the seed into a flowering plant "must now forever remain unanswered".³² Laycock's words were rewritten into something quite different from what he had intended – that the question of whether or not Joaquim bred the orchid "must now forever remain unanswered".³³

If the *Vanda Miss Joaquim* is a natural hybrid as alleged, then what was the agent of the pollination? Could it be carpenter bees, as it has been claimed before? But there is no evidence in history of these bees ever creating another *Vanda Miss Joaquim*. And there never have been any reports of naturally occurring *Vanda Miss Joaquim* orchids being found anywhere.³⁴

Besides, if bees had done the pollinating, Ridley would have said so. In his observations, Ridley carefully distinguished between an insect visiting a flower and pollination by a human. Noting that carpenter bees did the "greatest amount of

pollination in Singapore", he compiled a list of plants they pollinated.³⁵ He did not record carpenter bees as visiting or pollinating either *Vanda Hookeriana* or *Vanda teres*, although he noted that such bees did assist in the fertilisation of other orchids.³⁶

Arditti insisted that "all orchid scientists and knowledgeable orchid growers believe that *Vanda Miss Joaquim* is a natural hybrid".³⁷ But he did not substantiate this sweeping statement. Indeed, to the contrary, Harold Johnson's review of literature shows that until 1981, almost all publications accepted *Vanda Miss Joaquim* as an artificial hybrid and only a few after 1963 suggested differently.³⁸

It is worth remembering that Botanic Gardens director Richard Holttum, who closely reviewed his predecessor Isaac Burkill's work, regarded *Vanda Miss Joaquim* as an artificial hybrid. In 1928, Holttum quoted Ridley's original report, commenting on the skill and care with which Agnes Joaquim had raised the plant and describing it as "her orchid".³⁹ Again in 1972, he quoted Ridley's report as evidence of the orchid's origins.⁴⁰

Getting it Right – Finally

Ridley was widely respected for his role in establishing the Singapore Botanic Gardens as a reputable attraction and, in 1955, was described by historian Sir Richard Winstedt as "the man whose influence on Malayan history is second only to that of Raffles".⁴¹ Yet, after 1981, Ridley's pronouncement on the origins of the *Vanda Miss Joaquim* became sidelined. Although contemporary orchid experts accepted Ridley's statement that the orchid was deliberately created, the discovery story was perpetuated by a television drama, online articles, in books and even in scholarly journals.

In 2007, Arditti and Hew continued to claim that *Vanda Miss Joaquim* was a natural hybrid but yet again provided no evidence.⁴² In a final attempt to set the record straight, Harold Johnson and Nadia Wright collaborated on a book in 2008 that documented the orchid's true origins.⁴³ Although the book elevated public awareness of the subject, it was still not sufficient to convince officialdom to accept that Joaquim had hybridised the orchid.

In 2009, *The Straits Times* repeated that Agnes Joaquim had bred the orchid, but in news reports published in 2011, 2012 and 2015, it moved to a more neutral position without attributing credit to her. However, signs of change began to appear. For example, in 2011, a sample question from the Singapore citizenship quiz asked who had bred the orchid. The correct answer was Agnes Joaquim.

Finally, in 2015, after careful deliberation, Joaquim was inducted into the Singapore Women's Hall of Fame in

recognition of her hybridisation of the orchid. Hazel Locke (Basil Johannes's niece) accepted the award on Joaquim's behalf. The award was presented by Halimah Yacob, then Speaker of Parliament (and currently President of Singapore).

But the journey towards correcting history was not over yet. In 2016, matters came to a head after Hazel Locke's daughter, Linda Locke, came across a display board at the Singapore Botanic Gardens that failed to recognise Joaquim's role. The younger Locke embarked on further research to evaluate the conflicting arguments put forward by various people and was able to confirm that the evidence presented by Johnson and Wright was indisputable.

Locke persisted in her efforts to correct official records of Singapore history and managed to convince the National Heritage Board (NHB) to conduct its own review of all historical source materials. Only then did NHB, together with the National Parks Board, arrive at the conclusion that Agnes

Joaquim had indeed crossed the parent plants to create *Vanda Miss Joaquim*. NHB and the Singapore Botanic Gardens amended their official records in 2016.

This news was brought to the attention of other government agencies – the National Library Board, for instance, corrected its articles about the orchid on Singapore Infopedia, its online encyclopedia – and in September 2016, *The Straits Times* ran a full-page report accepting that Agnes Joaquim was responsible for creating the hybrid orchid.⁴⁴

Truth had finally triumphed, but its vindication was hard won, with a war of words and various parties taking different sides since the late 1950s. Much ado over a trivial matter, some may say. However, when the bloom in question is Singapore's national flower, it is important that its correct history is told. This is all the more timely as we commemorate the 125th anniversary of the *Vanda Miss Joaquim* in 2018. ♦

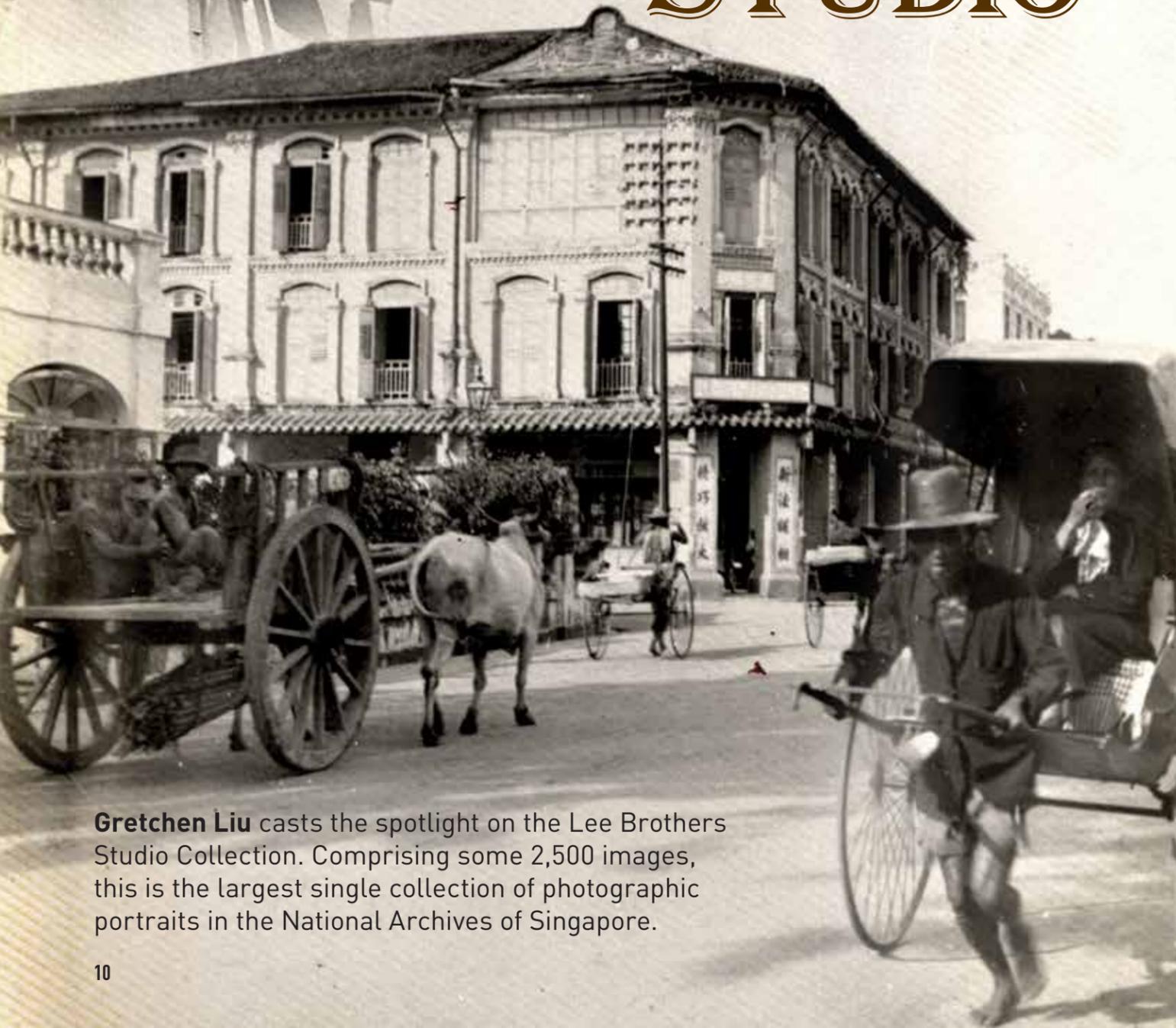
Notes

- Joaquim is pronounced joe/ah/kim/ with the accent on joe.
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- The article later described *Vanda Miss Joaquim* as an artificial hybrid. New orchids for Malaya (1931, August 4). *The Straits Times*, p. 12. Retrieved from NewspaperSG.
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PORTRAITS FROM THE LEE BROTHERS STUDIO



Gretchen Liu casts the spotlight on the Lee Brothers Studio Collection. Comprising some 2,500 images, this is the largest single collection of photographic portraits in the National Archives of Singapore.

Gretchen Liu is a former journalist and book editor as well as the author of several illustrated books, including *Pastel Portraits: Singapore's Architectural Heritage*, *Singapore: A Pictorial History 1819–2000* and the official book on the Raffles Hotel. Liu first knew of the Lee Brothers Collection in 1987 through her friendship with one of Lee Poh Yan's granddaughters.

h Between 1910 and 1940, Lee Brothers Photographers was a well-known landmark along Hill Street. In the years before amateur photography became widespread, hundreds of its clients – the prospering and aspiring, the famous and unknown, Chinese, Indian, Malay and European, resident and visitor – climbed the wooden steps to the top floor of a shophouse at No. 58-4 in search of that small bit of immortality: the studio portrait.

The brothers started their business in the three-storey shophouse located prominently at the corner of Hill Street and Loke Yew Street. The corner location was ideal because the additional windows provided the main source of illumination and kept exposure times to a minimum. Typical of Victorian photographers, the studio was equipped with decorative painted backdrops imported from Shanghai and Europe, and various props ranging from imitation masonry, drapery, potted plants and porcelain dogs to toys for children, rustic benches and handsome drawing room chairs.

All of the equipment was of the best quality while the processing chemicals were the purest available. The British-made main studio camera was a large wooden affair with squared bellows connecting the front lens panel with a rear panel carrying the focusing screen and the plate holder. It rested on a heavy wooden stand that could be raised, lowered or tilted so as to frame the sitter appropriately, and was fitted with cast-iron castors for mobility.

Sharing the work behind the camera – adjusting the lens, inserting the treated glass plates, calculating the exposure times, removing the plates and processing them in the darkroom – were the Lee brothers, King Yan (1877–1957) and Poh Yan (1884–1960). For over half a century, from 1940 until 1994, copies of over 2,500 of these original photographs and some glass plate negatives were kept by Poh Yan's eldest son, Lee Hin Ming. The photographs were mostly excess or uncollected prints while the negatives had been deliberately set aside. In 1994, this collection was entrusted

(Facing page top) Lee King Yan behind the camera. *Marjorie Lau Collection, courtesy of National Archives of Singapore.*

(Facing page bottom) Lee Brothers Studio at 54-8 Hill Street, 1910s. *Lee Brothers Studio Collection, courtesy of National Archives of Singapore.*

(Below) The Lee family with Poh Yan and King Yan standing third and fourth from the left respectively. *Marjorie Lau Collection, courtesy of National Archives of Singapore.*



to the National Archives by 80-year-old Hin Ming, thus ensuring the survival of a unique and eloquent record of the people of Singapore in the early years of the 20th century.

A Family of Photographers

Lee King Yan and Lee Poh Yan belonged to a large Cantonese family from the village of Siu Wong Nai Cheun (literally "Small Yellow Earth Village") in Nam Hoi county, Guangdong province. According to family lineage records, the village was founded by Lee Shun Tsai from Zhejiang province in the 13th century.¹ From this village, members of the family ventured forth to operate more than a dozen photographic studios in Southeast Asia, including eight in Singapore.

King Yan and Poh Yan, who were born in China, belonged to the 21st generation and learned photography from their father, Lee Tit Loon. In its early days, the art of photography was considered a trade secret. In some European cities, photography was a protected profession that no one who had not served as an apprentice could join.² In the Lee family, it was the brothers and sons who handled the camera and processed the plates, while employees were engaged as retouchers, finishers and mounters.

By 1900, Tit Loon was managing the successful Koon Sun Photo Studio at 179 South Bridge Road. He had four surviving sons, three of whom became photographers:

King Yan, Poh Yan and Sou Yan. The fourth, Chi Yan, was sent by the Methodist mission to study in the United States and became a minister and teacher until his early death in the mid-1920s. When Tit Loon retired to his home village, Koon Sun Photo Studio was left in the hands of Poh Yan and Sou Yan.

King Yan, however, struck out on his own. By 1911, he had established Lee Brothers Photographers at 58-4 Hill Street, and by 1913, Poh Yan had joined him. Younger brother Sou Yan continued to run Koon Sun for several years, closing it around 1917 before returning to China.

The move out of Chinatown and into the more salubrious Stamford Road area was significant. With a population of over 185,000, Singapore was one of the busiest ports in the world and the most cosmopolitan city in Asia. Nearly three-quarters of the population were Chinese, but there were large groups of peninsular Malays, Sumatrans, Javanese, Bugis, Boyanese, Indians, Ceylonese, Arabs, Jews, Eurasians and Europeans.³ Men still outnumbered women by eight to one but there was a steady increase in the number of Chinese women immigrants and more babies being born in the Straits Settlements,⁴ a fact reflected by the impressive number of baby and family photographs in the Lee Brothers Collection.

It wasn't long before King Yan and Poh Yan were photographing many of the well-known personalities of the day, including

Dr Lim Boon Keng, Mr and Mrs Song Ong Siang, Mr and Mrs Lee Choon Guan, Dr Hu Tsai Kuan, rubber planter Lim Chong Pang, rubber merchant Teo Eng Hock, banker Seet Tiong Wah, the families of Tan Kim Seng and Tan Kah Kee, and Dr Sun Yat Sen during his historic visits to Singapore.

Many of the photographs in Song Ong Siang's landmark 1923 publication, *One Hundred Years' History of the Chinese in Singapore*, were supplied by Lee Brothers Studio.⁵ The Methodist missionaries who patronised the brothers – both active church members – included Sophia Blackmore, the founder of Methodist Girls' School.

The photographs of these luminaries are found among the many more captivating portraits of the anonymous, but obviously prospering, inhabitants of Singapore: plump satisfied *towkays*, formidable *nonyas* of all ages bedecked with exquisite jewellery, European mer-

chants and their well-dressed wives, beguiling wedding couples and, perhaps most endearing of all, enchanting family portraits of all races.

In the early 1920s, the two brothers parted company on amicable terms and King Yan opened Eastern Studio on Stamford Road. The decision may have been dictated by domestic circumstances as both men had large and still growing families. The 1923 edition of *Seaports of the Far East* contained a highly flattering description of Eastern Studio that highlighted King Yan's expertise: "One of the best photographers in Singapore is Mr Lee Keng (sic) Yan, proprietor of the Eastern Studio, who has been operating locally for thirty years, and is an expert in every branch of his trade."⁶

King Yan came to Singapore with his father in 1891 as an apprentice photographer. In 1897, he married Tong Oi Yuet in St Stephen's Church in Hong Kong.

They returned to Singapore and had 12 children. Three of his sons became photographers. A Methodist and an active YMCA member, King Yan was one of the first in Singapore to cut off his queue and was known in photographic circles as *mo pin lou* or "the man with no pigtail".

On the eve of World War II, King Yan evacuated Eastern Studio because of vibrations to the shophouse structure caused by the frequent passing of heavy trucks along Stamford Road. He continued to operate Venus Studio in nearby Eu Court, a branch of Eastern Studio that he had opened in the 1930s. Unfortunately, these premises were damaged during a Japanese air raid, and the archive of negatives and prints destroyed. After the war, King Yan continued to work from his home at 26 Dublin Road. When he died in 1957 at age 80, his obituary in *The Straits Times* described him as "one of the pioneers of photography in the country" and the "grand old man of photography".⁷

Poh Yan, who maintained an avid interest in new advances in photography throughout his life, married Soh Moo Hin in China in 1902 and they raised 13 children. Two sons became involved in photography. Lee Hin Ming, the eldest, ran the family-owned photographic supply company Wah Heng for many years and was also a founder and director of Rainbow Colour Service. Youngest son Francis Lee Wai Ming developed a keen interest in photography, kindled by watching his father in the darkroom, and bought his first camera with the profits made from taking identity card photos for fellow students at St Andrew's School. He became a freelance photojournalist in the 1950s.

For many years, the business premises of Lee Brothers at Hill Street doubled as the family home and the older children were called upon to perform simple tasks in the studio. The ground floor was used mainly as storage. The first floor front room was the reception area with the living quarters behind. The top floor contained the studio and darkroom. At night, the reception area became the children's bedroom as mats were unrolled and spread out on the floor. As the number of children increased, more living space was secured in a block of flats behind on Loke Yew Street.

When the Hill Street studio was acquired for redevelopment in the 1930s, Poh Yan moved to a smaller unit nearby at the corner of Hill Street and St Gregory's Place. Business had, by this time, steadily declined due to the economic depression and the popularity of amateur photography. At the time of the move, three-quarters of the firm's glass plate



(Left) Lee King Yan with his wife and children, 1919. Lee Brothers Studio Collection, courtesy of National Archives of Singapore.

(Above) Lee Poh Yan (holding child on lap) with his wife and children, c.1930. Lee Brothers Studio Collection, courtesy of National Archives of Singapore.

The interior of Lee Brothers Studio at 54-8 Hill Street, 1920s. Lee Brothers Studio Collection, courtesy of National Archives of Singapore.



negatives had to be destroyed because of insufficient storage space.

With the imminent outbreak of World War II, Poh Yan permanently closed the studio. Although some family members continued to reside in the Hill Street shophouse, he and his wife moved to a farm at the eighth mile of Thomson Road. He passed away in 1960 at the age of 76.

The last of the family's photographic enterprises to survive was Wah Heng and Co., importers of photographic materials at 95 North Bridge Road, of which King Yan, Poh Yan and their many cousins were shareholders. The firm stocked a "remarkable range of goods" for both beginners and experts in photography, and did business "throughout the Straits Settlements, Federated Malay States and the Dutch East Indies".⁸

Studio Portraits

The Lee brothers were practitioners of a tradition that began with the invention of photography by Frenchman Louis Daguerre in 1839. The possibilities of studio portraiture were seized upon as the most exciting benefit of the new invention. The daguerreotype photographic method spread quickly and became available in Singapore by 1843 when G. Dutronquoy, proprietor of the London Hotel, placed an advertisement in *The Singapore Free Press and Mercantile Advertiser* on 4 December 1843, promising that a picture can be taken "in the astonishing short space of two minutes", "free from all blemish" and "in every respect perfect likenesses".⁹

In the 1860s, portrait photography was further invigorated by the introduction of the inexpensive *carte-de-visite* in France.

Originally intended as a visiting card with a photographic portrait mounted on it, such cards were later produced in great numbers for friends' albums.¹⁰ A further revolution took place not long after with the introduction of superior paper photographs made with the wet collodion process, or wet plate process. This new method gave a high-quality negative on glass with excellent resolution of detail from which an unlimited number of prints could be made.¹¹

The commercial possibilities of the wet plate process were staggering. Any quantity of prints could be ordered from the best results of a studio session, and supplied at terms attractive to both photographer and customer. The first to exploit this technical advance in Singapore was Edward A. Edgerton who, in 1858, advertised his "photographic and stereoscopic portrait" services at his Stamford Street residence.¹²

Another early European photographer who established a photo studio in the settlement was John Thomson, who went on to become one of the most celebrated of all 19th-century photographers. He arrived in Singapore in 1862 equipped with the knowledge of the latest advances in commercial photography in Europe, and advertised a range of new services involving "micro-photographs".¹³

Of all the European studios, however, the most enduring was G.R. Lambert & Co, which operated from the 1880s until around 1917. The official photographers to the King of Siam and Sultan of Johor as well

as for major political events in Malaya, G.R. Lambert & Co maintained branch offices in Sumatra, Kuala Lumpur and Bangkok. By the turn of the century, the firm had amassed one of the "finest collections of landscape views in the East, comprising about 3,000 subjects which were mainly purchased by globe-trotters as travel souvenirs and pasted into large leather-bound albums".¹⁴

Chinese photographers were also active in Singapore in the late 19th and early 20th centuries, as evidenced by the many examples of their work that have survived in family albums or turned up in antique shops. Such photographs are usually mounted on cardboard and carry names such as Pun Loon at High Street, Poh Wah at Upper Chin Chew Street, and Kwong Sun, Koon Hin and Guan Seng along South Bridge Road. While important examples of historic photography in their own right, the subjects are often posed stiffly and lack individual character.

In contrast, the Lee brothers achieved both subtlety and naturalness in their work. Their genius lay in their ability to combine the technician's dispassionate skill with the camera, the scientist's understanding of the subtleties of the darkroom and the artist's finely developed sense of human character and human expression.

In many of the portraits found in the collection – all of which were taken circa 1910 to the mid-1920s – a dignity and timeless elegance is apparent, which tempts us to look upon the faces of those who climbed the steps to Lee Brothers Studio as though we might almost know them today. ♦





All photos are from the Lee Brothers Studio Collection. Identities of the subjects are unknown as these photos are unrecorded excess or uncollected prints kept by the Lee Brothers Studio.

This is an abridged version of the introductory chapter by Gretchen Liu from the book, *From the Family Album: Portraits from the Lee Brothers Studio, Singapore 1910–1925*, published by Landmark Books in collaboration with National Archives in 1995. The book is available for reference and loan at the Lee Kong Chian Reference Library and selected public libraries (Call nos.: SING 779.26095957 FRO and RSING 779.26095957 FRO).

Notes

- 1 Family lineage records were kept by Dr Lee Ying Keng, the second son of Lee Tat Loon, who came to Singapore at the age of eight with his father. Lee Ying Keng attended Anglo-Chinese School and was 13 years old when his father died. He graduated from King Edward VII College of Medicine in 1920 and practised on board a coastal steamer plying the region until he set up practice in Muar, Johor, in the late 1920s. A copy of the family record was obtained courtesy of Marjorie Lau, daughter of Lee King Yan. See *Oldest living graduate of a Singapore University?* (1922, August 22). *The Straits Times*, p. 22. Retrieved from NewspaperSG.
- 2 Hillier, B. (1976, January 1). *Victoria studio photographs* (p. 17). London: Ash & Grant. [Not available in NLB holdings]
- 3 Turnbull, C. M. (1977). *A history of Singapore, 1819–1975* (p. 97). Singapore: Oxford University Press. (Call no.: RDLKL 959.57 TUR)
- 4 Turnbull, 1977, p. 103.
- 5 Song Ong Siang's *One Hundred Years' History of the Chinese in Singapore* was published in London 1923 and reprinted by Oxford University Press in 1967. An annotated edition was published by the National Library Board Singapore in 2016. See Song, O. S. (1923). *One hundred years' history of the Chinese in Singapore*. London: John Murray. Retrieved from BookSG; Song, O. S. (1967). *One hundred years' history of the Chinese in Singapore*. Singapore: University of Malaya Press. (RCLoS 959.57 SON); Song, O. S. (2016). *One hundred years' history of the Chinese in Singapore: The annotated edition*. Singapore: National Library Board Singapore. Retrieved from BookSG.
- 6 Macmillan, A. (Ed.). (1923). *Seaports of the Far East: Historical and descriptive commercial and industrial facts, figures & resources* (p. 274). London: W. H. & L. Collingridge. (Microfilm no.: NL 14242)
- 7 The full obituary in *The Straits Times* on 31 December 1957 reads: "Mr Lee King Yan, 80, one of the pioneers of photography in the country died at his home in Serangoon Garden Estate yesterday. He came to Singapore from China 50 years ago. He had received numerous awards for his photography. He was the proprietor of the Eastern Photo Studio, Stamford Road. Often referred to as the 'grand old man of photography', Mr Lee leaves seven sons and four daughters." See *Colony's grand old man of photography dies at 80*. (1957, December 31). *The Straits Times*, p. 4. Retrieved from NewspaperSG.
- 8 Macmillan, 1923, p. 273.
- 9 Page 1 advertisements column 3: Notice: Mr Dutronquoy. (1843, December 7). *The Singapore Free Press and Mercantile Advertiser*, p. 1. Retrieved from NewspaperSG.
- 10 *Carte-de-visits* from old Singapore studios still turn up in antique shops in Singapore and London, with the name of the studio handsomely printed on the back.
- 11 The most complete history of photography in Singapore to date is contained in Falconer, J. (1987). *A vision of the past: A history of early photography in Singapore and Malaya: The photographs of G. R. Lambert & Co., 1880–1910*. Singapore: Times Editions. (Call no.: RSING 779.995957 FAL)
- 12 Falconer, 1987, p. 18.
- 13 Falconer, 1987, p. 20.
- 14 John Falconer's book contains 180 Lambert views and portraits of people and places in Singapore and Southeast Asia.



