Hong Kong Rotarian Walter Brown

Founding Dean of Science of Hong Kong University

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Walter Brown, FRSE, AMIEE, MA, BSc (*Glasgow*) (29 April 1886, Glasgow – 14 April 1957, Marandellas, Rhodesia), Scottish mathematician and engineer, was an Active Member of Hong Kong Rotary Club (香港扶輪社) in the 1930-40s holding the Classification "Education – Mathematics" when he was the first Chair Professor in Pure and Applied Mathematics of the University of Hong Kong (香港大學). He was an educator renowned for his pioneering role in establishing higher education in mathematics and engineering in the British Crown Colony Hong Kong. Professor Brown advocated for the establishment of a Faculty of Science in the University and became its founding dean in 1939. He was conferred the title "Emeritus Professor" by the University in 1950.

Born in Glasgow to Hugh A. Brown, a headmaster in Paisley, Brown attended Allan Glen's School before matriculating at the University of Glasgow in 1903, where he earned a B.Sc. with honors in mathematics and physics in 1907 and another B.Sc. in Pure Science in 1910. After brief teaching experience at Allan Glen's School from 1911 to 1914, he moved to Hong Kong in 1914 as a lecturer in engineering at the newly founded University of Hong Kong, rising to Professor of Pure and Applied Mathematics in 1918---a position interrupted by World War II but resumed after the University's post-War re-opening until his retirement in the late 1940s.

During World War I, Brown supervised Hong Kong's harbour defences while continuing his professorial duties in mathematics and engineering. In World War II, following the Japanese occupation of Hong Kong in December 1941, he was detained in Stanley Internment Camp (赤柱拘留營), where he organized educational study groups and addressed internees' medical needs, demonstrating his commitment to learning amid adversity. Post-War, he briefly lectured in engineering at the Royal Technical College in Glasgow (1946–1947) and in mathematics at the University of Glasgow (1947–1948) before retiring fully. In his memory, the University of Hong Kong established [Walter Brown Memorial Prizes in Mathematics] for top students.

Brown's influence extended beyond academia. He was elected to the Royal Society of Edinburgh in 1923, proposed by figures including Andrew Gray and George A. Gibson, and became an associate member of the Institution of Electrical Engineers in 1920, later a Fellow in 1923. In Hong Kong, he led cultural and professional organizations, such as serving as President of the Hong Kong Philharmonic Society and contributing to engineering institutes. After retirement, he traveled extensively across Africa, South America, and beyond, sharing insights through lectures to guilds and societies until his sudden death in Marandellas, Rhodesia (now Zimbabwe), while visiting a former colleague.

The Story of Walter Brown

Early Life and Education

Family Background and Childhood

Walter Brown was born on 29 April 1886 in Glasgow, Scotland, as the younger son of Hugh A. Brown, a headmaster in Paisley, Renfrewshire. Brown had two sisters, both of whom outlived him.

Raised in Glasgow during a period of industrial growth and educational reform in Scotland, Brown's early years were shaped by his family's emphasis on scholarly pursuits. Little is documented about his immediate childhood experiences, but the household environment, led by an educator father, fostered an appreciation for intellectual discipline from a young age. This familial backdrop undoubtedly contributed to his later path in mathematics and science.

For his secondary education, Brown attended Allan Glen's School in Glasgow, a technically oriented institution known for its rigorous curriculum in mathematics and sciences, under the leadership of Dr. John G. Kerr. He completed his studies there around 1903, gaining an early exposure to a demanding academic setting that honed his analytical skills and prepared him for higher studies. This pre-university phase marked the culmination of his formative years before transitioning to university-level education.

Academic Training at Glasgow

Walter Brown matriculated at the University of Glasgow in 1903, where he pursued studies in mathematics and physics. His curriculum emphasized both pure and applied aspects of these disciplines, laying a strong foundation for potential engineering and academic pursuits.

In 1907, Brown graduated with a Master of Arts (M.A.) with honors in Mathematics and Physics, demonstrating his proficiency in analytical and experimental methods central to the

era's scientific education. He then continued his studies at Glasgow, focusing on Pure Science, which allowed deeper exploration of theoretical mathematics and related sciences.

This extended period culminated in a second Bachelor of Science (B.Sc.) in 1910, further solidifying his expertise in pure mathematics while bridging applied knowledge from his earlier honors degree. These qualifications positioned him well for subsequent roles in teaching and research, reflecting Glasgow's rigorous training in mathematical sciences during the early 20th century.

Career in Scotland

Initial Teaching Positions

After completing his studies at the University of Glasgow, Walter Brown began his teaching career in Scotland. In 1911, he was appointed as Assistant Master at Allan Glen's School in Glasgow, a position he held until 1914.

At Allan Glen's, Brown primarily taught mathematics and related subjects at the secondary level, drawing on his strong academic background in the field. His role involved instructing students in core mathematical principles, contributing to the school's emphasis on