SECRET WAR EXPERIMENTS IN SINGAPORE

The story of the Imperial Japanese Army farming bubonic plague-bearing fleas as biological weapons is very much fact, not fiction. **Cheong Suk-Wai** delves deeper.

Cheong Suk-Wai is a former lawyer turned journalist who is now in public service. A music, art and history buff, she has written four books, including the first history of Singapore's Attorney-General's Chambers titled *In Chambers: 150 Years of Upholding the Rule of Law* (2017), and the official SG50 book, *Living The Singapore Story: Celebrating Our 50 Years 1965-2015* (2015).



(Facing page) Japanese war planes such as these were used to transport rats from Tokyo to Singapore during World War II to bolster the local rat population and enable secret experiments in biological warfare to be carried out. These planes were also used to drop "bombs" carrying plague-infected fleas on enemy lands in China. *Courtesy of National Archives of Singapore.*

(Above) The restored College of Medicine Building within the grounds of the Singapore General Hospital. During the Japanese Occupation, the building was requisitioned by the Japanese and housed OKA 9420, the Singapore branch of Unit 731, the biological warfare research operative of the Imperial Japanese Army that was headquartered in Shinjuku, Tokyo, with another branch in Harbin, China. Bubonic plague-infested rats and fleas were bred at the Singapore facility along with other deadly disease-carrying pathogens. The building today houses the Ministry of Health, the Singapore Medical Council and the College of General Practitioners. *Courtesy of Preservation of Sites and Monuments, National Heritage Board.*

A few days before Christmas in 2017, North Korea threatened to load its intercontinental ballistic missiles with anthrax-carrying microbes and fire them into the United States. (Anthrax is a highly fatal infection caused by the bacterium *Bacillus anthracis*.)

Anthrax-tipped missiles might seem like the fantasy of a delirious despot – until one learns that anthrax and the bubonic plague were developed right here in Singapore by the Imperial Japanese Army (IJA) for use as biological weapons during World War II. Like North Korea, the IJA threatened to kill hordes of people by dropping disease-carrying bombs on them. But unlike North Korea (for now), the IJA actually carried out the nefarious deed during World War II.

The plague, which is spread by rats, is highly infectious and has a death rate of between 50 and 100 per cent. It is sometimes called the Black Death because its victims' lymph nodes swell into dark boils and the skin turns black from gangrene. The worst plague outbreak to date occurred in Europe between 1347 and 1350, when almost 65 per cent of the continent's population was wiped out, making it one of history's most devastating pandemics.

The IJA sought to re-enact the Black Death in Asia – its main target being the obliteration of enemies in mainland China – through its top-secret biological warfare research operative known as Unit 731. The unit was set up sometime between 1932 and 1935, with its headquarters in Shinjuku, the Tokyo ward with the world's busiest train station today. From this Shinjuku unit later sprang a second Asian command centre in Harbin, in northeastern China. The Harbin unit answered to its parent unit in Shinjuku.

Besides Shinjuku and Harbin, Unit 731 was also found in Singapore. The Singapore branch, known as OKA 9420 ("oka" meaning "hill" or "height" in Japanese), was set up just days after the Fall of Singapore on 15 February 1942. Like the unit's other branches, OKA 9420 was run by some of Japan's top doctors and scientists. Its first head was Yoshio Hareyama, who was soon replaced by Ryoichi Naito.

The latter and his colleagues worked out of the stately building at Outram Park – the Singapore General Hospital's College of Medicine today (and home to the Ministry of Health). As Singaporean war survivor Geoffrey Tan, 91, recalled in his 2001 memoir *Escape from Battambang*:

A Personal World War II Experience, the building housed up to six labs for Unit 731's diabolical remit. These were designated as Dai-ichi (No. 1), Dai-ni (No. 2), Dai-san (No. 3) and so on. Tan worked in Dai-ni.

Burrowing Through Bookshelves

The terrifying details of Singapore as a base for Unit 731's evil first came to light when Singaporean researcher and collector Lim Shao Bin was invited by the Singapore Society of Asian Studies to speak on the subject at the National Library on 4 November 2017. *The Straits Times* followed up with a newspaper report on 13 November.¹ Lim, 61, began ferreting out the ugly truths about Unit 731 when he was in his 20s, poring through piles of books and papers cramming the dusty shelves of bookshops lining shabby but genteel Kanda Street in Tokyo.

Lim is no eccentric, but an avid history buff and collector of memorabilia such as old postcards and photos of Singapore. His quest to uncover and piece together hidden details of the Japanese Occupation, including the atrocities of Unit 731, is his way of finding closure for his paternal grandfather's senseless murder by the Japanese just after

they surrendered to the Allied Forces in 1945 [see text box overleaf].

It helped that the younger Lim is equally adept at reading, writing and speaking Japanese. His study of the language is so serious that he has taught himself old Japanese script, the language in which the books and documents he sought were written. Over some 40 years, Lim rifled through and acquired all the wartime records and other documents he could find on Unit 731.

Lim did not, however, rely on Kanda Street alone. His burning questions about Unit 731 spurred him to trawl the internet for clues of its heinous activities. Lim may be an amateur researcher or, as he puts

it, “an investigator of war crimes”, but his zeal and eye for detail are impressive. For instance, he was able to refer me to an August 2002 paper by the late American scholar Sheldon H. Harris, and point to references in it to OKA 9420, including the 150 physicians who worked at the Singapore unit.

He adds that Unit 731 not only had a lot of clout, but also an “extraordinary” budget for its activities. Lim said he gleaned this from the 1991 memoir by a former OKA 9420 worker, Koichi Takebana, entitled *Fleas, Rats and Plague: I Saw All Three*. Crucially, Takebana’s book contains vital information about OKA 9420’s chain of sub-units. This was

instrumental in helping Lim retrace the murky workings of this clandestine unit because the chain showed Singapore to be the Southeast Asian headquarters of Unit 731, along with other units in the Malayan towns of Tampoi in Johor and Kuala Pilah in Negeri Sembilan.

In his memoir, Takebana also said that when he was first shipped in to Singapore, he reported for work at OKA 9420 at Outram Park. He started out as a clerk of sorts but later took charge of the huge boilers in the unit’s backyard, and soon became aware of what he called the “critical” (i.e. biological warfare development) lab within the area, which had huge facilities.

The Workings of OKA 9420

Ironically, it was claimed that OKA 9420 was set up to rid Singapore of the plague and other infectious diseases. Some among its 600-strong staff thought that was true. Among them was Geoffrey Tan, who was one of those involved in making the anti-tetanus vaccine in Dai-ni lab. Tan stuck it out for four months before quitting. When Lim met Tan recently and asked him why he was willing to work there in the first place, the latter said that if the Japanese were developing vaccines against tetanus, “they cannot only be doing bad things”.

In 2000, former Singaporean cabinet minister Othman Wok, who worked as a lab assistant in OKA 9420, wrote in his biography, *Never in My Wildest Dreams*, that he was certain Singapore had been a base for making biological weapons.² For one thing, he was made to trap rats and then check his rodent bounty for fleas, which his colleagues in the lab would then retrieve for later use. Unfortunately, Othman, who died on 17 April 2017 at the age of 92, did not say more in his book about OKA 9420’s shady misdeeds.

(Top) The neo-classical College of Medicine Building (c.1949) with its stately row of fluted Doric columns was erected in 1926 to house the King Edward VII College of Medicine. Ironically a building dedicated to the training of medical doctors would later be turned into a facility to spread diseases among people. *Ong Kay Ann Collection, courtesy of National Archives of Singapore.*

(Left) Passers-by bowing to Japanese soldiers outside a Japanese-owned shop in Singapore during the Japanese Occupation, c.1942–45. Unknown to the local population at the time, the Japanese had set up a laboratory in Singapore to cultivate pathogens that could cause pandemics such as anthrax, cholera, smallpox and malaria. *From Shashin Shuho, courtesy of National Archives of Singapore.*

But Lim unearthed more on this subject in Kanda Street. Besides the plague, he learnt from wartime documents found in Kanda Street bookshops that OKA 9420’s three labs cultivated such pandemic horrors as cholera, smallpox, malaria, typhus, dysentery and anthrax.

In some British wartime documents, there is also mention of the malaria parasite cultivated in the Singapore labs and used to kill hundreds of British soldiers in 1942 when the IJA invaded Buin and Bougainville Island in Papua New Guinea.

No Need for Bullets

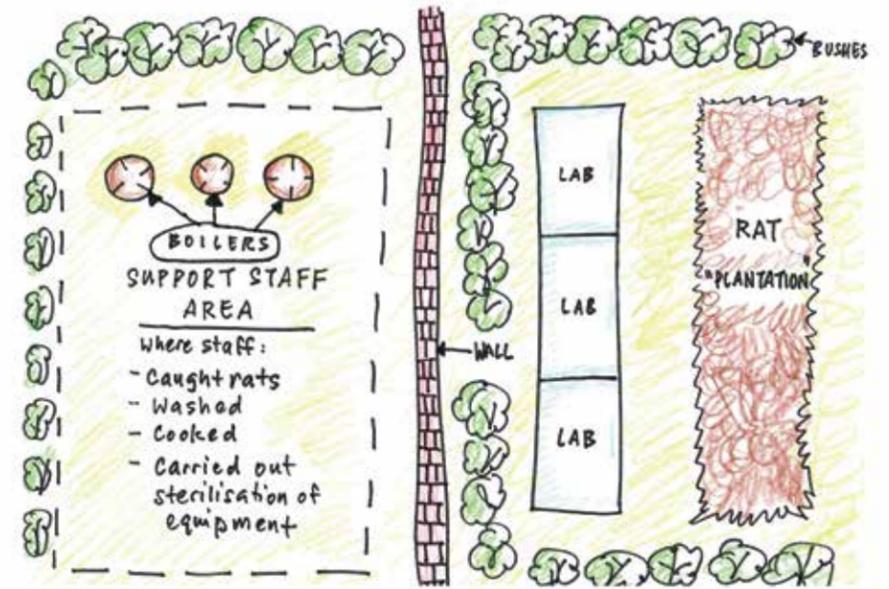
Harbin, the capital city of Heilongjiang province in China, is today famous for its beer and the annual ice sculpture festival, but during World War II, its outlying hamlet Pingfang served as Unit 731’s hub in China.

Lim’s research shows that after Japan unleashed the Nanjing Massacre between December 1937 and January 1938, Unit 731 began researching the optimal conditions necessary for breeding biological weapons, such as plague-carrying fleas from rats, in order to obliterate the Chinese economically and efficiently.

Tropical Singapore and Malaya were ideal breeding grounds because Unit 731’s research showed that fleas thrived best in places that had temperatures of between 27 and 30 degrees Celsius, and 90 percent humidity.

Despite these hospitable conditions, it appeared that there were insufficient rats in Malaya and Singapore for IJA’s diabolical ambitions. Hence, in late 1943, the Japanese military transported 30,000 rats by military jets from Tokyo to Singapore to bolster the local rat population. The IJA also sent truckloads of the vermin to two places in Malaya: Permai Hospital in Tampoi, in the middle of a Johor jungle, and a school in Kuala Pilah. The Japanese also sent rats to Bandung in Indonesia.

The rats flown in from Japan, along with those caught locally, were housed in what Lim calls “plantations” within the OKA 9420 compound in Outram Park. Each rat farm, as it were, consisted of a hut within a small garden. The floor of each hut was a huge metal plate, bolted down. On each plate rested four cages, into which the rats were released. It must have seemed like heaven as food scraps were scattered liberally about these cages.



This sketch is a simplified version of a rough map of Unit 731’s branch in Permai Hospital, Tampoi. The map was published on page 44 of the 1991 memoir, *Fleas, Rats and Plague: I Saw All Three*, by former OKA 9420 worker Koichi Takebana. The dividing wall in the sketch was about 4 m high, and separated the biological warfare production units from those providing support services such as washing, cooking, sterilisation of equipment and logistics. *Drawn by Cheong Suk-Wai, based on information by Lim Shao Bin and Koichi Takebana. All rights reserved, Cheong Suk-Wai, Lim Shao Bin, Koichi Takebana and the National Library Board, Singapore.*

Once the captive rats were bloated from the frenzied feeding, the lab workers would inject them with the plague bacteria. When the rats became sick, millions of fleas would be unleashed on them. The bloodsuckers went straight to work, feeding on their dying prey.

Lab workers would then isolate the fleas, now swollen with plague-rich blood. This involved an ingenious plan of shovelling flea-embedded soil or sawdust into a box, with mounds of dirt atop the box, and then shining a light on the fleas at an angle. The fleas, which hated the glow, would then flee to the box’s darkest corners, where lab workers would scoop them up as one would raisins. The “raisins” would then be examined under microscopes in the labs, which were located right next to the plantations. Here, lab workers had to “verify” if the fleas were incubating the plague bacteria in their systems, according to Lim.

Millions of the “verified” fleas were then flown to Thailand every two or three months “in big glass jars”, says Lim, ready for Japanese war planes to drop on their hapless foes.

Wartime records show that 10,000 rats sickened by the bubonic plague could yield 10 kg of plague-bearing fleas – and one needed only 5 g of fleas, or an estimated 1,700 fleas, to finish off around 600 people, as Lim learnt from reading the documents. With 10 g

of fleas, the effects were quadrupled, easily wiping out as many as 2,400 people at once. “The Japanese found it a most effective weapon of war,” he notes. On one of their subsequent bombing blitzes, war planes carrying clay bombs filled with oxygen and plague-infected fleas obliterated more than 9,000 people in China, according to Chinese wartime records. “There was no need for bullets,” adds Lim wryly.

From a 2009 Japanese research report, Lim further learnt that in June 1940, 3,031 people in China’s Jilin province died after being infected by plague-bearing fleas originating from Unit 731, while in October that same year, another 9,060 people died in Zhejiang province, located south of Shanghai.

To top it off, and as an experiment, Japanese land troops contaminated the wells of several of the villages they invaded in Zhejiang with bacteria. “That was so senseless,” observes Lim, noting that they never repeated that experiment.

OKA 9420 maintained huge boilers that bubbled and belched steam 24 hours a day so that workers always had boiling water on hand to disinfect themselves and sterilise their equipment instantly. Meanwhile, Lim learnt from online Japanese wartime records that the Japanese disposed of the rat carcasses by incinerating them in nearby furnaces built for that express purpose.



A GRANDSON'S RELENTLESS QUEST

In the 1970s, it was rare for a Singaporean to snag a scholarship to study and work in Japan, and most would be overjoyed at such an opportunity.

But when Lim Shao Bin won the chance to work for Japanese precision engineering company NMB – which was among the first Japanese multinationals to set up shop in Singapore after independence in 1965 – he had mixed feelings about it.

For one thing, he had rued since he was a boy that his paternal grandfather, Lim Kui Yi, had died at the hands of Imperial Japanese Army (IJA) soldiers during the Japanese Occupation.

Lim, who was born in 1957, remembers, "When I was a kid, I was just told 'Grandpa had been killed during World War II.'" So I assumed he was killed by Japanese aerial bomb attacks in Singapore.

"But after I got the scholarship, my father told me the truth: Grandpa had been killed after the Japanese surrendered in August 1945." His grandfather was the head of the feedback unit of Melaka's temporary city council, set up right after the Japanese surrender to give the city some semblance of governance. On 5 September, the council members celebrated Japan's defeat at Jonker Street by waving flags of the Kuomintang, the Chinese party led by General Chiang Kai-shek that defended China against the marauding IJA during World War II.

According to Lim's father, Lim Chow Sin, the open revelry enraged the Kempeitai, the Japanese secret police who were still around in Melaka at the time. "So on 5 September 1945, they stabbed Grandpa to death and threw his body down a well in Pulau Besar, Melaka."

Thus, when Lim Shao Bin touched down in Japan for the first time in 1980, at the age of 23, he felt conflicted. "It was quite confusing; I was supposed to learn from these people but I also thought, 'I shouldn't learn blindly from this place.'"

But as a true Singaporean who was "a bit kiasu", he did his best at work. Yet, burning within him was one big question: "Why was there a war in Malaya to begin with?" So began his quest to understanding all he could about the Japanese Occupation – and

also, as he says, find "closure" for his grandfather's senseless killing.

Every month, he would have to report to NMB's Tokyo office on Kanda Street, where the bookshops were. He recalls: "After visiting the office, I would drop by the bookshops and soon found that I could find wartime documents if I was patient enough."

The budding collector started small, rifling through the bookshelves for old postcards. He started to find things relating to Singapore. Paying tribute to Kanda's old-style shops and their owners, he says: "It's a special trade. When they purchase something to put on their shelves, they price their purchases with pride and professionalism. So if they say something is worth 2,000 yen, you can be assured they are right. They respect sincere collectors." Kanda's bookshop owners also, up till recently, traded on "cash only" terms.

Lim adds: "World War II split Japan into two worlds. Before the Japanese surrendered, they were so confident of themselves. They learnt from the West but modernised their culture, including language, without the need of foreign languages like English." This occasionally led to some blind spots; for instance, there is no traditional Japanese word for "rubber" because the trees had never grown in Japan.

But, Lim notes, when Japan lost the war, Japanese egos were deflated, and of one of the repercussions was that people began corrupting the Japanese language with words from the English lexicon, resulting in a Japlish form called *waize-eigo*, yielding mish-mash words such as *bakku-mira* ("back mirror"), *chia-garu* ("cheerleader" or cheerleader) and *hafu* (a "half-blood" or person of mixed ancestry).

Today, he considers himself a bona fide, if not formally trained, "historian" and sometimes refers to himself as a "historical detective" – and one keen to revive interest in Singapore's history before the nation gained independence on 9 August 1965. He says wistfully: "After independence, I think we emphasised too much on what was happening on this small island and lost the history of the years before 1965."

Since 2012, he says, visitors to quiet Kanda Street have trebled. It is more proof that history does matter, for the increase in literary foragers is due to China and Japan's squabble

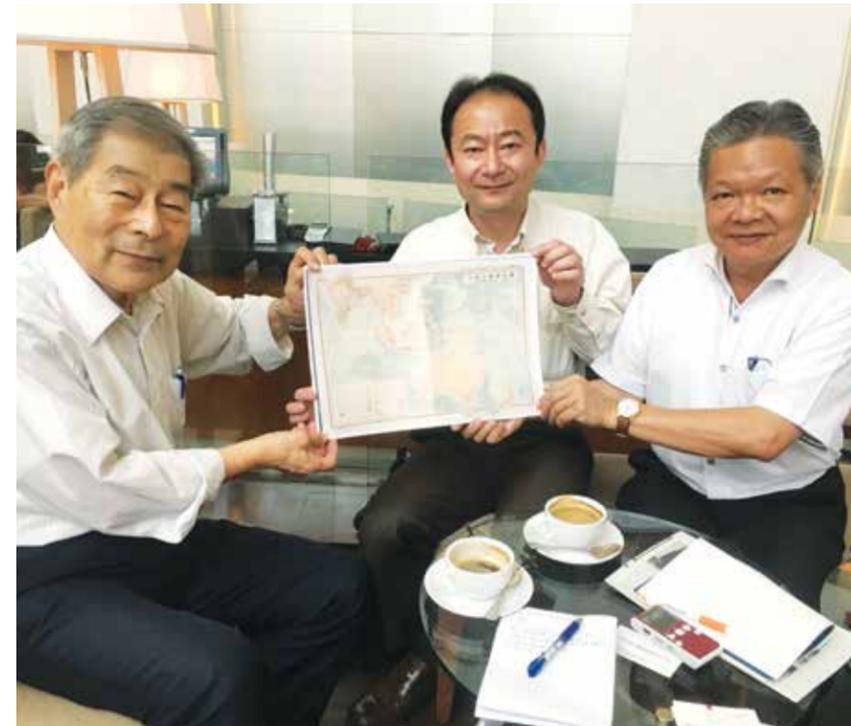


A portrait of Lim Kui Yi, the paternal grandfather of Lim Shao Bin whom the Japanese Imperial Army killed in Melaka on 5 September 1945. Courtesy of Lim Shao Bin.

over the necklace of islands south of Japan, which China claims under the name Diaoyu, and which Japan knows as Senkaku. The tensions are still taut today; on 31 January 2018, China ordered the Japanese consumer goods giant Muji to destroy all its catalogues that contained what China called "a problem map" because it omitted the Diaoyu/Senkaku islands. Lim says: "There are now buyers from the US, Japan, China, Taiwan and Korea in Kanda, all looking for books on Diaoyu or Senkaku."

Lim's most recent sojourn to Japan was in early December 2017 to join his friend, Nobuyoshi Takashima, at the World Peace Forum in the old port city of Yokohama. It is clear that Lim is as much a bridge-builder as he is a truth-seeker. Prof Takashima, 76, is professor emeritus at Ryukyu University, and he has been researching the war crimes of the IJA in Southeast Asia for the past 40 years.

The next step of Lim's quest is to find someone who can help him read and decipher a cache of medical reports from Unit 731 written by Ichiro Otaguro. "After independence, so much of Singapore history emphasised the years after 1965. I would like what I've found to spur future generations of Singaporeans to rediscover the history of our war years. Let's not make it a case of children forgetting their grandparents' past", says Lim with a pensive smile.



From left to right: Professor Nobuyoshi Takashima, Dr Yosuke Watanabe and Lim Shao Bin, holding a rare 1938 map showing Tokyo as the centre of the world. This photo was taken on 15 February 2018, during the Japanese dons' yearly sojourn to Singapore to commemorate the Fall of Singapore on 15 February 1942. Courtesy of Cheong Suk-Wai.

In late June 1945, OKA 9420 suddenly vanished from Singapore – weeks ahead of the official Japanese surrender on 12 September 1945. At first, everyone at its Tampoi base moved wholesale to Singapore on 15 June that year, and then nine days later, the entire arm was relocated to Laos for no discernible reason. Its workers also burned all traces of their records and research in Singapore, says Lim grimly, leaving no evidence of its existence.

Free but not Forgotten

Lim says that OKA 9420's head Ryoichi Naito and his colleagues were never tried as war criminals. "After the war, the Americans occupied Japan," he recalls. "They started interviewing and tried to arrest war criminals. And one critical thing they sought more information about was biochemical warfare in Harbin. They wanted the key men."

The Americans tracked down Naito who, in his fluent English, told them that he would turn over all the medical records, data from experiments and papers to the US on condition that they let him walk free. The Americans did just that, granting Naito and the rest of Unit 731 immunity from prosecution for war crimes.

Naito, his deputy Ichiro Otaguro and their ilk went on to rebuild their lives by, among other things, setting up clinics to treat everyday folk, joining academia and rising to professorships and, in some instances, becoming politicians.

But the truth eventually surfaced. "In the 1980s and 90s," says Lim, "the doctors among these men started to retire and mentor younger doctors. When the latter found out that their mentors had done such bad things, they were shocked."

Some of these younger doctors formed non-governmental organisations, which published accounts of what their founders had learnt about Unit 731's experiments. Why was Japan not rocked by such findings? Lim puts it down to the thick fog of negation surrounding Japan's war crimes, including from Japan's powerful and vociferous right-wing politicians. Also, he mused sadly: "Children do not appreciate their grandfathers' histories."

Some Japanese do, though. On 15 February this year, Lim introduced me to Nobuyoshi Takashima, 76, professor emeritus at Ryukyu University, who has been researching the dark days of the Japanese Occupation in Singapore and Malaya for more than 40 years. As Prof Takashima speaks no English, his friend,

Dr Yosuke Watanabe, 47, visiting fellow at the Center for Asia-Pacific Partnership, Osaka University of Economics and Law, acted as translator.

When I asked Prof Takashima what, as a Japanese, he would like to say to Singaporeans, he hesitated and then said: "Now is the time for making peace from humanism, not for condemning war criminals." He hoped that the OKA 9420 stories that Lim has unearthed would spur Singaporeans to learn more about their history.

Prof Takashima added that his interest in Unit 731 was piqued when one of his students took him to visit the Tampoi site in the 1980s. That started him off on his quest to uncover the atrocities committed by the IJA in Southeast Asia. "The Japanese Occupation is not researched much in Japan," he told me, explaining why, in 1983, he established his now-yearly Takashima Tours, taking a busload of his countrymen on tours of former World War II sites in Singapore and Malaysia. In the course of his travels, Prof Takashima came to know Lim, and the firm friends now meet and regularly exchange information on Unit 731 and the IJA via email.

In 2010, Prof Takashima wrote and published a guidebook of such sites in Malaysia, and in 2016, he published one such book on Singapore. Among his inner circle of enthusiasts are his 75-year-old wife Michi Takashima, Dr Watanabe and the journalist Fuyuko Nishisato, whose 2017 book on Unit 731 titled *Behind Bayonets and Barbed Wire: The Secrets of Japanese Army Unit 731*, has been mentioned by news agencies such as China's Xinhua.

Prof Takashima and his contemporaries have also taken to visiting Singapore every February to commemorate the Fall of Singapore, followed by a chicken rice dinner with Lim at Chin Chin Eating House, a well-known coffee shop on Purvis Street.

What Lim cannot stomach, even more than the grisly fates of plague victims, is what he sees as Unit 731's "lack of remorse" for any of their actions. He says of Unit 731's surviving Japanese officers: "All these soldiers write about somebody else's stories, not their own dirty work." ♦

Notes

- 1 Zaccheus, M. (2017, November 13). WWII S'pore used as base to spread disease. *The Straits Times*. Retrieved from *The Straits Times* website.
- 2 Othman Wok. (2000). *Never in my wildest dreams*. Singapore: Raffles. (Call no.: RSING 324.259570092 OTH)



Ronnie Tan is a Senior Manager (Research) with the National Library, Singapore, where he researches public policy, as well as historical, regional and library issues. Prior to his posting to the National Library, he served as a librarian in a public library, school library and fisheries research library.

HUNTING DOWN THE MALAYAN MATA HARI

Ronnie Tan pieces together the fascinating story of Lee Meng, the Malayan Communist Party female agent who headed its courier network for a brief period in 1952.

On 16 June 1948, three European planters were brutally murdered by communist guerillas in the Sungei Siput area in Perak state, in what was then known as Malaya.¹ Two days later, Britain declared a state of Emergency in Malaya, with Singapore following suit on 24 June 1948. The battle for control of Malaya and Singapore between the British and the Malayan Communist Party (MCP; also known as the Communist Party of Malaya) had begun, and it would not end until 31 July 1960.

During the Malayan Emergency (1948–60), the MCP carried out labour strikes, assassinations and other acts of violence aimed at bringing about social and industrial disruption in Malaya and Singapore.

In Singapore, the MCP tried to overthrow the British authorities “by means of subversion and terror”.² Specific sections of society were targeted, including “students, factory workers, government servants, intellectuals, politicians, newspapermen, transport workers and dockhands”.³ The wealthy were not spared either – the murder of pineapple and rubber merchant Lim Teck Kin being a case in point.

To carry out its nefarious activities, the MCP’s Central Committee needed to communicate effectively with its rank-and-file members scattered throughout Malaya and Singapore. But as the MCP cadres had no access to wireless communications technology back then, they had to rely on “open and fragile jungle couriers”.⁴

As it turned out, communications – or the lack of, rather – was the MCP’s Achilles heel. To cite an example, communications between local branches of the Min Yuen (Mass People’s Movement) in Pahang, comprising MCP sympathisers, was so bad that one branch was not aware of the other’s activities even when the physical distance was small. Chin Peng, Secretary-General of the MCP then, himself admitted that the Sungei Siput killings “were the work of local cadres acting without an order from the Central Committee – even without its knowledge”.⁵

Chin Peng needed someone who was street smart and capable of managing its communications courier system in north and central Malaya, and decided that the best person for the job as MCP’s “head courier” was a young lady named Lee Ten Tai (alias Lee Meng). Lee was leader of the Kepayang Gang⁶ which operated in Ipoh, the state capital of Perak.

Lee Meng: Malayan Mata Hari

Lee Meng already had a reputation as a cunning fighter and organiser. She was also “one of the most ruthless and capable members of the Min Yuen” in Ipoh.⁷ Surrendered and captured communist guerrillas claimed that Lee had ordered a number of cold-blooded executions that were carried out by Communist Special Service squads.⁸ While Chin Peng described her as “dedicated, active and brave” he also commented that she “lacked caution” and was reckless in her operational style.⁹

Lee Meng was born in Guangzhou, China, in 1926 and moved to Ipoh at the age of five. She was believed to have worked as a Chinese school teacher in Teluk Anson (now known as Teluk Intan), Perak, during the British Military Administration period – the interim military government established in Singapore and Malaya after the Japanese surrender on 12 September 1945.¹⁰ Her father was unemployed and lived with her uncle and aunt, while her mother would be banished to China in 1950 after she was arrested for communist activities. Given Lee Meng’s disenfranchised background and her mum’s own involvement with the

communists, it is not surprising that she readily joined the MCP in 1942 when she was recruited by her school teacher.

The courier network Lee Meng was ordered to set up required all messages to and from Chin Peng, or between local units and regimental commanders, to pass through it. During the early years of the Emergency, Lee Meng’s exact whereabouts were unknown as she had reportedly gone underground, living among Min Yuen

units scattered around the jungle fringes of Malaya or in the vicinity of Ipoh.

By then, the Malayan Special Branch – instructed to flush out MCP members and sympathisers – had found out about Lee Meng’s activities and decided to penetrate the courier link she was heading and establish her whereabouts. The task of arresting Lee Meng and unravelling the network fell on the shoulders of Detective-Inspector Irene Lee Saw Leng.¹¹



(Facing page) Lee Meng, head courier of the Malayan Communist Party in an undated photo (left), and being escorted to the Ipoh court complex for her retrial 10 days after she was found innocent during her first trial on 27 August 1952 (right). Image source: Chin, P. (2003). *My Side of History* (pp. 340, 343). Singapore: Media Masters Pte Ltd. (Call no.: R SING 959.5104092 CHI)

(Top) Irene Lee (first row, second from left), the Malayan Special Branch officer who played a key role in Lee Meng’s arrest. Photo was taken around 1955 with six other women police officers, who formed the first batch of women inspectors in the Malayan Police Force. Image source: Selamat bin Sainayune. (2007). *Polis Wanita: Sejarah Bergambar 1955–2007* (p. 82). Petaling Jaya: Kelana Publications Sdn Bhd. (Call no.: R 363.208209595 SEL)

(Above) The brutal murder of three European planters by communist guerrillas in the Sungei Siput area, Perak, on 16 June 1948 led to the British authorities declaring a state of Emergency in Malaya two days later, with Singapore following suit on 24 June. The Emergency lasted for 12 years and ended only in 1960. ©The Straits Times, 17 June 1948, p. 1.

Detective-Inspector Irene Lee: Special Branch Officer

On the other side of the ideological divide was Detective-Inspector Irene Lee, who was herself a victim of the communists: in April 1951, her policeman husband, Detective-Corporal Jimmy Loke, was murdered by communist gunmen in Penang.¹² After her husband's death, Lee joined the police force as an inspector and was posted to Special Branch Headquarters in Kuala Lumpur.

Lee was highly regarded by her peers in Singapore's Special Branch as a competent and experienced officer. She was not only a highly skilled marksman but also "a brilliant lock-picker, an expert with a mini-camera, an accomplished thief (in the course of her duty)" and endowed with a "delicious sense of humour", according to the British journalist and author Noel Barber.¹³

The Hunt for Lee Meng

The breakthrough in the hunt for Lee Meng came in early February 1952 following a raid on a communist guerrilla camp in Selangor. Captured documents from the deserted camp revealed the identity of a Chinese woman serving as a courier out of Singapore into Johor and who was believed to be the Singapore link in Lee Meng's intricate courier network.

That woman was known as Ah Shu or Ah Soo, a Chinese school teacher and the wife of Wong Fook Kwang, alias Tit Fung, the leader of the Communist-controlled

Workers Protection Corps in Singapore. Wong also had a hand in the murder of pineapple and rubber merchant Lim Teck Kin and others, including a policeman, a factory supervisor and a manager at Hock Lee Bus Company.

Once the identity of Ah Shu was established, the Special Branch sent Irene Lee to Singapore in February 1952 to track Ah Shu down and follow a complex trail that would ultimately lead to Lee Meng's arrest and eventual banishment to China.

For three weeks, Ah Shu's movements were closely monitored, particularly when she went shopping at Robinson's department store, which was then located at Raffles Place. On a number of occasions, Lee observed Ah Shu unobtrusively from a safe distance as the latter "skillfully switch[ed] identical shopping bags",¹⁴ believed to contain communist literature and messages, with another unidentified lady courier. The Special Branch knew then that both women had to be arrested.

At 5 pm one evening, Lee shadowed Ah Shu and watched her as she met the other lady to switch bags. No words were exchanged in the process. In the meantime, Lee's male colleagues waited in an unmarked Special Branch car, with its engine running. As Ah Shu walked out of the store, Lee tailed her, initially on foot and then by trishaw, with the Special Branch car following behind at a discreet distance.

Meanwhile, the other woman was quietly arrested by Special Branch officers inside Robinsons. Along Stamford Road, just by YMCA's tennis courts, Ah Shu alighted and started walking towards YMCA building, with Lee following behind. At the right moment, Lee gave the signal for the unmarked Special Branch car to draw abreast. Simultaneously, Lee stuck a gun into Ah Shu's back and ordered her to get into the car, which then sped off to a secret Special Branch "safe house" on the outskirts of the city.

On arrival, Ah Shu was searched by a woman constable, and a message hidden in a sealed tin of Johnson's baby powder was found in her shopping bag. The tin's bottom had been skillfully removed to contain the message. After the message had been extracted and photographed, it was then carefully put back into another identical tin, "which meant that a detective had to persuade an irate shopkeeper to open up [late at night] and sell him another [unblemished] tin so the message could be replaced".¹⁵

All that remained was for Lee to persuade Ah Shu to cooperate with the Special Branch and return to the jungle with the message that was now hidden in the new tin of baby powder. Lee managed to shake Ah Shu's resolve by showing her a photograph taken in the safe house – in which she was seated with two smiling uniformed Malay policemen – with the warning that the photograph would not only be published widely in the Chinese

press in Singapore, but 50,000 copies of the photograph would be dropped by plane around the area where she operated. Left with little room to manoeuvre, Ah Shu agreed to cooperate and carry the message to Johor and pass it on to the next link in the courier chain.

The information Ah Shu supplied led Special Branch officers to an address in Yong Peng, Johor, where another unnamed woman courier along the chain lived. To gain her trust, Lee posed as a fellow communist courier. Her ruse worked and the woman believed her.

Lee then persuaded the woman to go out for lunch. The former made up a story about how she had murdered a policeman in an ambush not far from Yong Peng three days earlier. The meal would be a celebration of Lee's daring feat. After lunch, Lee flagged a taxi (conveniently driven by a Special Branch officer) and both got in. Four hours later, the woman courier arrived at the Holding Centre in Kuala Lumpur with Lee by her side.

After dinner, the woman was ushered into a small room for interrogation during which Lee managed to convince her that the only way out of this difficult situation was to cooperate with the police and become a Special Branch double agent. She agreed and in time became one of its most valuable double agents. The double agent realised that she had "wasted the best years" of her life working for the communists, and even asked her superiors to be allowed to work with Lee.¹⁶

The Trail to Kuala Lumpur

The trail next led to a male rubber tapper in Jenderak rubber estate, near Jerantut, Pahang. Every morning, Lee turned up at the rubber estate, posing as a rubber tapper. After "work" was done at around 11.30 am, Lee's real job began, shadowing the after-work activities of a male rubber tapper named Chen Lee, a member of the Min Yuen.

Lee shadowed Chen Lee for several weeks, and eventually, her efforts paid off; she obtained evidence that Chen Lee was a communist courier and had been smuggling food to food dumps meant for communist terrorists hiding out on the fringes of the jungle. After ascertaining Chen Lee's involvement in clandestine activities, she arranged to have him arrested. One day, when Chen Lee was walking along a lonely road while out on one of his regular visits to drop off supplies for his comrades in the jungle, he was nabbed by Special Branch officers and bundled into the back of a taxi, with Irene Lee beside him.



A communist guerrilla surrenders to security forces at a rubber plantation during the Malayan Emergency (1948-60). Image source: Barber, N. (1971). *The War of the Running Dogs: How Malaya Defeated the Communist Guerrillas, 1948-60* (p. 216). London: Collins. [Call no.: R CLOS 959.5 BAR-[JSB]]

Inside the taxi, Lee read out the riot act to her captive, spelling out the various activities Chen Lee had carried out for the Min Yuen, including filling his bicycle pump with rice, buying drugs and hiding them in the jungle and buying three bullets – a crime punishable by death in Malaya. Chen Lee initially denied the charges but after Lee produced enough concrete evidence of his crimes, he decided to cooperate and divulge the next link in the courier chain – a bookshop on Batu Road, Kuala Lumpur.

As Batu Road was a busy street, the raid had to be carefully planned without raising the suspicion of the bookshop owner and communist cadres lurking in the neighbourhood. Otherwise, contacts in the courier chain would be alerted and go into hiding. For this reason, the Special Branch hatched an elaborate plan that involved the acquisition of a pineapple estate and cannery in Johor that exported canned pineapples. A lorry carrying a cargo of canned pineapples to be shipped out to Britain the next day via Penang would pass through Kuala Lumpur at a particular time.

In order not to arouse the suspicion of Min Yuen members in the area, the lorry's movement was timed so that it "fitted in perfectly" with the actual shipment schedule.¹⁷ The lorry would suffer a rear wheel puncture just as it passed by the bookshop. To replace the wheel, the lorry would have to be jacked up. However, due to the weight of the goods, the crates packed with tins of pineapple would be

temporarily unloaded while the wheel was changed. Now those loitering in the area, even if they were communist sympathisers or spies, had to help the lorry driver and his workers unload the crates, otherwise something would seem amiss. Since the crates could not be placed on the road without impeding traffic flow, they were conveniently stacked against the door of the bookshop.

Unaware to passers-by, Irene Lee was hiding in one of those crates. While the men went about changing the wheel, Lee opened the trapdoor of the crate, "picked the front door lock [of the bookshop], entered the shop, searched it, made photocopies and was back in her packing case" – all before the lorry was reloaded with the crates.¹⁸ From the evidence Lee found in the bookshop, the Special Branch ascertained that the nerve centre of the courier network was located in Ipoh and not Kuala Lumpur as it originally thought, and that it was run by a woman.

The Cat Finally Gets her Mouse (in Ipoh)

Two blocks away from the FMS Bar in Ipoh, the communist courier trail which began in Singapore on February 1952 finally ended at a small, nondescript house in Lahat Road. The house "turned out to be the undercover communication post coordinating the secret courier network reporting to the CPM's Central Committee".¹⁹

Special Branch officers kept the house under 24-hour surveillance. At



(Above) Robinsons department store in Raffles Place in the early 1950s where two communist couriers were caught switching shopping bags containing communist literature and messages. It started a chain of events that would lead to Lee Meng's arrest on 24 July 1952. RAF Seletar Association Collection, courtesy of National Archives of Singapore.

(Right) As part of the communists' clandestine communications network, rolled slips containing secret coded messages were concealed in everyday nondescript items such as a wall clock or a Chinese tea box. Courtesy of ISD Heritage Centre.



8 pm on 24 July 1952, a raid was carried out. Irene Lee's knock on the door was answered by her nemesis, Lee Meng. Stunned by this stranger at the door, Lee Meng and her friend Cheow Yin, who was also in the house at the time, were caught unawares and unarmed, and quickly apprehended.

The noose around Lee Meng tightened further when she slipped up in her attempt to produce her identity card. Issued in Ipoh in 1949, the card did not bear her name but that of another person by the name of Wong Nyuk Yin.²⁰ Lee Meng claimed that she had been in Ipoh for just over two years and was living in Singapore prior to that. However, Irene Lee caught on to her lie; it was impossible for Lee Meng to be in Singapore in 1949 and yet receive "her" identity card in Ipoh at the same time.

Upon further questioning, Lee Meng buckled. In addition, the old Chinese desk with a false drawer that Chin Peng had ordered her to buy earlier was found in the house.²¹ Inside the drawer were communist documents waiting to be disseminated – ample proof of her role as being part of Chin Peng's courier network. Lee Meng was subsequently remanded in Taiping Jail to await trial.

The Aftermath

Lee Meng

When Lee Meng appeared before the Magistrate's Court in Ipoh on 6 August 1952, she was charged with three offences – being armed with a pistol and a hand grenade between August 1948 and September 1951 in Ipoh, and for consorting "with persons who were carrying firearms and acting in a manner prejudicial to the maintenance of good order".²² No references were made to her activities as a courier to avoid compromising Special Branch operations that were going on at the time and neither was she charged as a communist. The Special Branch hoped that when Chin Peng received news of her arrest, he would assume that her courier activities had not been exposed. In court, she denied that she was Lee Meng but Lee Ten Tai. She also denied ever living in the jungle and claimed that she did not know what a hand grenade was. However, several former communist guerrillas testified in court that they had seen Lee Meng armed with grenades and was a senior MCP member.

Lee Meng was initially found not guilty during her first trial on 27 August 1952. A retrial was ordered on 10 September the following month. This time, Lee Meng, now dubbed the "grenade girl" by



(Top) Chin Peng (right), Secretary-General of the Malayan Communist Party, seen here with Rashid Maidin, one of the few Malay communist leaders and a trusted aide of Chin Peng (undated photo). Image source: Chin, P. (2003). *My Side of History* (p. 513). Singapore: Media Masters Pte Ltd. (Call no. R SING 959.5104092 CHI)

(Above) Lee Meng (left), former head courier of the Malayan Communist Party, at age 80, seen here with two friends. Image source: Zheng, Z. (2007). 陈田夫人: 李明口述历史 (p. 3). Petaling Jaya: 策略资讯研究中心. (Call no.: 324.2595075092 ZZX)

the press,²³ was pronounced guilty and sentenced to death.

According to one account, while Lee Meng was remanded in Taiping Jail, she tried to seduce the male jailer on night duty in an effort to become pregnant. She knew that British law did not permit a pregnant woman to be executed. Unfortunately for Lee Meng, the authorities discovered the plot and replaced him with a female jailer.

During her retrial on 10 September 1952, Lee Meng appealed to the Malayan High Court against her death sentence but

her case was dismissed on 14 November. She was returned to Taiping Jail to await her fate while her lawyers lodged an appeal to the Judicial Committee of the Privy Council in London on 14 February 1953. The appeal was unsuccessful and a petition for clemency was then sent to the Sultan of Perak on 23 February 1953. The petition was approved and just two weeks later on 9 March, Lee Meng's death sentence was commuted to life imprisonment in Taiping Jail. While in prison, she passed her time knitting shawls and even learned to speak "superb Malay".²⁴

But there was another twist to the Lee Meng story. Lee Meng's trial had generated worldwide interest, with the government receiving petitions for her to be spared the death penalty. Moreover, the Cold War between the Soviet Union and Eastern Bloc countries and the United States and its NATO allies was in full swing. Both sides conducted espionage activities on each other to gain the upper hand in the battle for dominance.

It was against this backdrop, on 2 March 1953, that the Hungarian government offered to swap Lee Meng for a British businessman, Edgar Sanders, who was serving a 13-year jail sentence in Budapest for espionage. Almost overnight Lee Meng's case became a *cause célèbre*.²⁵ However, the offer of a prisoner swap was turned down by the British.

Lee Meng was incarcerated at Taiping Jail until her release and banishment to China on 23 November 1963 – the same fate that had befallen her mother in 1950. However, it was only in January 1964 that the Malaysian government announced her deportation. Before Lee Meng left, she asked the lawyers who defended her, the Seenivasagam brothers (Sri Padhmaraja and Darma Raja, popularly known as S.P. and D.R. Seenivasagam), to buy her two bicycles, a transistor radio, blankets, a mattress, several watches and some gold bangles so that she could bring these to China.

In China, she was reunited with her mother, whom she cared for until the latter passed on. She also met Chen Tien, Chin Peng's "trusted aide and comrade",²⁶ and married him in 1965. He passed away on 3 September 1990 from lung cancer.²⁷ In August 2007, Lee Meng visited Malaysia. During her visit, she called on one of her trial lawyers, Lim Phaik Gan, to thank her for "securing her release".²⁸ It was reported that Lee Meng passed away in Guangzhou, China, on 2 June 2012 at the age of 86.

Irene Lee

Following the successful capture and prosecution of Lee Meng, Irene Lee went on to serve in other capacities in the police force in Malaya. These included stints in the Penang Contingent, the Georgetown Police District Headquarters (1957) and the Federal Police Headquarters in Kuala Lumpur (1958), while serving as Chief of Women Police and, shortly thereafter, as a Woman Police Supervisor, with the rank of Assistant Superintendent of Police (ASP).

On 12 October 1959, Lee was transferred to the Perak Contingent and served as an Inspector of 'A' Branch. She was

awarded the Colonial Police Medal for meritorious service in 1956.

Lee left the police force on 1 January 1960 "as a result of a disagreement with the Malayan authorities"²⁹ and subsequently took up a secretarial job at an import firm in Singapore. She passed away on 12 May 1994 at the age of 72. ♦

The author would like to thank Yvonne Yeo, Goh Yu Mei and Seow Peck Ngiam for their help in translating Lee Meng's autobiography and providing additional information, as well as the staff at the ISD Heritage Centre for their assistance in providing resources for this article.

Notes

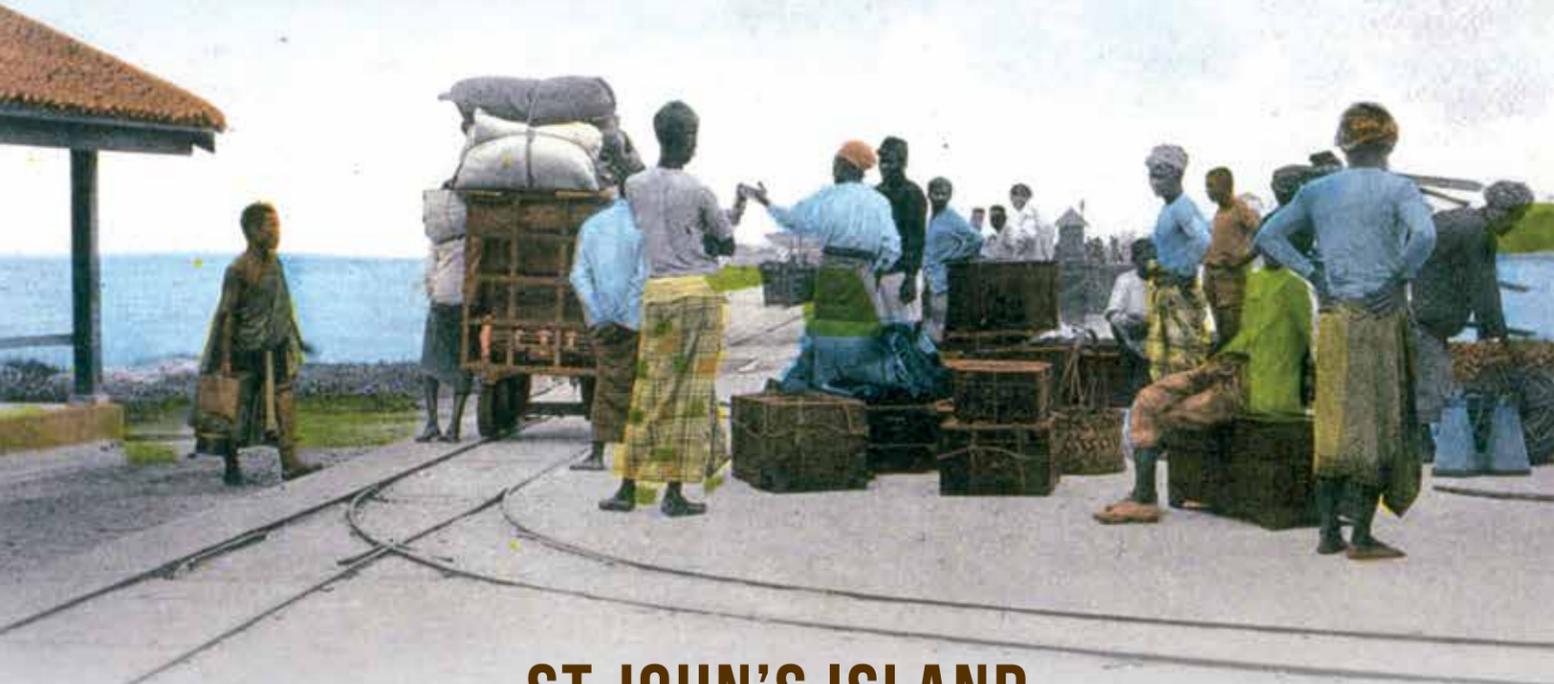
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- Barber, 1971, p. 166.
- Barber, 1971, p. 167.
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ST JOHN'S ISLAND FROM GATEWAY TO GETAWAY

St John's Island was once home to new migrants, opium addicts and political detainees. **Marcus Ng** charts the island's transformation from a place of exile to an oasis of idyll.



Marcus Ng is a freelance writer, editor and curator interested in biodiversity, ethnobiology and the intersection between natural and human histories. His work includes the book *Habitats in Harmony: The Story of Semakau Landfill* (2009 and 2012), and two exhibitions at the National Museum of Singapore: "Balik Pulau: Stories from Singapore's Islands" and "Danger and Desire".

It's well known that Stamford Raffles landed by the banks of the Singapore River on 29 January 1819 to establish a British trading port on the island.¹ Most accounts of this colonial milestone, however, skim over the minor fact that a day earlier, Raffles' fleet of ships had anchored off St John's Island. This was where representatives of the local ruler – the Temenggong of Johor, Abdul Rahman – met and assured the British that Singapore harboured no Dutch settlers who would be hostile to rival powers.²

Early modern Singapore was a by-product of geographical serendipity coupled with commercial desperation. Raffles' mission was driven by the British quest for a regional port that could rival Dutch-controlled Melaka. Raffles also knew that the island enjoyed regional pedigree as "the site of the ancient maritime capital of the Malays".³ Beyond that, Singapore was largely terra incognita to Europeans.⁴

Siquijan to Sekijang

The islands that clustered along Singapore's southern coastline, however, were already longstanding landmarks to sailors plying the waters between the Straits of Melaka and the South China Sea.

The Portuguese were undoubtedly familiar with St John's Island. Portuguese-Bugis cartographer Manuel Godinho de Erédia marked two islands as "Pulo Siquijan" in a map he had drawn in 1613 that was part of a manuscript titled *Declaracam de Malaca e India Meridional com o Cathay*. In another map he drew in 1604, titled *Discripsao Chorographica dos Estreitos de Sincapura e Sabbam. ano. 1604* (*Chorographic Description of the Straits of Sincapura and Sabbam 1604 A.D.*), Erédia sketched a maritime passage called *estreito novo* ("New Strait") which ran south of Pulau Blakang Mati (present-day Sentosa) before passing north of Pulau Sekijang and turning east.⁵

"Pulo Siquijan" was Erédia's (mis) rendering of Pulau Sekijang, Malay for "barking deer island". Passing sailors then played a centuries-old game of Chinese whispers, distorting "Sekijang" into "St John's" by way of "Sijang".⁶ Erédia's depiction of two islands sharing the same name, however, was no error. Two neighbouring isles bore the moniker "St John's" and were marked as such in charts, including one produced by French hydrographer and geographer Jacques-Nicolas Bellin in 1755 and another by the Honourable Thomas Howe in 1758.⁷ It was only in 1899 that one of the two St John's Islands – the eastern one – which housed a hospital for patients afflicted with beri-beri, was renamed Lazarus Island.⁸

In Malay, the islands continue to share a nomenclatural link: Lazarus Island is known as Pulau Sekijang Pelepah (*pelepah* means "palm fronds"), while St John's Island is Pulau Sekijang Bendera (*bendera* means "flag") on account of a

flagstaff that stood on it between 1823 and 1833. According to H.T. Haughton, "these islands are supposed to be two roe-deer at which the 'spear-reef (Terumbu Seligi) off Blakang Mati is being aimed".⁹ The tales that gave rise to these names, unfortunately, are lost, as are any deer that may have once inhabited these islands.¹⁰

Gone too are names that one Captain George Thomas assigned to nearby islands in the late 1700s.¹¹ Hoping perhaps to expand the Biblical theme, he marked Pulau Tekukor (north of St John's Island) as "Luke" and the Sisters' Islands as "Mark" and "Matthew". These names, however, failed to stick and only St John's survived in later charts.

Gateway to Singapore

St John's Island was not only Raffles' gateway to Singapore. The hilly island, located south of the Singapore harbour, also became a crucial landmark for the

(Facing page top) Scene at St John's Island, showing newly arrived migrants at the quarantine centre waiting for the ferry to take them to mainland Singapore, c.1908. *Courtesy of National Archives of Singapore.*
(Facing page bottom) The living reefs of St John's Island. In the distant background is the skyline of mainland Singapore. Photo taken by Ria Tan on 31 August 2004. *Courtesy of WildSingapore.*
(Below) Detail of a 1924 map showing St John's and other adjacent islands. *Survey Department Collection, courtesy of National Archives of Singapore.*



fledging port on the mainland. Before Raffles left the settlement, he issued instructions “to establish a careful and steady European at St John’s with a boat and small crew, for the purpose of boarding all square sailed vessels passing through the Straits”.¹² An apocryphal account credits one Loughony with this task of informing passing captains “that the port is open” for business.¹³ St John’s Island, by hosting this crew of heralds, was instrumental in placing Singapore on the mental maps of mariners at a time when news could spread only as fast as the swiftest craft.

St John’s turn on the frontlines of colonial enterprise was brief. By 1834, the island was all but abandoned. “The only inhabitant was an old Malay, whose small thatched habitation was surrounded by cocoa-nut, orange, guava, plantain, and other tropical fruit-trees”, observed a visiting naturalist, who added, “The view from the summit of this elevated island was both extensive and beautiful; the small islands near us were either covered by a wilderness of wood, or else the jungle was cleared away” for pineapple plantations.¹⁴

The pineapples were still extant in 1847 when Dr Robert Little – a medical practitioner who was appointed first Coroner of Singapore in 1848 – visited the two St John’s Islands. He wrote:

“... we crossed to 2 islands called Pulo Sakijang about 1¼ mile from Blakang Mati. On landing on the nearest we ascended a hill covered with pine apples [sic] and found one house with one inhabitant... from this island we pulled to the other of the same name, and found on the beach a colony of Bugis, consisting of 7 men and inhabiting 3 houses. This had been a settlement for 40 years, and they permitted no women to be located with them, the only reason they gave for this misogynistic feeling, was that women invariably quarrelled and prevented them from working.”¹⁵

The aim of Dr Little’s sojourn to St John’s was to investigate remittent fever (malaria), which he mistakenly believed was caused by miasma from dying coral reefs.¹⁶ Medical interest in St John’s Island came from other quarters in 1848 when a medical committee suggested the use of “St John’s or one of the neighbouring islands” for the segregation of leprosy convicts.¹⁷ The subject was raised again in 1857 – when the leper population in Singapore reached

alarming levels – to no avail. However, in the end, St John’s Island was never used to accommodate lepers.¹⁸

Quarantine Island

St John’s transformation into a rather less welcoming destination began in 1873 after a severe cholera outbreak in Singapore claimed the lives of 357 people. Under pressure from the mercantile community, Andrew Clarke, the British Governor in Singapore, approved a proposal by Acting Master Attendant Henry Ellis to establish a lazaretto (a facility to isolate and treat patients with contagious diseases) on St John’s Island.

Ellis’ wishlist for the site included a steam cutter (patrol boat), a floating police station and a hospital as well as burial grounds on nearby Peak (Kusu) Island.¹⁹ St John’s stint as Singapore’s “Quarantine Island” thus began in November 1874 when the barely completed lazaretto took in between 1,200 and 1,300 Chinese passengers from the cholera-stricken *S.S. Milton* from Swatow (now Shantou), China.²⁰

By 1908, the quarantine facility on St John’s had expanded to encompass the entire island, which was populated with sheds housing the occupants of infected or suspected ships,²¹ be they new migrants to Malaya or religious pilgrims returning from performing the Hajj in Mecca.

In reality, quarantine was defined by the class of passage. First- and second-class cabin passengers could simply present themselves for clearance before disembarking, while hapless passengers



St John’s became known as Singapore’s “Quarantine Island” in November 1874 when the first load of 1,200 to 1,300 Chinese passengers from the cholera-stricken *S.S. Milton* from Swatow (now Shantou), China, arrived on the island. This 1930 photo shows passengers being vaccinated against infectious disease upon disembarkation. *Courtesy of The National Archives of the UK, ref. CO1069/560 pt 1 [23].*

in steerage (who shared a deck or hold) were quarantined for two to three days. From the 1920s, most cargo-hold travellers were required to transit at St John’s Island for inoculation before proceeding to Singapore, with migrants from China subject to at least a week’s quarantine.²²

For the British, St John’s Island was an achievement “which every resident may be proud”. *The Singapore Free Press and Mercantile Advertiser* reported in 1926:

“With thousands of Chinese arriving at Singapore every week, and with smallpox on two out of every four immigrant ships entering the port, Singapore and the Peninsula are nevertheless kept practically free from that disease... Certainly the treatment which the immigrants received on the island is about as pleasant an introduction to Malaya as they could expect. They arrive hungry, dirty and miserable after a deck passage through the China Sea, and they spend five blissful days – or it may be a fortnight – with nothing to do, wholesome food to eat, and the beaches of the island on which to lounge away the first hours of leisure they have known in their lives.”²³

Another report in *The Straits Times* in 1935 feted St John’s as the “largest quarantine station in the world” – after New York’s Ellis Island and El Tor in Egypt – with the means to accommodate up to 6,000 people in 22 camps. The island then also housed “several hospitals for actual cases of smallpox, cholera, plague, chickenpox,

measles and kindred diseases, and the barracks and temple for the 15 men of the island’s Sikh Police force, the gardeners’ quarters and mosque, the coolies’ and workmen’s quarters, the Coroner’s court and the lock-up”.²⁴

Memories of Quarantine

Henry Ellis’ initial plans to use Peak (Kusu) Island as a burial ground were soon cut short when a community leader named Cheang Hong Lim raised strenuous objections to this idea. Instead, Lazarus Island took its place; from the early 20th century onwards, passengers who died upon or shortly after arrival were buried here.

Writing to the Colonial Engineer J.F.A. McNair in 1875, Cheang offered a glimpse into Kusu’s cultural life, which British authorities had overlooked. He wrote:

“... a small Island called Peak Island, lying opposite to this Colony of Singapore, has, for upwards of thirty years been used by many of the Chinese and native Inhabitants of this Settlement as a place for them to resort to at certain periods every year, for the purpose of making sacrifices, and paying their vows to certain deities there called ‘Twa Pek Kong Koosoo’ and ‘Datok Kramat’, and as that place has lately, to the great prejudice of their feelings, been desecrated by the interment therein of a number of dead bodies. Your Petitioner is desirous of applying for a Title to the same, in order to prevent that place from being any longer used as a Burial Ground.”²⁵

Teo Choon Hong, who arrived in Singapore from Amoy (now Xiamen), China, in 1937, recalled his quarantine experience with the National Archives of Singapore in 1983. He said in Hokkien:

“I was quarantined on Kusu Island [later in the interview, he clarified that he had meant St John’s Island] as the British thought that there were germs on the lower berth of the steamer that might lead to infectious diseases. Only those on the lower deck were quarantined. Those who stayed in the cabins did not have to go. There was a class distinction... Being quarantined on Kusu Island was inhumane. We were bossed around like chickens and ducks. The British saw us Chinese as beasts. After being given some rations, it felt like we were camping – we had to



Minister for Health Armand J. Braga visits the Opium Treatment Centre on St John’s Island when it opened in 1955. The centre trained opium addicts in various tasks, such as carpentry and woodworking, for their rehabilitation into productive society. It closed in 1975. *Ministry of Information and the Arts Collection, courtesy of National Archives of Singapore.*

cook and eat there. I was quarantined for two days before being released.”²⁶

Teong Eng Siong offered a more sanguine view of his stay on St John’s Island after he arrived from Foochow (now Fuzhou) in 1948:

“Every batch of people who came here had to stay at Qizhang Hill²⁷ for a short three to five days, so as to ensure that there were no infectious diseases and such. After three or five days, I was allowed ashore... We had three meals a day. Breakfast consisted of bread and milk tea. There were two small slices of bread. At that time, it was not enough. Then in the afternoon, it was lunch, and at night it was dinner. The meals all had eggs, and some stir-fried vegetables and fish. We had two time slots a day to shower, because at that time, the weather was hotter, hotter than now. It made us more comfortable. Living quarters-wise, there were many people living together in a big hall.”²⁸

For Saravana Perumal, who came from Jaffna, Ceylon, in 1947, St John’s Island was an “isolated place”. “We were locked up in the camp,” he told the National Archives in 1983. “We were given rations, firewood, pots to cook and prepare our

own food. It gave me a sort of fright there because of centipedes, cockroaches...”²⁹

Years later, in 1955, Perumal returned to St John’s Island when he was transferred there to help establish an Opium Treatment Centre. This centre, he explained, trained opium addicts in various tasks for rehabilitation into productive society. “After a month, when they are certified fit for work, they were given the jobs of carpentry where they made tables, chairs, furniture, rattan work, tailoring...”³⁰

The treatment centre at St John’s, which operated until 1975, was one of the island’s new functions after the war. But quarantine continued even after Singapore gained independence in 1965 as the government had adopted a precautionary stance against the risk of infection from deck passengers from China and India.³¹ It was only in 1971 that deck passengers from China were exempted from compulsory quarantine if they had valid health certificates.³² Those from India had to wait until 1973 for compulsory quarantine to end. St John’s quarantine centre officially closed on 14 January 1976.³³

Island and Prison

In 1948, parts of St John’s Island were converted into a detention centre for political prisoners.³⁴ Earlier, during World War II, the island had already acquired a political-military dimension

when it housed Japanese and German civilians. During their stay, the Germans erected a Chinese-style moon gate by the island's western shore, which still stands today.³⁵

C.V. Devan Nair, who became Singapore's third president in 1981, was among those detained on St John's Island for anti-colonial activities. With little else to do but immerse himself in books, Nair dubbed the island "St John's University".³⁶ His studies were interrupted one fateful day in 1952 by a visitor who described the island thus:

"There, amid beautiful old tembusu trees, stood some government holiday bungalows, and not far away, long rows of barrack-like buildings surrounded by chain-link fences for opium addicts undergoing rehabilitation. One of the bungalows was also ringed with chain-link topped with barbed wire. This housed the political detainees."³⁷

That visitor was a young anti-colonial lawyer named Lee Kuan Yew, and the fateful meeting between the two men led to Nair becoming one of the convenors of the People's Action Party (PAP) at its founding in 1954. Nair would later be detained again in 1956, along with his party comrades Fong Swee Suan, Lim



In 1948, part of St John's Island was converted into a detention centre for political prisoners. In 1956, C.V. Devan Nair (extreme right) – who became Singapore's third president in 1981 – along with (from left to right) Lim Chin Siong, Sydney Woodhull and Fong Swee Suan, his colleagues from the People's Action Party (PAP), were detained on St John's until the PAP was returned to power in 1959. This photo was taken by Lee Kuan Yew, the first prime minister of Singapore, in 1959. Photograph taken by the late Mr Lee Kuan Yew, courtesy of National Archives of Singapore.

Chin Siong and Sydney Woodhull, until their release in 1959 when the PAP was returned to power³⁸ in the Legislative Assembly general election that gave Singapore the right to self-government and paved the way for Lee to become the first prime minister of Singapore.

An Island Getaway

By the mid-1970s, plans were afoot to convert Singapore's southern islands into beachside holiday destinations.³⁹ In part, these developments were aimed at replacing a stretch of the shoreline at Changi that would be buried under the

new airport.⁴⁰ St John's Island would join Kusu, Sisters' Islands and Sentosa to become an idyllic getaway from the confines of the congested mainland.

Meanwhile, before any transformation into an island paradise could take place, St John's island housed a final batch of "detainees": about 1,000 Vietnamese refugees fleeing their homeland, who occupied the island between May and October 1975 as they awaited resettlement in the West.⁴¹

Since 1976, St John's Island has become entrenched in the memories of a new generation of Singaporeans: as a site for offshore school camps, holiday bungalows, and wet and wild weekends at its swimming lagoons protected by walls of rock. It is also fondly known as "cat island" to some, in reference to the abandoned felines that now outnumber children in the corridors of a former primary school established in the 1950s for families of staff residing on the island.⁴²

Echoes of the past returned in 1999, when fences and barbed wire lined parts of St John's Island as the authorities braced for a wave of illegal migrants fleeing political turmoil in Indonesia.⁴³ Thankfully, the storm abated but the fences still stand, perhaps as a precautionary measure.

In the interim, the two St John's Islands were conjoined by a causeway. Further plans for a "canal-laced marine

village with recreational and mooring facilities and waterfront housing" failed to materialise as the business climate changed.⁴⁴ Singaporeans, sparked perhaps by the preservation of Chek Jawa on Pulau Ubin, also began to see their islands less as "underutilised" spaces than as treasures of national and natural heritage.

New landmarks emerged in the 2000s: a Marine Aquaculture Centre where seabass are bred, and Singapore's only offshore Marine Laboratory where researchers investigate diverse facets of marine science, ranging from giant clams to coral ecology and anti-fouling solutions for the shipping industry. Another milestone occurred in 2014 when St John's western shore was designated as part of the Sisters' Islands Marine Park.⁴⁵

A signboard at the end of the jetty invites visitors to explore the Marine Park's Public Gallery on the island's southern peak. The path from the jetty runs through compounds of barbed wire and beckons towards a row of low houses, home to the island's last residents.⁴⁶ Turn left and the trail winds past old bungalows, lush mangroves where fiddler crabs frolic at low tide, and patches of coastal forest. On the other side of the island are the former quarantine quarters turned campsites, which overlook beaches that still attract sizeable crowds on weekends.

The bustling city seethes beyond St John's seawalls, always looming but still



Scores of cats now dwell at the former school premises on St John's Island. Photo taken by Marcus Ng on 2 September 2014. Courtesy of Marcus Ng.

far enough to imagine that the island, as it was in the not-too-distant past, is not where Singapore ends, in space and thought, but a gateway to hope, to a future in harmony with its history and habitats. ♦

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CHINESE RENAISSANCE ARCHITECTURE

This unique style of architecture only reigned for five decades in China, yet several buildings in Singapore still bear the hallmarks of this hybrid form, says **Julian Davison**.

There have been several “Chinese Renaissances” in the history of the Middle Kingdom – depending on which authority one consults. For the historian, the Han (206 BCE–CE 220), Tang (618–907) and

Song (960–1279) dynasties, can each, in their own way, claim to be the Chinese equivalent to the Renaissance in the West that took place between the end of the 14th and the beginning of the 17th centuries.

Chinese Renaissance Deconstructed

When it comes to architecture, however, the term “Chinese Renaissance” generally refers to the output of a group of young Chinese architects in the 1920s and '30s who returned to China after a period of overseas study, seeking to reconcile what they had learnt of modern building technologies with a stylistic idiom that reflected traditional Chinese aesthetic

sensibilities – a kind of architectural equivalent of “Socialism with Chinese characteristics”.

Perhaps the best known of these architects was Lu Yanzhi (1894–1929), a graduate of Cornell University, who designed the Sun Yat Sen Mausoleum in Nanjing (completed 1929). Another was Dong Dayou (1899–1975), an alumnus of Columbia University, who wrote an article in the English-language *T'ien Hsia Monthly* in 1936 extolling the achievements of this pioneer generation of Chinese architects:

“A group of young students went to America and Europe to study the fundamentals of architecture. They came back to China filled with ambition to create something new and worthwhile. They initiated a great movement, a movement to bring back a dead architecture to life: in other words, to do away with poor imitations of Western architecture and to make Chinese architecture truly national.”¹

Given the historical background of this period, the Chinese Renaissance,

as an architectural movement, can be seen as part of a wider call for renewal and revitalisation of Chinese society and culture taking place at the time. This came on the back of more than half a century of foreign interference in China's affairs, following the disastrous Opium Wars of the mid-19th century that ceded Hong Kong to Britain and established treaty ports in China.

The Christian Influence

But if the term Chinese Renaissance perfectly captures the spirit of those times and the ambitions of the young architects who sought, quite literally, to build a new China, the origins of the movement can be traced back to the architecture of Christian missions stations a quarter of a century earlier.

Although the intent of the mainly American Christian architects who designed these buildings was by and large the same as the Chinese architects who followed them a generation later – namely, to find a middle ground between Eastern and Western building typologies – their motivation was quite different. These Christian architects

were not so much interested in a renewal and rejuvenation of Chinese society and culture, but rather were more intent on luring potential Chinese converts away from their traditional belief systems – Buddhism, Taoism, Confucianism and ancestral worship – and persuade them to embrace a Christian god.

One of the earliest examples of an East-West architectural pairing in China is a remarkable structure – a church with a belfry in the form of a Chinese pagoda – erected by Catholic missionaries in Guiyang, southwest China, in the mid-1870s. Named St Joseph's Cathedral, it is, perhaps, no more than a case of cultural appropriation – making do with the materials available at the time – than a purposeful attempt to create a new architectural style that took the design aesthetics of the West and infused them with an Eastern sensibility.

By the turn of the century, however, Christian missionaries in China were acknowledging the fact that churches built in an overtly European style – Gothic was the architecture of choice back then – could seem alienating and even intimidating to their Chinese audience. And not only churches, but also schools, hospitals, orphanages and other buildings associated with the typical mission station in China in the late 19th century.

Jeffrey Cody, a leading historian in the field of Christian missionary architecture in China, writes: “As they [the missionaries] sought to educate, proselytize and convert Chinese, they

(Facing page) The China Building on Chulia Street, which served as the old headquarters of Oversea-Chinese Banking Corporation, 1964. The building was designed by Keys & Dowdeswell in 1929. It was a five-storey Deco block capped with a Chinese pavilion. *All rights reserved, family of Kouo Shang-Wei and National Library Board, Singapore.*

(Below) Interment of Sun Yat Sen, 1 June 1929. His mausoleum, which was designed by Chinese architect Lu Yanzhi, is situated at the foot of the second peak of Mount Zijin in Nanjing, China. *Image source: Wikimedia Commons.*

(Below right) St Joseph's Cathedral in Guiyang, China, erected by Catholic missionaries, mid-1870s. It represents one of the earliest examples of an East-West architectural pairing in China. *Courtesy of Julian Davison.*



Anthropologist, architectural historian and former Lee Kong Chian Research Fellow, **Dr Julian Davison** lives in Singapore where he works as a writer and television presenter, specialising in Singapore architecture and local history. His latest book, *Swan & Maclaren: A Story of Singapore Architecture*, will be published in 2018.



(Above) Singapore has its share of buildings in the Chinese Renaissance style, mostly dating from the post-war era. These include (from the left): Nanyang University Library and Administration Building, *Wong Kwan Collection*, courtesy of National Archives of Singapore; Singapore Chinese Chamber of Commerce, *courtesy of Julian Davison*; and C. K. Tang department store, *Chiang Ker Chiu Collection*, courtesy of National Archives of Singapore.

(Below) University of Nanking campus in Nanjing, China, 1920. Designed by American architect William Kinne Fellows (1870–1948), the university is an outstanding example of the Chinese Renaissance style in “collegiate” mode. *Image source: Wikimedia Commons.*

tried to strike a culturally harmonious chord with their buildings.”²

One of the first missions to adopt this approach was the Canadian Methodist Mission in Chengdu, China, which started adding Chinese-style roofs to its West China Union University campus buildings from around 1910 onwards. As a Foreign Missions Report from 1914 explained, five years of deliberations had “resulted in the adoption of an Orientalized Occidental type of architecture. The buildings... express the harmony and spirit of unity that pervades the entire institution and the purpose to unite in one the East and West”.³

Before long, other missions followed suit. Between 1911 and 1917, there were at least four other large-scale building projects initiated by Christian missionaries in China that sought to introduce Chinese architectural features into their plans for Christian schools and colleges in China. These include Shandong Christian University in Jinan, St John’s University

in Shanghai, Ginling College for women in Nanjing, and University of Nanking campus, also in Nanjing.

A precedent had been established and thereafter it became the norm for schools and universities, and later, other kinds of civic buildings – town halls, museums, municipal offices – to proclaim their Chinese-ness by incorporating traditional Chinese architectural features in their overall design, though often this meant no more than placing a token Chinese-style roof on what was otherwise an entirely Western construction.

When it came to the turn of young Chinese architects working in China just after the end of World War I, many of whom had at one time or another been employed by Henry Killam Murphy (1877–1954), the leading American exponent of college campus architecture in a contemporary Chinese style, it was only natural that they should follow suit. But there was a marked difference in their thinking.

What had originally been conceived as a way of persuading the Chinese to abandon their traditional beliefs for the Christian faith was now turned on its head and seen as an expression of Chinese nationalism and self-regard – the physical embodiment of Chinese aspirations in the modern world. A famous instance of this and one that has a Singapore connection is Xiamen University (previously known as Amoy University), founded in 1921, which was

largely financed by a massive endowment from Singaporean industrialist Tan Kah Kee.⁴

The Chinese Renaissance, as an architectural movement, was relatively short-lived in mainland China – around 50 years in all – beginning with the early experiments of the Christian missionaries at the turn of the 19th century to the defeat of the Nationalist Government in 1949 and the proclamation of the People’s Republic of China. After that, the style fell out of favour on the mainland. It continued, however, to be popular in Taiwan where there are a number of notable Chinese Renaissance buildings from the 1950s and beyond. Examples include Nanhai Academy campus (1950–60s); Grand Hotel (1953–73); National Place Museum (1965); and National Theatre and Concert Hall (1987) – all of which are found in Taipei and its vicinity.

Singapore’s Chinese Renaissance

Singapore too has its share of buildings in the Chinese Renaissance style, mostly dating from the post-war era. These include Nanyang University Library and Administration Building (1953–56); the old C.K. Tang department store on Orchard Road (1957–58, demolished 1982); Tuan Mong High School on Clemenceau Avenue (Teochew Centre today) (1958–63); Kheng Chiu Building on Beach Road that houses the Hainanese clan association and Tin Hou Kong temple

(1959–63); Singapore Chinese Chamber of Commerce on Hill Street (1960–64); and Chung Cheng High School (Main) Administration Building (1965–68).

The parallels with pre-war China and post-war Taiwan are self-evident. Although these buildings – an exception being Chung Cheng High School – belong, somewhat paradoxically, to the years immediately before independence, they are all about nation-building and the quest for a new architectural identity in the post-colonial era – a style that was at once modern but also reflected local (i.e. non-Western) sensibilities and history. Apart from Kheng Chiu Building on Beach Road which was designed by the British architectural practice, Swan & Maclaren, the other buildings are the work of Singaporean architects – Ng Keng Siang, Ang Kheng Lang and Ee Hoong Chwee – all of whom, one assumes, shared similar goals and aspirations with their confrères in China and Taiwan.

Before the World War II, however, the circumstances surrounding the erection of first-generation Chinese Renaissance buildings in Singapore were rather different, though even here one finds parallels with China, since it was Christian missionaries who introduced the Chinese Renaissance style of architecture to Singapore.

Telok Ayer Chinese Methodist Church

The earliest example of Chinese Renaissance architecture in Singapore is the Telok Ayer Chinese Methodist Church in Telok Ayer, commissioned by the American Methodist Mission and erected between 1923 and 1925. Its architects were Messrs Swan & Maclaren, the leading architectural practice of the day, with Denis Santry the man responsible for drawing up the plans. His brief was to design an “institutional church” in the heart of Chinatown that would serve the needs of Chinatown’s burgeoning Christian community – the term “institutional church” in Methodist parlance meaning a place where worship, education and recreational activities all come together under one roof.

Up until this time, most church buildings erected in Singapore were in the Gothic Revival style, which was the architecture of choice for ecclesiastical buildings in late 19th-century Britain.⁵ The Telok Ayer Chinese Methodist Church completely broke with that tradition, and from the very outset it was clear that this was not going to be an

ordinary church with a nave, transept and pews, but rather a wholly modern structure designed specifically to meet the requirements of the client.

In terms of its construction, it was a modern four-storey, concrete-frame building with a flat roof; stylistically it

was part-Byzantine and part-Chinese in execution. Most radical of all, though, was the allocation of space. To begin with, the main congregational hall where church services were held was not on the ground floor as one might have expected, but on the floor above – a large auditorium with a



(Top) Denis Santry’s building plan of the proposed church and recreation rooms for the Telok Ayer Chinese Methodist Church, 1923. *Building Control Division Collection*, courtesy of National Archives of Singapore. **(Above)** Telok Ayer Chinese Methodist Church was consecrated by Bishop Titus Lowe on 25 April 1925. Designed by Denis Santry of Swan & Maclaren, it was a modern four-storey, concrete-frame building that was part-Byzantine and part-Chinese in design. *Lee Brothers Studio Collection*, courtesy of National Archives of Singapore.

seating capacity of 800, as well as vestries for the minister and choir. This allowed the ground floor to be used for recreational activities: games, classes, nativity plays at Christmas – in short, various amusements intended to encourage people to come to church. The third floor provided living quarters for two pastors and their families, while the top floor consisted of a roof terrace with a Chinese-style pavilion at one end that provided fine views of Telok Ayer and its environs.

Not long after work had begun on site, *The Straits Times* reported in February 1924 that this was “an entirely



new plan in Church architecture as far as this part of the world is concerned and its ingenious and effective lay-out and novel and attractive design reflect much skill on the part of the architects, Messrs Swan and Maclaren”.⁶

Completed in early 1925, the Telok Ayer Chinese Methodist Church was consecrated by Bishop Titus Lowe on 25 April the same year. In his address, Bishop Lowe noted that the “building was a new departure in the line of making a church a great and useful social centre, the idea here being to “create a social atmosphere which would make it possible for both young and old alike to enjoy the fellowship of each other”.⁷ He drew attention to the fact that the building was “distinctly Chinese”, adding that “for this matter they [the Church] were indebted to the architects... in attempting to give them a building that was characteristic of Chinese art”.

In reality, Santry’s design was no more like a traditional Chinese building than it was a conventional church, the upturned eaves of the rooftop pavilion

notwithstanding. If anything, it is more Byzantine Revival, the arcaded loggias and arrangement of the side windows within recessed alcoves contributing to this impression. All the same, it was the building’s Chinese elements that seem to have caught the untrained public eye. *The Straits Times* described the new church as being “distinctly Chinese in appearance, its most characteristic feature being a quaint gabled tower surmounting the roof, and finishing off the design of the frontage very effectively”.⁸

Chinese Methodist School (Anglo-Chinese School)

Telok Ayer Methodist Church was closely followed by another Swan & Maclaren commission from the American Methodist Mission, this time for a new school building at the summit of Cairnhill. The existing Methodist School – the forerunner of today’s Anglo-Chinese School – was located at Coleman Street at the time, next door to the American Methodist Chapel

(Left) The rear elevation of the Anglo-Chinese School at Cairnhill, showing the two-tier roof and extended eaves. *Courtesy of Julian Davison.*

(Below) Frank Brewer’s architectural plan of the proposed new building for Anglo-Chinese School at Cairnhill, 1924. *Swan & Maclaren Collection, courtesy of National Archives of Singapore.*



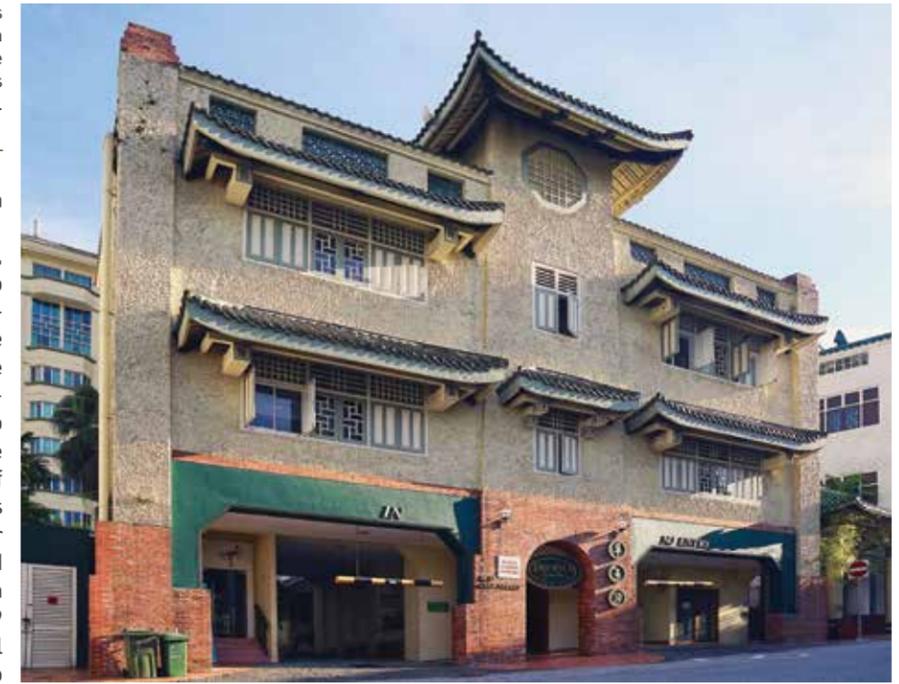
In 1925, Frank Brewer designed two blocks of flats in the Chinese Renaissance style for Eu Tong Sen, a prominent businessman and leader of the Chinese community, at 31–45 Club Street. The buildings now form part of Emerald Garden condominium. *Courtesy of Julian Davison.*

where the school had moved to soon after it was founded in 1886.⁹

By the beginning of the 1920s, the Coleman Street buildings were no longer able to accommodate the ever-increasing student population – the school was already obliged to schedule two sessions a day to cope with the existing enrolment of 1,500 pupils – and so the Mission started looking for a suitable location to expand the school. A plot of land on the summit of one of Cairnhill’s twin peaks was purchased in 1923 for \$65,000, following which the title deed was transferred to the government in return for a lease with a duration of 999 years. With the site secured, the school authorities invited Swan & Maclaren to design a building on it.

Described in the newspapers as “semi-Chinese”,¹⁰ the new Anglo-Chinese School building was completed in 1924 to a design by British architect Frank Brewer, another leading figure at Swan & Maclaren in the 1920s. Located off Oldham Lane – named after pioneer Methodist missionary William F. Oldham who was also the school’s founder – the first sight that greeted visitors to the school was its imposing three-storey entrance pavilion, which skilfully combined Chinese and Art Deco detail. At the back of the entrance pavilion were two floors of classrooms arranged around an internal courtyard, or atrium.

One of the most striking features of the building was the broad canopy roof over the ground floor windows, a feature



that was also repeated on the floor above in the three-storey block that fronted the site. Supported by massive brackets, the eaves of the canopy roof were swept up at the corners in the typical Chinese manner, as did the eaves of the main roof. As well as making an impressive visual statement, these tiered roofs worked together to cast long shadows over the external walls of the building during the middle of the day when the sun was at its highest point, shielding the classrooms within from the warming effects of solar radiation.

The internal courtyard also acted as a cooling mechanism, allowing warm air inside the classrooms to escape via the open atrium, and replaced by cooler air drawn in from the outside through

the many door and window openings, thus creating a constant circulation of air through the building (it worked like a gigantic chimney flue). This system of natural ventilation was further enhanced by the school’s breezy hilltop location, which simultaneously made the most of ambient air currents.

Eu Tong Sen’s Apartment Blocks

Frank Brewer revisited the Chinese Renaissance in 1925 when he designed two blocks of flats on Club Street for Eu Tong Sen, a prominent businessman and leader of the Chinese community. This was at a time when apartment living was just beginning to take root in Singapore.

A TIMELINE OF SINGAPORE’S CHINESE RENAISSANCE BUILDINGS

Building	TELOK AYER CHINESE METHODIST CHURCH	CHINESE METHODIST SCHOOL (ANGLO-CHINESE SCHOOL)	EU TONG SEN APARTMENTS	CLUB FOR ALAN LOKE WAN WYE	EE HOE HEAN CLUB	CHINA BUILDING (OCBC)	HOLY TRINITY CHURCH
Year	1923–1925	1924–1928	1925–1926	1925	1926	1929–1931	1940–1941
Address	Telok Ayer	Cairnhill	Club Street	Robinson Road	Bukit Pasoh Road	Chulia Street	Hamilton Road
Architect	Denis Santry, Swan & Maclaren	Frank Brewer, Swan & Maclaren	Frank Brewer, Swan & Maclaren	Frank Brewer, Swan & Maclaren	Swan & Maclaren	Keys & Dowdeswell	Ho Kwong Yew
Status	Extant	Extant	Extant	Demolished (date unknown)	Proposal (not built)	Demolished 1970	Extant

NANYANG UNIVERSITY LIBRARY AND ADMINISTRATION BUILDING	C.K. TANG DEPARTMENT STORE	TUAN MONG HIGH SCHOOL (TEO CHEW CENTRE)	SINGAPORE CHINESE CHAMBER OF COMMERCE	KHENG CHIU BUILDING	CHUNG CHENG HIGH SCHOOL (MAIN) ADMINISTRATION BUILDING	C.K. TANG AND DYNASTY HOTEL
1953–1956	1957–1958	1958–1963	1960–1964	1959–1963	1965–1968	1977–1982
Jurong	Orchard Road	Clemenceau Avenue	Hill Street	Beach Road	Goodman Road	Orchard Road
Ng Keng Siang	Ang Kheng Lang	Ng Keng Siang	Ee Hoong Chwee & Co.	Swan & Maclaren	Ho Beng Hong	Archiplan Team
Extant	Demolished c.1976	Extant	Extant	Extant	Extant	Extant

But whereas previously, this new type of accommodation had been intended for a mainly European clientele, in this instance the prospective occupants were clearly meant to be Asian; in 1925, no European would have dreamed of putting up in Chinatown, thanks to its shady reputation as a hotbed for secret societies, brothels, gambling dens and opium shops. Possibly, it was this consideration that encouraged Brewer to opt for a Chinese Renaissance-style building, which at once signalled its modernity and yet retained a characteristically Chinese flavour.

Generally speaking, many supposedly Chinese-style buildings from this period, both in Singapore and elsewhere, are little more than a pastiche – even bordering on the kitsch – since the Western architects who designed them had little real understanding of traditional Chinese architecture and were probably not too bothered to find out. Brewer's two apartment blocks for Eu Tong Sen, however, were different and went some way beyond the typical "Western-style building with a Chinaman's hat on top" approach, revealing that Brewer had at least taken the time to acquaint himself with some of the basic precepts of Chinese architectural practices and building typologies.

The basement floor of the main building (which is on the left as one heads up Club Street from the Cross Street junction), for example, with its

central, unadorned arch and fair-faced brickwork, brings to mind Chinese gateways from the Ming dynasty (1368–1644). Similarly, the slightly tapering profile of the tower is reminiscent of the classic silhouette of a Chinese drum tower.

Other "traditional" Chinese features include the canopy roofs over the windows, which rest on Chinese-style brackets protruding from the wall; one sees a similar arrangement in the canopy roofs of shophouses. The tiles were imported from China (unlike the v-shaped tiles normally used for shophouse roofs, which were manufactured locally), and came adorned with decorative, green-glazed "stoppers", or end-pieces (*wadang*), for the roof margins; the origins of the latter can be traced back to the second millennium BCE.

The upturned corners, which are every Westerner's idea of what a Chinese roof should look like, are perhaps the least successful aspect of the edifices – and smacking of Chinese tokenism – but the composition of the window mullions and transoms is convincing, as they are derived from traditional Chinese latticework patterns, albeit greatly simplified here.

Chinese Art Deco

There are several other Chinese-inflected buildings dating from the 1920s, notably Eu Court (1925), Great Southern Hotel (1927) and Theatre of

Heavenly Shows, today's Majestic Theatre (1928). All three were commissioned by Eu Tong Sen and designed by Swan & Maclaren

GENTLEMEN'S CLUBS

In 1926, the famous Ee Hoe Hean Club, otherwise known as the "Millionaires' Club" – home to wealthy Chinese businessmen, financiers, shipping magnates, tin *towkays*, rubber barons and their like – commissioned Swan & Maclaren to design new premises for them at Bukit Pasoh.

The original plans were for a Chinese Renaissance-style building, and one cannot help but draw the conclusion that members of the building committee were influenced by Eu Tong Sen's apartments at the foot of Club Street – the original Ee Hoe Hean Club (established 1895) was at 28 Club Street at the time, a stone's throw from the apartments. Although Swan & Maclaren's original building plans were beautifully executed, in the end club members decided to go for a more contemporary look, which is the building we see today on Bukit Pasoh Road. The club is still around today; the membership remains exclusively male and by invitation only.

The architectural plan showing the front elevation of the Ee Hoe Hean Club to be erected on Bukit Pasoh Road, 1927. The original plans were for a Chinese Renaissance-style building but in the end, club members opted for a more contemporary look, which is the building we see today. *Building Control Division Collection, courtesy of National Archives of Singapore.*



Majestic Theatre (left) and Great Southern Hotel (right) on Eu Tong Sen Street, 1950. Designed by Swan & Maclaren, these buildings were more Art Deco than Chinese Renaissance in design, although both bear Chinese-inspired details and decorative motifs. *Tan Kok Kheng Collection, courtesy of National Archives of Singapore.*



Maclaren, but they are more Art Deco in character, albeit with Chinese flourishes – a kind of Shanghai chic that was all the rage back then.

There was, however, one other major building from this period that managed to be both Art Deco and Chinese Renaissance at the same time. This was the headquarters of the newly created Oversea-Chinese Banking Corporation (OCBC) on Chulia Street,¹¹ which was designed by the British partnership of Keys & Dowdeswell in 1929.

Best remembered for the Fullerton Building (today's Fullerton Hotel), home to Singapore's General Post Office, which had been completed the previous year, Keys & Dowdeswell were riding the crest of a wave, having temporarily displaced Swan & Maclaren as the architects of choice for large-scale corporate commissions in the latter half of the 1920s. Other major works by Keys & Dowdeswell at this time include the Mercantile Bank of India building in Raffles Place and the Kwantung Provincial Bank on Cecil Street, as well as a six-storey office block on the corner of Finlayson Green and Robinson Road for the Dutch shipping line, Koninklijke Paketvaart-Maatschappij, or KPM for short.

The China Building, as the OCBC building was known, was Keys & Dowdeswell's only venture into the realm of Chinese Renaissance architecture – a massive, five-storey Art Deco block capped with a Chinese pavilion wrought in reinforced concrete – but it made a huge impact.

Much of the building's Art Deco-style ornamentation was modelled after the firm's Fullerton Building – similar detailing was used for its Capitol Theatre and the adjoining four-storey apartment-cum-shop complex known as Namazie Mansions at the corner of Stamford and North Bridge roads in 1930, giving rise to the term "GPO architecture" – but the attic storey was full-blown Chinese Renais-

Holy Trinity Church at Hamilton Road was designed by Ho Kwong Yew in 1940 for the Anglican Foochow congregation. The building has Chinese-style roofs and fenestration. *Courtesy of Julian Davison.*



sance with its imitation roof brackets (*dougong*) supporting upturned eaves surmounted with stylised "dragon" ornaments (*chiwen*) at the four corners.

The OCBC building was the last major Chinese Renaissance-style building to be erected by British architects in pre-war Singapore. At this early stage, it was almost exclusively British architects who embraced the Chinese Renaissance style. Local architects were not much inclined to take up the cause until after World War II. Why was this so?

Many local architects who qualified to practice under the Architects Ordinance of 1926 were schooled in Western engineering and may have instinctively been attracted to more contemporary or "Modernistic" styles of architecture – mainly Streamlined Moderne – which exploited the potential of the latest building technologies, most notably reinforced concrete, rather than the retrospective traditionalism of the Chinese Renaissance movement.

One exception, however, was Ho Kwong Yew's Holy Trinity Church at Hamilton Road. Ordinarily, Ho was very much the Modernist, but in 1940 he was commissioned to design a new church for the Anglican Foochow congregation, which sported Chinese-style roofs and fenestration with a stringcourse inscribed with the Chinese cloud or thunder pattern (*leiwen*). *The Straits Times* described it as "the first church in Malaya built in the Chinese style of architecture",¹² but of course they had overlooked Denis Santry's church for the Methodist Mission at Telok Ayer. Completed in July 1941, Holy Trinity Church was the last building in the Chinese

Renaissance style erected before the Japanese Occupation.

After World War II, it was a different scene altogether with Singaporean Chinese architects coming to the fore, embracing the Chinese Renaissance style with gusto in response to the outpouring of nationalist fervour, although Swan & Maclaren did make one more important contribution: the Kheng Chiu Building on Beach Road.

Somewhat ironically, though, by the time nationhood was achieved in 1965, the world had moved on and Chinese Renaissance, as an architectural style, was beginning to sound like old news. The last major Chinese-style building of any consequence to be constructed in Singapore was the C. K. Tang and Dynasty Hotel complex (1977–1982), but that can hardly be thought of as Chinese Renaissance in the sense of the term as has been described here. What was seen as a rebirth was, in fact, a dead end. ♦

Notes

- Doon, D. [1936]. Architectural chronicle. *T'ien Hsia Monthly*, 3(4), 358–362. The article was republished in the online China Heritage Quarterly, June 2010, China Heritage Project, Australian National University.
- Cody, J. W. (1996, December). Striking a harmonious chord: Foreign missionaries and Chinese-style buildings, 1911–1949. *Architronic*, 5(3), 1–30, p. 1. Retrieved from iBrarian website.
- Cody, Dec 1996, p. 5.
- When it came to Tan's buildings in Singapore, however, it seems that he preferred to adopt a Western style of architecture: Edwardian Baroque for the Chinese High School at Bukit

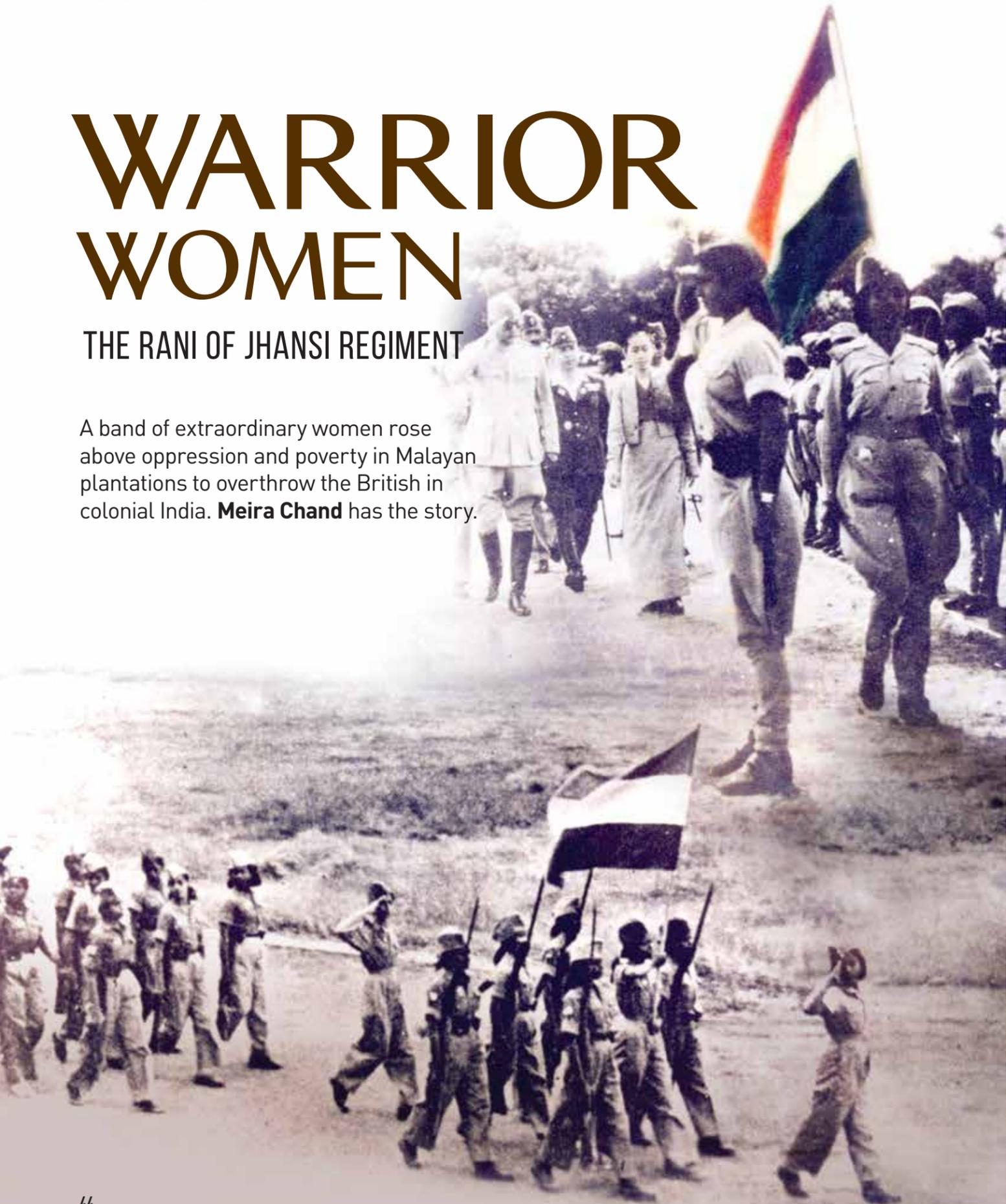
- Timah [today's Hwa Chong Institution], which was founded by Tan in 1919 [the school building dates from 1923]; Beaux Arts for his residence at Cairnhill (1926); and Art Deco for his rubber goods factory in Kallang (1930).
- Two notable exceptions are the Armenian Church, consecrated 1835, and the Cathedral of the Good Shepherd, consecrated in 1847, which are both neo-Classical in conception, but then they date from before the Gothic Revival style became popular in Britain.
- The new Chinese church. [1924, February 2]. *Malayan Saturday Post*, p. 24. Retrieved from NewspaperSG.
- Opening of Telok Ayer Chinese Church. [1925, April 27]. *The Singapore Free Press and*

- Mercantile Advertiser*, p. 8. Retrieved from NewspaperSG.
- A Chinese church. [1925, April 27]. *The Straits Times*, p. 9. Retrieved from NewspaperSG.
- It was a boys-only school in those days as girls attended their own school, known as Methodist Girls' School today, on Selegie Road.
- Anglo-Chinese School. [1928, November 19]. *The Singapore Free Press and Mercantile Advertiser*, p. 9. Retrieved from NewspaperSG.
- Oversea-Chinese Banking Corporation was formed from a merger of Ho Hong Bank, Chinese Commercial Bank and Oversea-Chinese Bank in 1932.
- New church in Horne Road. [1941, July 14]. *The Straits Times*, p. 9. Retrieved from NewspaperSG.

WARRIOR WOMEN

THE RANI OF JHANSI REGIMENT

A band of extraordinary women rose above oppression and poverty in Malayan plantations to overthrow the British in colonial India. **Meira Chand** has the story.



Meira Chand's multi-cultural heritage is reflected in the nine novels she has published. *A Different Sky*, set in Singapore, was long-listed for the International IMPAC Dublin Literary Award in 2012, and made it to Oprah Winfrey's reading list. Her new book, *Sacred Waters*, was recently published in Singapore. She has a PhD in Creative Writing.



The traditional Indian woman is invariably portrayed as modest and compliant, entirely focused on her role as daughter, wife and mother. Yet, by the same token, the image of the warrior woman is a recurring figure in Indian history, beginning in Hindu religious mythology with the goddess Durga and culminating in modern times with figures such as Phoolan Devi, the notorious bandit queen.

Female power has also been celebrated over the centuries in the works of Indian women poets and writers, and in tales of legendary women such as Chand Bibi and the Rani of Jhansi.

The Indian women who joined the Indian National Army (INA) in 1942, as the events of World War II unfolded, chose to recognise their power and agency as women in a way that reflects that alternative image. The bravery of these women in the nationalist efforts to overthrow the British in colonial India has been largely overlooked by history. The issue of gender, and the illiteracy and low caste of the majority of the Indian women allowed for their easy dismissal, and has resulted in their courage being little known or celebrated.

In trying to make sense of the historical meaning and importance of the Rani of Jhansi Regiment while researching my novel, *Sacred Waters*, I found a general scarcity of material about the women who made up this regiment. In contrast, there is a large collection of material available for those researching the male segment of the INA.

The remarkable story of these brave women deserves to be better known. But it is impossible to write about the Rani of Jhansi Regiment without mentioning the force they were part of, the INA, and its inextricable ties to the charismatic Indian freedom fighter, Subhas Chandra Bose.



(Facing page top) Subhas Chandra Bose inspecting the Rani of Jhansi Regiment and Indian National Army troops in Singapore in 1943. *S R Nathan Collection, courtesy of National Archives of Singapore.*

(Facing page bottom) Soldiers of the Rani of Jhansi Regiment marching alongside Indian National Army troops, c.1943–45. *Puan Sri Datin J Athi Nahappan Collection, courtesy of National Archives of Singapore.*

(Above) Subhas Chandra Bose, with Captain (Dr) Lakshmi Sahgal, inspecting the guard of honour presented by the Rani of Jhansi Regiment during the opening of the Rani of Jhansi camp at Waterloo Street, Singapore, on 22 October 1943. *Courtesy of Netaji Research Bureau.*

(Below) Subhas Chandra Bose (1897–1945) was a freedom fighter who fought for the liberation of India from British rule. He commanded the Indian National Army in Singapore and created the Rani of Jhansi Regiment. *Nirvan Thivy Collection, courtesy of National Archives of Singapore.*

Subhas Chandra Bose

The name Subhas Chandra Bose is little heard today, but in his own time Bose was a hero to many in India. He was a controversial and divisive figure, inspiring aversion in his opponents and adulation in his followers. Both Mahatma Gandhi (1869–1948) and Bose (1897–1945) were legendary sons of India, fighters for freedom from colonial rule, and active during the same timeframe. Yet, the means by which each man sought to achieve India's freedom could not have been more different.

Bose was 28 years younger than Gandhi, and was initially greatly influenced by the writings and ideals of the older man. However, a growing admiration for militant European fascism caused Bose's views to take a radical turn. He grew critical of Gandhi with his symbolically rustic spinning wheel and call for non-violent civil disobedience, feeling that such passivity would never achieve independence for India. Bose believed freedom could only be gained by violent means, through an invasion of the country from outside. "Give me your blood, and I will give you freedom" was his famous battle cry.

In 1941, Bose escaped house arrest by the British in Calcutta, and fled overland to Germany to petition Adolf Hitler's help in his mission. At first Hitler was supportive of Bose, allowing him to raise a small army, the Indian Legion, which

was comprised of Indian prisoners-of-war in Germany who had been captured from the British. Around this time Bose acquired the title, *Netaji*, or great leader, by which he is still remembered today. Although Hitler appeared supportive of Bose, once Germany lost the war to Russia, it was clear he was in no position to help Bose drive the British out of India. Any interest Hitler retained in Bose was reserved for propaganda victories rather than military ones, and Bose grew progressively disillusioned.





(Left) Subhas Chandra Bose arriving in Singapore on 2 July 1943. *Nirvan Thivy Collection, courtesy of National Archives of Singapore.*

(Below) Subhas Chandra Bose announcing the formation of the Provisional Government of Free India, or Azad Hind, at a rally at Cathay Building, Singapore, in October 1943. He established Azad Hind to ally with the Axis powers and free India from British rule. *Nirvan Thivy Collection, courtesy of National Archives of Singapore.*



On the other side of the world, the British stronghold of Singapore fell to the Japanese military on 15 February 1942. As had been the case in Germany, large numbers of Indian soldiers who were part of the defeated British army were taken prisoner and encouraged by the Japanese to become part of a new military force known as the Indian National Army.

With Japanese support, this force was expected to rally opposition to British colonial rule in India and spearhead a possible subsequent Japanese invasion of the country. The fledgling INA unit, however, fell apart in 1943 when its commander, Captain Mohan Singh, was arrested for insubordination to the Japanese. A new leader was sought and the Japanese settled on Subhas Chandra Bose. In Germany, World War II was not going well for Hitler, and he was only too happy to put Bose on a German submarine and pack him off to the Japanese in Singapore.

Bose arrived in Singapore on 2 July 1943 to an enthusiastic welcome from the Indian community. He immediately took command of both the Indian Independence League (IIL), a political organisation of expatriate Indians, and the INA. The latter was made up of approximately 40,000 Indian soldiers, and one of Bose's first initiatives was to encourage civilian recruits to join this army.

Beginnings of the Jhansi Regiment

Bose was from Bengal, a state that more than any other in India encouraged the education and emancipation of women. It was this principle that led him to create a regiment of women in the INA. The new regiment was formed on 12 July 1943 and Bose named it after the legendary Rani of Jhansi, who famously rode into battle against the British in 1858, and died a martyr to the Indian cause.

Reported numbers vary, but it is thought that the Rani of Jhansi Regiment consisted of well over 1,000 Indian women, spread out over camps in Singapore, Malaya and Burma (Myanmar). It is estimated that only 20 percent of the recruits were well educated women, who became the commanding officers. The remaining 80 percent were the wives and daughters of Tamil labourers who worked on the rubber estates of Malaya, and who would have been either illiterate, or have had no more than a few years of basic education.

Before large and enthusiastic rallies on the Padang and at Farrer Park, Bose set out his vision for India, and his wish that the Indian women of Singapore, Malaya and Burma – like their contemporaries in the Indian motherland – participate in the freedom movement too.

"This must be a truly revolutionary army... I am appealing also to women... women must be prepared

to fight for their freedom and for independence... along with independence they will get their own emancipation."¹

Bose's inspiring words caused women listening to him on the Padang to surge forward through police barricades, eager to fight as he demanded for India and their own emancipation.

At the time in India, the struggle for independence from British rule, more than any other impetus, encouraged women from all strata of Indian society to take greater control of their lives. They were urged to participate in a life outside the home in new but sanctioned ways, to cross the forbidden threshold into the world of men, and to work together with men for the freedom of the motherland.

The wave of Indian nationalism sweeping through the Indian diaspora at this time cannot be underestimated. On the British-owned rubber plantations of Malaya, where Tamil workers lived a degraded life set apart from other communities, they would have been well aware of the growing anti-colonial sentiments of the time. Tamil newspapers and radio carried news from India, and pictures of Gandhi hung in many places.

At the very bottom of the plantation hierarchy, Tamil workers lived in poverty and exploitation, but this sepa-

rateness allowed their Indian identity to remain intact. Even if cut off from India for two or three generations, they still spoke their native tongue and wore Indian dress in everyday life. At Hindu temples in the rubber estates, they celebrated religious festivals and practices. Hindu myth and folklore was handed down from one generation to the next, and their sense of Tamil identity remained strong.²

Stripped of their self-worth in Malaya, the motherland became a consoling image for these displaced Tamils, an India of the imagination, created out of an ancestral memory that was constantly kept alive.³ Seen through this lens – the insularity of the Tamil community and its powerful ties to India and Indian heritage – it is easier to understand why second and third generation Indians in Malaya, who had never lived in India, were stirred by the nationalistic feelings of the time, and willingly laid down their lives for the patriotic cause.

The women who volunteered to join the newly formed Rani of Jhansi Regiment were all exceptionally young, the majority in their mid- to late teens, a few are even documented as being no more than 12 or 14 years old. Most were of an impressionable age, filled with burgeoning emotions, desires and romantic dreams. In the turmoil of war, the women regiment may also have been seen by some as a safe haven where food, shelter and safety from marauding Japanese soldiers was provided.

Even so, it is astounding that Indian women, some so young as to be barely out of childhood, many illiterate and the majority mindful of their traditional roles in their society, should be prepared to leave families and husbands behind and lay down their lives for the cause of Indian freedom. Their commitment is even more exceptional when it is remembered that most had never set foot in their motherland. Yet, all were filled with passion for the cause, all empowered by the irresistible sense of adventure the Rani of Jhansi Regiment offered. Many were also a testament to Bose's personality as a powerful element in their decision to join the regiment.

Under Bose's leadership, Indian women from Singapore, Burma and Malaya, of varied caste, religion and social backgrounds, were recruited into the Rani of Jhansi Regiment to fight for India's freedom. In caste- and class-ridden India where Hindu will not eat with Muslim, where the superior Brahmin will not mix with the low-caste

labourer, where a northerner cannot speak the language of a southerner, and where the untouchable is anathema to all, the fostering of a sense of oneness was a difficult task.

Bose ordered all recruits to eat and live together whatever their differences. As they came from different parts of India and spoke different languages, they were required to learn the common language of Hindustani as a means of communication. Bose also introduced the Roman script for writing Hindustani in order to overcome the conflict of using multiple regional Indian scripts.

Those Ranis whose testimony has been recorded all bear witness to how quickly feelings of differences fell by the

wayside, and how the tight knit bonds of being a community of women motivated by a powerful cause overrode everything else. This sense of community forged alliances and collaborations across diverse boundaries, firing up everyone with the commitment of female comradeship and the commonality of shared experiences.

The Making of Women Warriors

The women in the Rani of Jhansi Regiment received the same basic military training as male INA recruits. For many, the early experiences of military life would have been a difficult rite of passage. When the women first joined the regiment, the unshackling of traditional ways could not



(Top) Women volunteering to join the Rani of Jhansi Regiment, 1943. *Image source: Lebra, J. C. (2008). Women Against the Raj: The Rani of Jhansi Regiment. Singapore: Institute of Southeast Asian Studies. (Call no.: RSING 954.035 LEB)*

(Above) Soldiers of the Rani of Jhansi Regiment undergoing training, c.1943-45. *Image source: Bose, S.K., & Sinha, B.N. (Eds.). (1979). Netaji: A Pictorial Biography (p. 176). Calcutta: Ananda Publishers Pte Ltd. (Call no.: R 954.0350924 NET)*

have been easy, especially for uneducated girls from the plantations.

The discarding of conventional feminine reticence, ingrained through centuries of Indian custom, and the learning of military aggression was akin to building a new personality. The wearing of military uniforms – shorts, jodhpurs, fitted shirts and belts that cinched the waist – revealed the body in an unaccustomed way that may have been shameful for some of the girls.

A fighting force, ready for war, has no time for vanity, and the shedding of their long tresses, a source of pride for all Indian women, must have also been painful to many. Yet, most of the women quickly adapted to the empowerment their new life brought, and the demand for growth it made on their character. In their new role they were soldiers first before they were women.

Although for educated recruits, the Rani of Jhansi Regiment presented an opportunity to assert their identity as women and as Indians, for the illiterate it was above all a chance to gain self-respect for the first time, to escape the abuse and contempt they experienced on a daily basis on the plantations. For many, this change of status had an enormous psychological effect. In her memoir, *A Revolutionary Life* (1997),⁴ Lakshmi Sahgal (see text box), a doctor

in Singapore who rose to command the Rani of Jhansi Regiment, points out that while on the plantations the women were treated like cattle and sexually exploited, in the Rani of Jhansi Regiment they found dignity as individuals and pride in fighting for the nation.

For better or for worse, the Rani of Jhansi Regiment was never sent to the frontlines. After their military training, many recruits opted to become nurses and work in hospitals near war zones in Burma, but a large number of women remained as active reservists, always waiting – and expecting – to be sent to the front.

Soon after World War II ended, a diary was published in India asserting that some of the women in the Jhansi Regiment did see actual action in the field. *Jai Hind: The Diary of a Rebel Daughter of India with the Rani of Jhansi Regiment* created a great stir when it was anonymously published in 1945, but it was later found to be a fictionalised account written by a male journalist, A.D. Shenth.

Those ageing Ranis I interviewed for my novel, so many decades after the war, still spoke of Subhas Chandra Bose with intense emotion. Indeed, the influence of Bose's personal charisma pervades almost everything that has been written about him. Perhaps it is

permissible to speculate that many of the Ranis, along with the motivation of patriotism in joining the regiment, may have found in Bose the romantic ideal that traditional Indian society – along with arranged marriage and female repression – denied them.

No tales of impropriety have ever come to light in Bose's leadership of these young women; he was known to be a dedicated, caring and paternalistic leader. In the minds of the Ranis, they were *his* Ranis, and Bose spoke of them as *my girls*. Bose himself openly acknowledged the "grave responsibility" of persuading young women to leave their homes and take up arms.⁵

The End of World War II

The devastation wreaked by the atomic bombs on the Japanese cities of Hiroshima and Nagasaki by American warplanes in the first weeks of August 1945 set off a series of events that brought World War II to a rapid close. When the British returned to Malaya in September, Bose kept good his promise to the young women under his command by returning them safely to their families. Within days of the conclusion of the war, Bose was killed in a plane crash in Taiwan as he tried to escape to Russia or Manchuria.

LAKSHMI SAHGAL

As the daughter of politically active parents, Lakshmi Sahgal (born Lakshmi Swaminathan; 1914–2012) was made aware, from a young age, of anti-British sentiments in India and the fight for political freedom. After completing high school, she chose to study medicine and obtained her medical degree in 1938.

Fiercely independent, Sahgal left an unhappy marriage to follow a lover, who was also a doctor, to Singapore in 1940. During the Japanese Occupation, she became involved with the Indian Independence League. In 1943, Subhas Chandra Bose arrived in Singapore to take command of the INA, and Sahgal, as a prominent woman activist, was part of the official reception committee that met him at the airport.

When Bose announced his wish to create the Rani of Jhansi Regiment, Sahgal was quickly drawn into the organising of this new force. At Bose's request she took up its com-

mand, establishing a camp and recruiting young women to the force. Sahgal became known as Captain Lakshmi, a name and identity that would remain with her for life.

In Singapore, in October 1943, Bose formed the Provisional Government of Free India, or as it was more simply known, Azad Hind, and Sahgal was included in his cabinet. Later, in Burma, she established more camps and organised relief work. When the war ended in 1945, Sahgal was taken prisoner by guerrilla fighters, and made to march through the jungle for days. In 1946, she was handed over to the British in Rangoon, and subsequently repatriated to India and released.

In 1947, Sahgal married Prem Kumar Sahgal, a former officer who left the British Indian Army to join the Indian National Army (INA). Along with other fellow INA officers, her husband was put on trial for treason at the Red Fort in Delhi. However, the charge was not upheld, and he was dismissed from the British Indian Army. The couple then settled in Kanpur in the state of Uttar Pradesh, where Sahgal established her medical practice.

In her later years, Sahgal joined the Communist Party of India (Marxist) and was a founding member of the All India Democratic Women's Association. She passed away on 23 July 2012, at age 97.



Dr Lakshmi Sahgal took up command of the Rani of Jhansi Regiment and became known as Captain Lakshmi, a name and identity that would remain with her for life. *Image source: IASPaper.net.*

His death still remains shrouded in mystery and speculation, and has attained the status of myth. Many questions remain unanswered, queries that only time and the release of still-classified documents in India will put to rest.

Bose's tragic death came as a shock to all who knew him, and history continues to evaluate his contribution to India's independence in 1947. Yet, history has never dealt squarely with the women of the Rani of Jhansi Regiment, and their courage has been inadequately celebrated. Their gender prevented them from being taken seriously, and indeed the Japanese military was resolutely dismissive of them.

At the end of the war when the INA was dissolved, most of the women were still very young, with their entire lives ahead of them. On their return to Malaya, they were quickly released, rejected by the returning British Military Administration as misguided females carried away by romantic notions. In contrast, the professional male soldiers of the INA were sent to stand trial at the Red Fort in Delhi, where it was expected they would be hung as traitors. The Red Fort Trials, however, collapsed under the pressure of Indian unrest, but that, as they say, is another story.

Many educated women from the officer class of the Rani of Jhansi Regiment later entered professional careers, and much of what we know about the regiment today is largely because of this group of women and the more public nature of their activities. Unfortunately, the majority of women in the rank-and-file regiment returned to the same disempowered situations they had left behind when they first signed up; they married and raised families, and became cloistered again in traditional social structures.

Still others were repatriated to India, a country unfamiliar to them, and died there in poverty and obscurity. Some ex-officers of the Jhansi Regiment worked to secure pensions from the Indian government for these women, but often to no avail.⁶ Illiteracy prevented many women from being aware of their elevated status as freedom fighters, or that pensions could be extracted from the Indian government because of their status. Their low social position, and lack of knowledge and education made it easy for the Indian government to refuse such pension payouts.⁷

Yet, without exception, those Ranis I interviewed or those whose recorded testimonies I have read or listened

to, all remember their service in the regiment – whatever the dangers and privations they endured – as the best time of their lives.

It is sad that the endeavours of these brave women have been largely forgotten by history. In her introduction to Lakshmi Sahgal's memoir, *A Revolutionary Life*, Geraldine Forbes suggests it is easy to reject their enterprise because they never saw action, were never real "female warriors" fighting alongside their men, nor "true women" fighting to death to save their children. Most male-authored accounts of the INA seldom give due reference to the role played by the women in the Rani of Jhansi Regiment. Forbes laments that so many decades after the war when many historians are committed to a more inclusive view of events, this lack of acknowledgement is regrettable.⁸

The Rani of Jhansi Regiment comprised a relatively small number of women, and they were operative for only the last two years of the war, between 1943 and 1945, when Bose commanded the INA. It matters not that this female regiment played a minor role in both the INA and the events of World War II. It matters not that this force of women was small and did not see action at the frontlines. That such a force should have been established at all in that day and age in history is in itself of tremendous importance.

Bose's motivations for starting the regiment can be endlessly argued, but what matters is that it utterly transformed the lives of the traditional women who joined it. These women entered a scenario where the patriarchal code was at its most inflexible, and where they represented an embodiment of female agency and resistance.

Although so many of the Jhansi Ranis returned to their traditional societies after the war, and others lived out their lives in poverty in India, their brief experience of empowerment would have been orally related to their daughters and other female members of their households, and would have helped sow the seed for change in later generations of women.

In India, recent renewed interest in the Rani of Jhansi Regiment has rekindled discussion of their role in the struggle for Indian independence. It is hoped that with this renewed interest, acknowledgement will at last be given to this small band of extraordinary Indian women. ♦



Meira Chand's new novel, *Sacred Waters* (2017), is published by Marshall Cavendish Editions and retails for S\$21.50 at major bookshops. It is also available for reference and loan at the Lee Kong Chian Reference Library and selected public libraries (Call nos.: RSING 823.914 CHA and SING CHA).

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FOUR TAPS

THE STORY OF SINGAPORE WATER

From a hole in the ground to running water at the turn of the tap. **Lim Tin Seng** tells us how far Singapore has come in its search for water.

Lim Tin Seng is a Librarian with the National Library, Singapore. He is the co-editor of *Roots: Tracing Family Histories – A Resource Guide* (2013), *Harmony and Development: ASEAN-China Relations* (2009) and *China's New Social Policy: Initiatives for a Harmonious Society* (2010). He is also a regular contributor to *BiblioAsia*.

Water has and will always be a precious resource in Singapore. In 2015, the Washington-based World Resources Institute identified the city-state as one of 33 out of 167 countries most likely to face extremely high water stress by 2040.¹ To help overcome the absence of natural water bodies, the government has come up with innovative ways to expand and diversify Singapore's water resources.

Over the decades, PUB, Singapore's national water agency, has created a sustainable supply from four sources: water from local catchment, imported water, high-grade reclaimed water (known as NEWater) and desalinated water.² Together, these four sources, termed the "Four National Taps", have come a long way in helping Singapore meet its water needs.

Early Water Supplies

Securing a sustainable water supply is key to Singapore's development, a fact recognised by the British since the time of Stamford Raffles. One of the reasons why the British chose Singapore as a trading post was its access to fresh water. In fact, digging a well for drinking water was among the first tasks ordered by Raffles when he landed in Singapore on 28 January 1819.³

Eight months later, the British completed building a reservoir near the foot of Bukit Larangan (now Fort Canning Hill).

Despite being rudimentary, the reservoir had an aqueduct that carried water to a plaster-lined tank sited at the edge of the Singapore River.⁴ The tank had a spout so that skiffs (small boats) dispatched by the larger ships anchored in the harbour could pull up beneath the spout to collect water.⁵

The reservoir remained as the island's main water supply until the 1830s when demand exceeded its capacity. It was subsequently replaced by a system of wells that were dug around the hill.

As demand for water continued to grow in tandem with Singapore's development as a trading port, the British realised that using wells to supply water to visiting vessels was unsustainable as the low water rate – at a piddling four gallons per minute – was too slow. This meant that ships had to wait for several hours before they could fully replenish their water supply. Those whose patience wore thin resorted to obtaining contaminated water from the Kallang River.⁶

The First Reservoirs

In 1823, the British Resident John Crawford proposed spending 1,000 Spanish dollars to build a new reservoir, but this did not materialise. In 1852, the Government Surveyor and Engineer John Turnbull Thomson suggested drawing water from the "Singapore Creek" – an early reference to the Singapore River. The lack of government support and public interest, however, scotched this plan. Five years later, in 1857, the idea of having a proper reservoir resurfaced again when Tan Kim Seng, a wealthy Straits Chinese merchant, donated 13,000 Straits dollars to the local government to improve the town's water supply.⁷

Tan's offer could not have come at a better time: the population had grown eightfold from 10,683 in 1824 to 81,734 in 1860, and in their desperation, people turned to contaminated wells and streams for their water needs.⁸ With Tan's donation, the government began making plans in January 1858 for a new reservoir and waterworks. But when cost estimates ballooned to 100,000 Straits dollars, the Bengal Presidency in Calcutta, which administered the British colonies in the Far East, refused to sanction the project. The reservoir and waterworks were put on hold until 1862 when the Bengal government agreed to fund half the project.⁹ The remaining half was raised through a loan in 1864.

The new Impounding Reservoir (renamed Thomson Road Reservoir in 1907 and thereafter as MacRitchie Reservoir in 1922) began operations

in 1877, exactly 20 years after Tan Kim Seng's philanthropic gesture. Located off Thomson Road, the reservoir comprised a catchment area of about 1,890 acres and a conduit made of masonry that could transport water to within 200 feet of the Singapore River.¹⁰

Managed by the Municipal Council, the reservoir used gravity rather than pumps to distribute the water. As a result, the municipality had to construct a number of service reservoirs on high ground such as hilltops. Water from the Impounding Reservoir would flow to a pumping station at the foot of the hill before being sent up to the service reservoir and distributed to households. The first of such service reservoirs was built on Mount Emily in 1878, followed by Pearl's Hill in 1898 and Fort Canning in 1928.¹¹

By the end of the 1900s, Singapore's daily water consumption had surged to 4.5 million gallons. This was due to the booming population as well as the growth of New Harbour (now Keppel Harbour).

Municipal Engineer James MacRitchie decided that the best course of action was to enlarge the Impounding Reservoir. Carried out between 1891 and 1894 and at a cost of 32,000 Straits dollars, the expansion works increased the capacity of the reservoir.¹²

However, the enlarged reservoir could barely meet with the increased demand during prolonged periods of dry weather. To relieve the pressure, the municipality had to curtail water supply to as few as two hours per day. It also resorted to supplementing the water supply with well water despite its inferior quality.¹³

In 1905, the Impounding Reservoir's embankment was raised to further increase its capacity. To obtain the additional water, a tunnel was dug to connect the reservoir to Kallang River. While the construction of the tunnel was still underway, Municipal Engineer Robert Peirce proposed constructing an embankment across the valley of Kallang River to create a second reservoir in 1902.¹⁴



(Facing page) Children splashing themselves with water at a standpipe in a village in Geylang Serai, 1960s. The government installed standpipes to provide water to residents who had no taps in their homes. Courtesy of National Archives of Singapore.

(Top) The service reservoir on Mount Emily as photographed by G.R. Lambert & Co., c.1880s. It was built in 1878 to receive water from the Impounding Reservoir in Thomson Road and distribute it to households. Courtesy of National Museum of Singapore, National Heritage Board.

(Above) Thomson Road Reservoir c.1910. Known as the Impounding Reservoir when it began operations in 1877, it was renamed Thomson Road Reservoir in 1907 and MacRitchie Reservoir in 1922. Lim Kheng Chye Collection, courtesy of National Archives of Singapore.

Kallang Reservoir – renamed Peirce Reservoir in 1922 and Lower Peirce Reservoir in 1975 – was officially opened in 1911 at a cost of around one million Straits dollars. Capable of producing at least 3.5 million gallons of water each day, the new reservoir together with the enlarged Thomson Road Reservoir (known as Impounding Reservoir until 1907), supplied the town of Singapore with 9 million gallons of water daily.¹⁵

While the two reservoirs provided enough water in the first decade of the 1900s, there were concerns whether this was sustainable, especially since the population had swelled from 300,000 in 1910 to almost 420,000 in 1920. During the same period, the average daily consumption of water had risen to over 10 million gallons, beyond the capacity of the two reservoirs.¹⁶

Peirce warned that the water situation would end in “disaster” unless “large and bold measures [were] taken to improve the water supply without delay”. The Municipal Council’s initial solution was to construct a third reservoir at Seletar (renamed Upper Seletar Reservoir in 1992), which was envisaged to have a capacity of 700 million gallons.¹⁷ But the project was subsequently scaled down to a smaller reservoir that supplied only 2 million gallons of water a day in favour of something far more ambitious – the Johor water scheme.¹⁸

Water from Across the Border

The Municipal Council had explored the idea of importing water from Johor from

The Central Catchment Nature Reserve occupies over 2,000 hectares of forest and is home to a rich biodiversity of flora and fauna. MacRitchie, Upper Seletar, Upper Peirce and Lower Peirce reservoirs are located within the reserve. *Photo by Richard W.J. Koh.*



as early as 1904 after Peirce predicted that Singapore would continue to face chronic water shortages even if it were to develop all its potential water resources on the island. Over the next decades, Scudai River, Linggiu River (a tributary of Johor River) and Pelapah River in the state of Johor were identified as potential water sources for Singapore (see text box below).¹⁹

Finally, in 1923, the Municipal Council concluded that the best solution was to obtain water from Gunong Pulai in Johor due to its height. Located some 32 miles from Singapore and standing at 770 feet, Gunong Pulai allowed water to be delivered to the island by gravity,

which was the most economical means.²⁰

Development of the Gunong Pulai scheme, which cost 22 million Straits dollars, involved the construction of a series of dams to create a 1.2 billion-gallon impounding reservoir at the mountain’s ridge in 1927 and a second 3.2 billion-gallon reservoir located some 5 miles away in Pontian Kechil in 1931. As the latter reservoir was situated on lower ground, the water had to be pumped to Gunong Pulai’s waterworks for treatment and then piped across the Causeway.²¹

With water supply boosted by the Johor reservoirs, it was initially thought that Singapore had met its water require-

WATER AGREEMENTS WITH MALAYSIA

Singapore and Malaysia have signed four water agreements regarding the supply of water from across the Causeway.

- **5 December 1927:** This agreement allowed Singapore to lease 2,100 acres of land in Gunong Pulai at an annual fee of 30 sen per acre for the purpose of supplying raw water to the island. Singapore was not charged for the water.
- **2 October 1961** (Tebrau and Scudai Rivers Water Agreement): Replaced the 1927 agreement and allowed Singapore to draw water from Gunong Pulai, Tebrau River and Scudai River for a period of 50 years. Singapore

paid an annual rent of RM5 per acre and 3 sen for every 1,000 gallons of raw water it drew. After the agreement expired in 2011, Singapore handed over to the Johor State government the Gunong Pulai and Scudai waterworks as well as the pump houses at Pontian and Tebrau without any charges and in good working order.

- **29 September 1962** (Johor River Water Agreement): This agreement is still in effect today and allows Singapore to draw 250 million gallons of water per day from the Johor River for a period of 99 years until 2061. Singapore pays rent for the land it uses “at the standard rate applicable to the use made of such lands and in particular building lots on town land”. It also pays for the water it draws at the rate of 3 sen per 1,000 gallons.

- **24 November 1990:** This agreement supplements the 1962 water agreement and is still valid today. The agreement allows Singapore to purchase treated water from Johor in excess of the entitlement of 250 million gallons per day of untreated water under the 1962 agreement. Singapore bore the cost of constructing a dam across Linggiu River and maintaining it. Singapore also paid a one-time upfront payment of RM320 million as compensation for the loss of land use, a premium of RM18,000 per hectare and rentals for the remaining tenure of the agreement calculated at an annual rent of RM30 per 1,000 square feet (0.02 acre). The 1990 agreement will expire in 2061, along with the 1962 agreement.

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ments for at least 20 years. However, the introduction of a waterborne sewage system and an increase in British troops in Singapore led to an unexpected surge in water consumption to 25 million gallons a day by 1940. In response, the Municipal Council embarked on a plan in 1939 to turn Seletar into a permanent reservoir with a daily yield of at least 4 million gallons. The project, which cost 5.6 million Straits dollars, also involved the construction of a second Pontian Kechil-Gunong Pulai water pipe to increase capacity. With these improvements, Singapore’s daily water supply increased to over 31 million gallons.²²

The continued rise in population – from 570,000 in 1940 to nearly a million in 1947 – again cast a spotlight on Singapore’s water woes.²³ Since the daily water supply stayed relatively unchanged during the Japanese Occupation and the immediate post-war period, the increase in consumption meant that Singapore was once again facing the crisis situation it experienced during the early 1900s.²⁴ To address this issue, the Municipal Council curtailed water supply and launched a Save Water campaign in 1950 to reduce consumption.²⁵

In urgent need of more water, the Municipal Council – renamed the City Council in 1951 – looked for a new water source in Johor and decided on Tebrau River.²⁶

Completed in 1953, the Tebrau waterworks alleviated the water situation in Sin-

gapore by adding at least 20 million gallons of water to the colony’s daily supply. This brought the daily total supply to at least 56 million gallons, surpassing the daily consumption of 52 million gallons. Initially, the City Council wanted to expand the Tebrau waterworks, but the winding down of the Communist-related Emergency from the late 1950s allowed the Johor River scheme to be revived in 1958 and finalised in 1961.²⁷

When the new waterworks at Johor River began operations in 1968, at least 30 million gallons of water were delivered daily to Singapore. While the authorities were planning the Johor River scheme, they also built another waterworks at Scudai River in 1965.

Known as Sultan Ismail Waterworks, it provided Singapore with another 30 million gallons of water each day. The additional water supply from the Johor River and Scudai schemes was timely for Singapore as the island’s daily water consumption had more than doubled by this time, from 52 million gallons in 1955 to 110 million in 1970. This was largely due to a population boom in the 1960s as well as the growth of the shipping, services and industrial sectors.²⁸

Securing Domestic Water Resources

Although the water supply from Johor helped to relieve the water crisis in the 1950s and 60s, the government had already



recognised its heavy dependence on Johor for water. This was evident during the Malayan Campaign when the water supply from Johor was abruptly cut in January 1942 after the British, in a bid to slow down the advancing Japanese forces, blew up the Causeway and with it the main water pipe system from Gunong Pulai.²⁹

In 1963 when both the Johor River and Scudai schemes were still under construction, coupled with the prolonged dry weather, Singapore’s water supply fell to critically low levels, thereby forcing the PUB – formed in 1963 to take over the utilities departments from the City Council – to impose a 10-month-long water rationing exercise between April 1963 and February 1964.³⁰

In 1950, the Municipal Council had commissioned a study to investigate

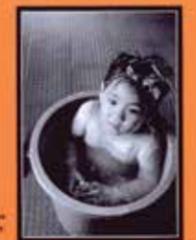
(Top right) In an age when people had to collect water from standpipes, public education was vital in water conservation. *Courtesy of PUB, Singapore’s national water agency.*

(Below) Then Prime Minister Lee Kuan Yew visiting the Sultan Ismail Waterworks construction site at Scudai River in May 1964. Completed in 1965, the waterworks provided Singapore with another 30 million gallons of water each day. *Ministry of Information and the Arts Collection, courtesy of National Archives of Singapore.*

(Below right) A 2001 poster by the Public Utilities Board exhorting people to save water. *PUB Collection, courtesy of National Archives of Singapore.*



**WOULD YOU
USE WATER MORE
CAREFULLY IF YOUR
KIDS HAD
TO BATHE THIS
WAY?**



If you don't do something about the way you use water, you'll miss about 100 million years of the future. So don't just sit there. Use water wisely.

the availability of new water sources in Singapore. Led by the engineering firm Sir Bruce White, Wolfe Barry and Partners, the consultants recommended three methods of drawing water from the rivers: either damming or transferring the water to a larger central reservoir, tapping on groundwater in the eastern part of the island, and constructing wells and harvesting rainwater. However, in light of the revival of the Johor River scheme, the City Council did not implement the recommendations except to create a groundwater system in Bedok in 1959. Costing M\$2 million, the project was a disappointment as it yielded less than one million gallons of water a day instead of the expected 5 to 10 million gallons.³¹

After Singapore gained independence in 1965, one of the first post-independence water projects carried out by the PUB was the enlargement of Seletar Reservoir in April 1967. Upon its completion in February 1969, the S\$27-million project increased the reservoir's capacity by more than 30-fold.³²

In 1972, PUB embarked on the construction of a new S\$55-million reservoir located upstream of Lower Peirce Reservoir. Upper Peirce Reservoir was completed

in 1975 and officially opened in February 1977 with a water storage capacity seven times that of Lower Peirce Reservoir.³³

Unprotected Catchments

MacRitchie, Upper Peirce and Lower Peirce reservoirs are located in the Central Catchment Nature Reserve. As it is not possible to build new reservoirs within this gazetted nature reserve, the PUB has had to look elsewhere for water. In 1972, the agency released the first Water Master Plan, which charted the long-term development of water resources in Singapore.³⁴

One innovative method adopted by PUB was the creation of a string of unprotected catchments across the island. Unlike protected reservoirs, such catchments are located in urban areas, yielding water that is of lower quality and with higher organic matter. To improve water quality, a number of measures were taken, such as using stronger disinfectants, improving filtration methods, enforcing stricter anti-pollution controls, implementing a more efficient waste management system, and launching the Keep Singapore Clean campaign.³⁵

The Kranji and Pandan reservoirs were the first two estuarine reservoirs built in unprotected catchment areas in 1975. The S\$75-million Kranji-Pandan water scheme was formed by damming the Kranji and Pandan rivers. The two reservoirs served mainly the north-western part of Singapore, including Jurong Industrial Estate and housing estates in the area.³⁶

In 1981, dykes were built across the mouths of the Murai, Poyan, Sarimbun and Tengah rivers to transform them into reservoirs under the Western Catchment Scheme. These reservoirs supply water to the western part of the island, including Queenstown, Bukit Merah, Telok Blangah, Pasir Panjang and Alexandra.³⁷

In 1983, PUB initiated the Sungei Seletar-Bedok Water project to meet the increasing demand for fresh water in the eastern part of Singapore. Unlike the earlier two estuarine reservoir schemes, the main water source for this urbanised catchment was storm water run-off. Storm water collected from nine ponds in Bedok, Tampines and Yan Kit was channelled to Bedok Reservoir, which was created from a former sand quarry.

A second reservoir, Sungei Seletar Reservoir (renamed Lower Seletar Reservoir in 1992), was formed by damming Seletar River. The river water was also used to fill Bedok Reservoir (see text box overleaf).³⁸

Marina Reservoir, located in the heart of the city, is another urban reservoir. It officially opened in 2008 and was created by building a dam – Marina Barrage – across Marina Channel. Envisioned by Singapore's first Prime Minister Lee Kuan Yew in 1987, the barrage is unique in the sense that it stores water, alleviates flooding and supports recreational activities. The flood control function is enabled by a mechanism that serves as a tidal barrier to prevent rising waters from advancing inland and flooding low-lying areas. The barrage also keeps the reservoir's water level constant, making it suitable for water activities such as sailing, windsurfing and canoeing.³⁹

NEWater and Desalinated Water

Another recommendation of the 1972 Water Master Plan was the use of reclaimed water, in other words, water that has been purified to a high degree. This was, however, not an entirely new concept. Industrial water was first introduced in 1966 with the construction of Jurong Industrial Water Works by the Economic Development Board to supply non-potable water for industries. The objective was to help conserve potable water by reclaiming the effluent from Ulu Pandan Water Reclamation Plant.⁴⁰

In 1974, Singapore's Sewerage Department opened an experimental plant in Jurong that attempted to produce potable reclaimed water by using advanced membrane technologies, including reverse osmosis, to purify waste water. However, the plant was decommissioned a year later as the purification technologies available then were unreliable and expensive.⁴¹

It would take another 25 years before technological advances made it possible for PUB to revisit the idea of producing potable reclaimed water. The Singapore Water Reclamation Study (NEWater Study) conducted in 1998 revealed that water reclamation was a growing trend globally and that membrane-based purification technologies had become more reliable and cost efficient. This led to the opening of the prototype NEWater demonstration plant at Bedok Water Reclamation Plant in 2000.⁴²

A comprehensive study of NEWater was carried out between 2000 and

Waste water is treated at the Ulu Pandan NEWater Plant, which opened in 2007. Reclaimed water is today one of Singapore's Four National Taps. Photo by Richard W.J. Koh.



2002. Although the study concluded that NEWater was safe for potable use, it recommended blending NEWater with raw reservoir water and then subjecting the resulting mix to the same water treatment process as raw reservoir water. This would re-introduce trace minerals removed during the production of NEWater and make the idea of consuming treated and purified waste water more palatable to the public.⁴³

Following the successful conclusion of the NEWater study, PUB's Bedok NEWater Plant came into operation in 2002, marking the launch of NEWater as the Third National Tap.⁴⁴ Since then, NEWater plants have been built in Kranji (2003), Seletar (2004 but decommissioned in 2011), Ulu Pandan (2007) and Changi (2010 and 2017).⁴⁵ These plants are expected to meet up to 55 percent of Singapore's future water needs by 2060.⁴⁶

The 1972 Water Master Plan also recommended tapping seawater as another source of water supply. However, minerals and salts have to be removed from seawater first in a process known as desalination. Unfortunately, as the desalination technology available at the time was energy intensive and costly, the PUB decided not to adopt this method. As more energy efficient water purification methods, particularly reverse osmosis, became available in the 1990s, PUB began to relook the idea of desalinating seawater.

In 2005, desalinated water officially became the Fourth National Tap with the opening of the first desalination plant in Tuas. Hyflux's wholly owned subsidiary, SingSpring Pte Ltd, won a bid to construct a desalination plant under PUB's Design,

Build, Own and Operate (DBOO) model. This plant, which has a daily capacity of up to 30 million gallons, supplies PUB with desalinated water over a 20-year period.

In 2013, Hyflux won a second bid to construct the second desalination plant under the DBOO model to supply PUB with desalinated water over a 25-year period.⁴⁷ By 2020, Singapore is expected to commission three more desalination plants in Tuas, Marina East and Jurong Island.⁴⁸ By 2060, Singapore's total water demand could almost double, with the non-domestic sector accounting for about 70 percent. By then, NEWater and desalination would meet up to 85 percent of Singapore's future water needs.

Other Water Strategies

Conceptualised in the 1990s as a solution for Singapore's used water needs, Phase 1 of the Deep Tunnel Sewerage System (DTSS) comprises a 48 km-long deep sewer tunnel running from Kranji to Changi, a centralised water reclamation plant at Changi, two deep sea outfall pipes and 60 km of link sewers.

The heart of DTSS Phase 1, the Changi Water Reclamation Plant, is capable of treating 900,000 cubic metres (202 million gallons) of used water per day. The used water is treated to meet international standards before it is channelled to a NEWater factory for further purification or discharged into sea. At a NEWater plant, the treated used water goes through a rigorous 3-step treatment process to produce high-grade reclaimed water.⁴⁹ Projected to complete by 2025, DTSS Phase 2 can collect used water

Built across Marina Channel, Marina Barrage created Singapore's 15th reservoir, the first located in the city. The barrage serves three purposes: it stores water, alleviates flooding and supports recreational activities. Courtesy of PUB, Singapore's national water agency.



ACTIVE, BEAUTIFUL, CLEAN WATERS

Other than being one of the first urban water catchments, Bedok Reservoir was also one of three demonstration projects under the Active, Beautiful, Clean Waters (ABC Waters) Programme.

Launched in 2006 the programme aimed to turn waterways and reservoirs into recreational sites for public use by enhancing them with amenities.¹

Prior to this, the public held the view that reservoirs were out of bounds and strictly used for the collection of water.

Kayakers at Bedok Reservoir, 2011. This was one of three demonstration projects under the Active, Beautiful, Clean Waters (ABC Waters) Programme launched in 2006. Reservoirs were beautified with pathways, trees and street lights, and some were even opened for recreational purposes. Photo by Richard W. J. Koh.



As Prime Minister Lee Hsien Loong quipped, “Our old attitude was, the water is for the reservoir, don’t go near it, keep far away, keep it clean, no canoeing, don’t walk near it, if possible, don’t even look at it”.²

However, the ABC Waters Programme became a game changer. Selected reservoirs and waterways in Singapore received extensive makeovers. Street lamps were installed, trees were planted and proper pedestrian access was provided. In some cases, even fishing decks and pontoons for boats and kayaks were added.³

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from the western and southern parts of Singapore for treatment at the proposed Tuas Water Reclamation Plant.

To overcome the limited capacity of existing reservoirs, PUB implemented the Reservoir Integration Scheme in 2007. This scheme uses a system of pipelines and pumps to connect reservoirs so that excess water can be transferred from one reservoir to another, thereby optimising their capacity.⁵⁰ In 2011, the total number of reservoirs in Singapore increased to 17 when two more were created when dykes were built across the mouth of Punggol and Serangoon rivers.

PUB is also making strides in water technologies by partnering overseas firms. One recent example is the trial of a new desalination method in 2015 with American company, Evoqua Water Technologies. Known as electro-deionisation, this method uses an electric field to extract dissolved salts from seawater, leaving behind fresh water. Compared with the current desalination method, electro-deionisation is significantly more efficient in terms of energy usage and cost.⁵¹

From the first well dug by the British in 1819 to a constant supply of clean drinking water flowing from taps, Singapore’s water journey – at times bumpy and peril-

ous – has come a long way since the time of Raffles. Through persistence, foresight and innovation, our water pioneers have been able to overcome massive obstacles and challenges to develop and diversify Singapore’s water sources.



ous – has come a long way since the time of Raffles. Through persistence, foresight and innovation, our water pioneers have been able to overcome massive obstacles and challenges to develop and diversify Singapore’s water sources.

At the current rate of 148 litres per person per day, Singapore uses more water than many other developed cities.

It is crucial that Singapore continues to find innovative ways to secure and sustain a robust and affordable water supply for future generations. Water rationing and lining up in snaking queues to collect water from public standpipes is a scene from the 1960s that we should not revisit. ♦

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文言与白话 的抗争与磨合

近代华文教学语体的蜕变历程

Classical and Modern Chinese education in Mainland China and Taiwan has been debated for over a century. **Chua Chee Lay** analyses its development and provides valuable lessons from history.

近半个世纪来, 海峡两岸对教科书文言与白话的取舍, 有着截然相反的立场和举措。特别是在2017年, 文白之争更趋白热化, 很值得远在数千公里外的新加坡华语文教育工作者密切关注与参考, 甚至于是深切反思与检讨。

跨过21世纪的门槛后, 在官方的推波助澜下, 中国大陆诵读经典的热潮此起彼伏, 许多家长带着孩子身穿汉服诵读《弟子规》和《论语》。从2010年起, 中国教育部、国家语委与中央精神文明建设指导委员会办公室, 还联合实施大规模的“中华诵: 经典诵读行动”。¹

这股抚今悼昔的热潮, 折射出中国社会普遍对当前以白话文为主的教科书的不满, 教育工作者还发出“救救孩子: 小学语文教材批判”的强烈呼声。² 道德危机的警钟, 一次又一次敲响人们对承载传统文化的

蔡志礼博士是美国威斯康辛大学(麦迪逊分校)东亚语言暨文学博士和新加坡国立大学教育硕士。他是一位拥有多年培训教师经验的语言教育学者。

Dr Chua Chee Lay received his PhD in Asian Language and Literature from the University of Wisconsin, Madison, and Master in Education from the National University of Singapore. He is a language educator and researcher with many years of teacher training experience.

循着历史的轨迹, 就不难发现这样的发展趋势其来有自。六七十年代的中国经历文化大革命的浩劫, 一直到八十年代都一直在价值观危机边缘徘徊, 步入九十年代后, 海外的“儒学热”和“国学热”乘虚而入, 填补了精神上无所依托的空白, 形成一股波澜壮阔的传统文化回流现象。九十年代中期的全日制普通高中语文教学大纲, 已提出语文是最重要的交际工具, 也是最重要的文化载体的观点。2000年, “弘扬祖国优秀文化”、“培育学生热爱祖国语言文字和中华优秀传统文化的思想感情”已经成为教育大纲上的首要宗旨, 排在听说读写语言技能的前头。⁴ 在这样一个绝佳的思潮优势下, 文言文就自然水到渠成, 很快就成为教学的核心, 不仅课时大增, 还要求充分发掘其审美鉴赏的价值。可见今日新教材重视文言文, 是拜“传统文化热”所赐。

正当中国大陆如火如荼地加大文言文教学的力度时, 海峡对岸的台湾官方却大唱反调, 反其道而行。2017年9月, 台湾教育部课程审议会通过提案, 将于2019年实施的12年教育课纲草案, 把高中文言文比例从45%-65%降为45%-55%; 课纲内必选的古文篇章, 从原本的20篇降到10至15篇, 此外也决议删除中华文化基本教材的选材范围,⁵ 另外, 必修课程之《论语》、《孟子》、《大学》和《中庸》的中华文化基本教材, 应考量教学节数、学生学习兴趣与理解能力, 可考虑改为能融入品德教育、生命教育、生涯发展、人权教育等议题的合适现代文本, 进一步删去经典文言的份量。其所持的理由是, 文言文是因循保守、腐化思想的八股文。现代学生不应被困在古人思想的牢笼里, 应减少接触抱残守缺的古籍, 增加台湾当地的文学内容, 强化台湾的主体性, 让学生有更多空间探讨族群、阶级和性别的议题。

提案出台后, 所如预料立即引发台湾社会大争议, 抗议文言比例降低的呼声不小, 中研院院士邀集文坛大家与跨界专业人士

发动连署, 超过五万人反对大幅调降文言文比例, 强调课纲修订应回归教育专业。事实上, 台湾教育部编辑的教科书降低文言文篇数与比例早有先例。选文篇数部编本从原有的70篇, 2010年课纲下降到40篇; 2012年再降到30篇, 现在2019年课纲仅剩20篇。在研修小组订定的课纲中, 文言文比例也从2010年课纲的55%到65%, 降至2012年课纲的45%到65%, 2019年课纲为45%到55%, 对照早期教科书的文言文比例超过70%, 降幅颇大。

程晏铃在《天下》杂志专文明确地指出, 文言文的争议乃源自于大众对台湾以考试为主导的教学所引起的集体焦虑。高中生几乎人手一本的抢救国文大作战, 参考书、考古题像是各种焦虑纷陈, 各种文章挖空等着被填满, 台湾语文教育因为服膺考试, 偏重词性与注释, 对文本只有表浅理解, 缺乏统整、批判、后设与跨领域思考。可见文白之争的背后不是语体问题, 而是教学的问题, 无关乎文体或选文。⁶

从社会语言学的角度审视, 文言与白话的矛盾冲突错综复杂, 不纯然只是教学和考试的问题, 因为文言与白话乃不同世代

的代言人, 在语言思维结构和生活习惯上有所不同。简要回顾文白之争的历史, 对我们剖析与梳理当今纷争的缘由, 应有一定的帮助。

虽说“文言文”古已有之, 但此概念却迟至晚清方以“白话文”的对立面出现。⁷ 文言是由早期口语演化出来的, 两者有着不可割舍的血脉关系。“文言”、“白话”、“白话文”与“现代华语”是四个不同的概念, 若混为一谈, 必然会剪不断理还乱。“文言”是以文字记录下来的书面语。“白话”是日常口头的应用语。“白话文”是以现代口语为基础形成的书面语, 而现代华语的历史比白话短得多。现代华语则是以北京语音为标准, 以典范的现代白话文著作作为语法规范的语言体系。让我们从语言文化传承与教学意义两个角度, 梳理分析华文教学面临的困难局面与文白之间应如何取舍, 如何磨合。

随着时间的推移, 以日常生活为活水源泉的白话在潮流中不断更新, 而以文言文书写的书面语却因与时代脱节而停滞不前, 大大限制了语言的发展和教育的普及。清末废止科举制, 为中华文化从文言转向白话提供了契机。民国初年掀起的新文化运

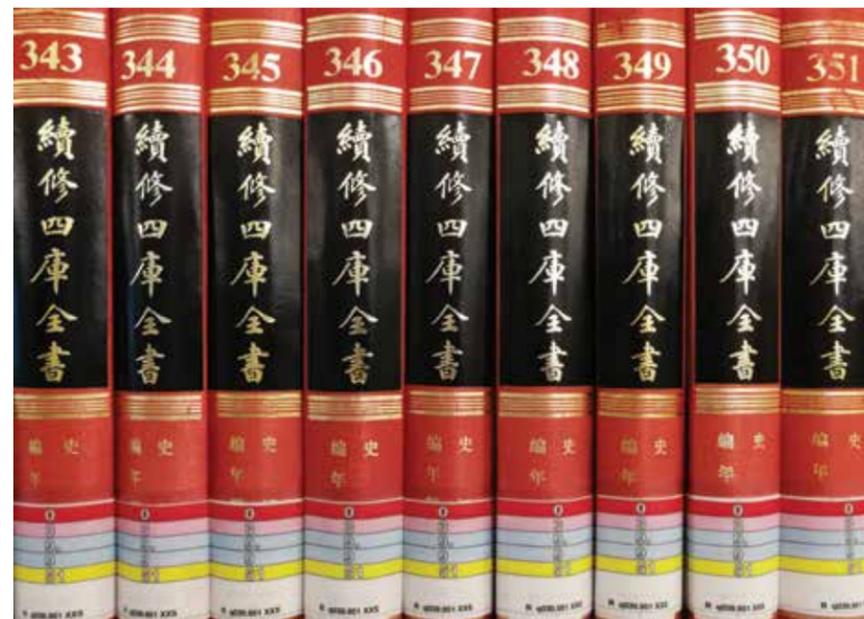
动中, 胡适和陈独秀等人倡导白话文改革和文学革命, 更是促成了白话逐渐取代文言的历史机缘。1920年北京政府颁令全国学校和报刊采用白话文, 启动了语文教科书语体转换的历史进程。

历史已清楚证明文白语体的演变, 对于语文学科的独立和教育的普及有重大意义, 但我们也见证了近代汉语文化转型过于仓促和功利化所产生的不利影响。诚如周志强指出的: “五四以来从文言文到白话文的转换, 实现了语言的社会学意义上的转换, 但对古典汉语形象审美传统的继承却被搁置并延迟”。⁸ 声势浩大的“经典诵读热”, 提醒我们应把多些言简意赅、生动有趣、蕴含传统美德的经典美文收入教科书里。我们应引导莘莘学子多背诵抑扬顿挫的经典, 让他们心领神会中华美学的精妙; 也可背诵带有时代精神至情至性的现代美文, 培养口语流畅优雅的能力, 这对提高他们的书写能力也大有帮助, 唯有如此莘莘学子才有可能不由自主地爱上中华华语。

知古鑑今, 华文教学语体应取道中庸。重文言轻白话, 开历史的倒车不可为, 而一味废除文言, 摒弃经典亦不可取, 这两者之间毕竟存在着不可分割的血缘关系。顺应着时代的步履, 以白话文为主以文言为辅, 古为今用, 文白共生, 才是华文教学语体走到今天最美好的组合。◆

注释

- 1 中国教育部网站 http://www.moe.gov.cn/jyb_xxgk/xxgk_jyta/jyta_yys/201611/t20161117_289194.html
- 2 郭初阳、蔡朝阳和吕栋(2010)。《救救孩子: 小学语文教材批判》。中国: 长江文艺出版社。
- 3 《新编语文教材9月1日起全国投入使用古诗文数量增加》。摘录自中国教育部网站: http://www.moe.gov.cn/jyb_xwfb/xw_fbh/moe_20169/xwfbh_2017n/xwfb_20170828/mtbd_20170828/201708/t20170830_312738.html
- 4 陈子丰“从教材大幅增加文言文, 谈中国语文教育的百年历史”。摘录自《界面》。 <http://www.jiemian.com/article/1545417.html>
- 5 摘录自《联合早报》 <http://www.zaobao.com.sg/realtime/china/story20170911-794322>
- 6 程晏铃“文言文比例回歸專業, 國文怎麼教才是重點”。摘录自《天下》杂志(2017年9月11日) <https://www.cw.com.tw/article/article.action?id=5084897>
- 7 张中行(2007)《文言与白话》。中国: 中华书局。
- 8 周志强, “一个伟大传统的失落与重建——从汉语形象角度看白话文改革”。摘录自周志强专栏 <http://www.aisixiang.com/data/21630.html>



从《续修四库全书》, 也可看到文言文与白话文演变的端倪。版权所有, 《续修四库全书》编委会编(2002)。《续修四库全书》。上海: 上海古籍出版社。(索书号: R Chinese 039.951 XXS)

RAMEN TEH

FOOD, WAR AND MEMORY

Eric Khoo tells us how the Japanese Occupation, ramen noodles and *bak kut teh* became the inspiration for his latest film. **Lu Wenshi** finds out more.

When acclaimed Singaporean film director Eric Khoo produced his latest film *Ramen Teh*, he was drawn to the historical materials and archival records on display at the exhibition – “Surviving the Japanese Occupation: War and its Legacies” – at the Former Ford Factory. It was not a coincidence, therefore, when he decided to feature the World War II site in his film.

Ramen Teh tells the story of Masato (played by Takumi Saitoh), a young Japanese ramen chef, who travels to Singapore in a bid to find out more about his late Singaporean mother. Along the way, he discovers events in Singapore history that were unknown to him and, eventually, through food, is able to forge a bond with his new-found family.

In the film, Masato visits the exhibition to find out more about the Japanese Occupation in Singapore. The visit leaves a deep impression on Masato as he comes to learn about the horrific events that took place during this period in Singapore’s history. The former car factory in Bukit Timah was where British forces officially surrendered Singapore to the Japanese on 15 February 1942. What followed was three-and-a-half years of brutal Japanese rule when Singapore was renamed Syonan-to (“Light of the South”).

Ramen Teh premiered in local cinemas on 29 March 2018, and also stars Singaporean artistes Jeanette Aw as Masato’s mother and Mark Lee as his uncle, and Japanese pop singer Seiko Matsuda. In this interview with *BiblioAsia*, Eric Khoo shares his thoughts on the war and what drove him to produce this film.

Lu Wenshi is Manager (Archives Services) with the National Archives of Singapore. She was involved in the revamp of the Former Ford Factory and managed its outreach programmes, including facilitating the shoot of *Ramen Teh*.



Q: How was the story for *Ramen Teh* conceived, including the use of food as a central theme?

A: I’ve always believed that food is an integral part of Singapore’s cultural identity. In fact, food is a recurring theme in almost all of my movies. It has a universal emotional resonance that cuts across all cultures. Back in 2015, I was approached by Japanese producer Yutaka Tachibana to collaborate on this project, and I immediately said yes.

Singaporeans love Japanese food and the Japanese are also developing a taste for our cuisine, so it seemed logical to use food as the central theme to symbolise ties between Singapore and Japan. Our love for *bak kut teh* (“meat bone soup”) and *ramen* became the inspiration for the film, whose title combines the names of these two dishes. Once the theme was decided, the plot and characters just developed naturally.

Q: Why did you decide to include a World War II dimension to the plot?

A: The starting point is always the characters. As our main character Masato is of Japanese-Singaporean parentage, World War II naturally came into play when I decided to inject drama and conflict into the film. We wanted ultimately to show that *Ramen Teh* is a story of love and forgiveness.

Q: Why did you choose to film at the Former Ford Factory when there are other war-related sites in Singapore?

A: I was overwhelmed by the building and the exhibition space when I visited the place. I knew I had to shoot a scene there as the displays were very engaging and the oral history interviews extremely moving. The lighting was perfect too.

Q: Can you share any anecdotes from the filming at the Former Ford Factory?

A: The Japanese production crew and actors were deeply moved by what they saw. The lead actor Takumi Saitoh, after his tour of the Former Ford Factory, came up to me, close to tears and said, “I am very sorry, I never knew all this happened.” The staff at the gallery were extremely knowledgeable and helpful, and that ensured our shoot went smoothly.



(Facing page top) The ramen shop run by Masato’s father in Japan. *Courtesy of Zhao Wei Films.*

(Facing page bottom) *Ramen Teh* premiered in Singapore cinemas on 29 March 2018. *Courtesy of Zhao Wei Films.*

(Left) Masato discovering the diverse experiences and accounts of the people in Singapore during the Japanese Occupation at the exhibition in the Former Ford Factory. The film also features resources from the National Archives of Singapore. *Courtesy of Zhao Wei Films.*

(Above) In a dream-like scene, Masato’s parents (played by Japanese actor Tsuyoshi Ihara and Singaporean actress Jeanette Aw) enjoy the *ramen teh* that Masato has prepared. *Courtesy of Zhao Wei Films.*

Q: Do you think there is a good understanding among today’s younger generation of what Singapore went through during World War II?

A: I think it is difficult for any generation to truly understand the experience of war when they have only known peacetime in their lives. Even more so when their parents or grandparents who lived through the war years have passed on. There is little motivation for subsequent generations to share the war stories of their forefathers, especially when some of these may be traumatic. *Ramen Teh* does provide an insight into the impact of World War II on modern times through the plot and characters – even though that was not my primary intention.

Q: Do you think that the legacy of World War II still shapes current-day Singapore and Japan?

A: This is a big question and I am not a historian! I think what is more important is for Singapore and Japan to learn from the lessons of war, and to appreciate that with love and friendship, so much more can be achieved from working together.

Q: What more can be done for a better understanding of World War II and its aftermath as those who lived through the war gradually pass on?

A: One approach can be through storytelling, in whatever artistic form it takes, for instance through movies, books, TV, theatre and music. If we can incorporate the lessons of war and its consequences into our psyche, I think there is greater resonance – especially for the younger generation. ♦

The Former Ford Factory is located at 351 Upper Bukit Timah Road. Presented by the National Archives of Singapore, the exhibition “Surviving the Japanese Occupation: War and its Legacies” is open 9 am–5.30 pm from Mondays to Saturdays, and 12 pm–5.30 pm on Sundays.

FIRST ISSUES

PUBLICATIONS FROM THE PAST



Launch issues can make or break a new publication. **Barbara Quek** shares highlights of first issues from NLB's Legal Deposit Collection.

Barbara Quek is a Senior Librarian with the National Library, Singapore. She is currently with the Advocacy & Statutory Function group that oversees the compliance of Legal Deposit in Singapore. Her work also covers donations as well as gift and exchange materials for the library.

Inaugural or first issues of publications – whether lifestyle magazines, trade publications or scholarly journals – are sometimes much anticipated by readers because of the hype and publicity drummed up in the lead-up to their launch.

First issues of famous and iconic magazines, such as *Life* and *National Geographic*, have become highly sought-after collectors' items, with some titles fetching high prices on eBay. Much time and expense are invested in inaugural issues as they can make or break the publication.

First impressions do count in the publishing business. If the cover is dull, and the contents

pedestrian and do not resonate with the intended audience, there is a good chance the publication will not last beyond the first year.

While editors often try and anticipate readers' tastes when deciding on the contents, some have firm personal convictions about what is right (or wrong) for their readership.¹ Editorials – either in the form of a lead article or an introductory note from the editor-in-chief or publisher – are usually worth more than a cursory read.

In the first issue of *The Food Paper* launched in January 1987, its editor, well-known food critic Violet Oon, claimed that her culinary magazine “will excite, titillate and amuse” its readers. Published in a newspaper format, it was pitched

- The Journal of the Singapore Society of Architects** (December 1923)
This journal of the Singapore Society of Architects, the precursor of the Singapore Institute of Architects, was launched the same time the society was established in 1923 with 11 founding members, one of whom was the municipal architect S. Douglas Meadows. The society aimed to foster the growing interest in architecture in Singapore after World War I. According to Meadows, who became the first president of the society, “to design in beauty and build in strength should be the aim of the architect”.⁵
- Student World** (Vol. 1, No. 1, 5 May 1958)
According to the Foreword in the inaugural issue published on 5 May 1958, the magazine aimed to supplement students' education in school with articles that will equip them with skills for the real world.
- Tumasek** (No. 1, January 1964)
Founded by award-winning writer and poet Goh Poh Seng, the inaugural issue of this literary journal featured Goh's poem, “On Looking at the Moon and Thinking”, and novel *If We Dream Too Long*. The latter is considered the first local English novel and won the National Book Development Council of Singapore's Fiction Book Award in 1976.
- Her World** (Vol. 1, July 1960)
Launched in July 1960, *Her World* is the first English-language women's magazine published in Singapore and the longest-running to date. Local model Nancy Koh, with half her face artistically cropped out, was the first cover girl. According to the editor, the cover “suggest[s] all the mystery of the East”.⁶
- 旋律飞扬 (Xuan Lü Fei Yang)** (March 1987)
When *xinyao* (新谣), a genre of Mandarin songs unique to Singapore, was making waves in the local music industry in the 1980s, 旋律飞扬 (*Xuan Lü Fei Yang*) was published to showcase new as well as established *xinyao* singers and their songs. Featured on the cover of the inaugural issue is Yan Liming, one of Singapore's pioneer *xinyao* singers and affectionately known then as “big sister” among *xinyao* singers.
- திரைமலர் (Thirai Malar)** (January 1961)
This was one of the earliest Tamil movie magazines in Singapore. It was targeted at film fans with features on Tamil movies, the latest news on famous film stars and scenes from popular movies. To reach out to non-Tamil speaking audiences, the magazine also published articles in English that showcased popular Hindi and other movies.
- Sub Aqua** (Vol. 1, No. 1, August/September 1964)
Touted as Malaysia's skin diving, boating and skiing magazine, the publication was aimed at watersports and boating enthusiasts. This target audience was likely small as the people who could indulge in such activities in 1960s Singapore were probably from privileged backgrounds.
- National Pioneer** (August 1969)
Shown here is the first issue of *National Pioneer* – the precursor of *Pioneer* magazine – launched in August 1969 by then Ministry of Interior and Defence. *Pioneer*, which is published by the Singapore Armed Forces, keeps servicemen abreast of events and developments in the armed forces, and includes topics such as entertainment, travel, and health and fitness.

as an “affordable” publication for food connoisseurs looking to experience “love at first bite”.²

The editor of literary magazine *Tumasek* had loftier ambitions, asserting that “at the inception of a magazine, it is necessary to promulgate one's intentions and aspirations... and it is fitting that the editorial of our first number should be devoted to this end”.³

Published with a discerning audience in mind, the editor of *Folk Scene Singapore* aimed “to present folk music in its fullest spectrum”, adding that if readers “find our interpretation controversial, in which case we shall be pleased, as this magazine intends to be controversial on the subject of music”.⁴

Pages from the Past

First-issue publications evoke memories of people, places and events from times past. The tabloid format was the norm for several early student and community-focused publications, including *The Student Times* (1960), *Students' Digest Illustrated* (1967) and *Busway* (1975). There were also relatively more B4-size publications back then, such as *The Journal of the Singapore Society of Architects* (1923), *Singapore Illustrated Weekly* (1947), *Her World* (1960), *V.I.P. Magazine: The Prestige Magazine* (1966), *The Travellers' Palm* (1967) and *National Pioneer* (1969). Black-and-white pages featured more prominently as colour printing was very costly in those days.

Many of these old magazines have either ceased publication, changed names or acquired new publishers. Sustaining a publication is often more challenging than publishing and launching a new one, and we applaud those that have stood the test of time. Although quite different in contents, style and readership, *National Pioneer*, forerunner of today's *Pioneer* magazine of the Singapore Armed Forces, and *Her World*, Singapore's oldest women's magazine, have survived to this day.

Featured in this essay are just a sampling of titles from a collection of about 700 first-issue publications – from 1923 to 1987 – available in the Legal Deposit Collection of the National Library, Singapore. The titles run the gamut from light-hearted fare, such as fashion, entertainment, art, music, sports and food, to more serious reading like architecture, building and construction, business and education. ♦

WHAT IS THE LEGAL DEPOSIT?

One of the statutory functions of the National Library Board Act is Legal Deposit. Under the act, all publishers, commercial or otherwise, are required by law to deposit two copies of every work published in Singapore with the National Library within four weeks of its publication. The Legal Deposit function ensures that Singapore's published heritage is preserved for future generations. Legal Deposit also acts as a repository for published materials, providing exposure via the online catalogue, PublicationSG: catalogue.nlb.gov.sg/publicationsg. For more information, please visit www.nlb.gov.sg/Deposit.

9. **Singapore Business** (Vol. 1, No. 1, January 1977)
First published in January 1977, the magazine covered a wide array of topics on the business landscape in Singapore. A feature article in the inaugural issue reported that the only way to ease traffic congestion in Singapore is to build a mass rapid transit system. Already, more than 40 years ago, the city was suffering from a surfeit of too many vehicles.
10. **Development & Construction** (Vol. 1, No. 1, January/February 1976)
Targeted at professionals in the building and construction industry, the 1976 inaugural issue of this trade publication included a special feature on the 50-storey International Plaza at Anson Road. This is one of Singapore's first mixed-use developments comprising both residential and commercial units. The building – at a height of 190 metres – was one of the three tallest in Singapore at the time.
11. **Dewi Majalah Bulanan Wanita** (May 1972)
A popular monthly magazine for women, the inaugural issue interviewed cover girl Rosie Kassim, the bass guitarist of a pop quartet called the Teepees. Other talents featured included Anne Wong, the sole Singaporean woman race car driver at the time; Sharifah Aini, who came in third at the 1968 Radio and Television Singapore talentime contest; and singers Nona Asiah and Rahimah Rahim.
12. **The Food Paper** (January 1987)
Helmed by Violet Oon, the grande dame of Singaporean cooking, the monthly magazine hoped to “excite, titillate and amuse” its readers.⁷ In this first issue, the magazine takes readers on a whirlwind tour of the best “private hawker centres” in Singapore. These included Scotts Picnic Food Court, Forum Galleria's Rasa Forum Food Fair, Orchard Food + Plus, Waterloo Food Paradise and Bugis Square Food Centre.

Notes

- 1 McKay, J. (2006). *The magazines handbook* (p. 60). London; New York: Routledge. [Call no.: 052 MAC]
- 2 Meet Violet, the chef. Retrieved from *Violet Oon Singapore* website; Oon, V. (1987, January). Mouthpiece. *The Food Paper*, p. 1. Singapore: Food Paper. [Call no.: RSING q641.095957 FP]
- 3 Editorial. (1964). *Tumasek* (p. 3). Singapore: Tumasek Trust. [Call no.: RCL05 805 T]
- 4 Editorial. (1967, November). *Folk scene*, 1 (1), p. 3. Singapore: J. E. Wee for Folk Scene Singapore. [Call no.: RSING 781.62 FSS]
- 5 Meadows, D.S. (1923, December). The mistress art. *The Journal of the Singapore Society of Architects*, p. 13. [Microfilm no.: NL16646]
- 6 Thumbing through... (1960, July). *Her World*, 1, p. 3. Singapore: Straits Times Press (Malaya) Ltd. [Call no.: RSING 052 HW]
- 7 Meet Violet, the chef. Retrieved from *Violet Oon Singapore* website; Oon, Jan 1987, p. 1.



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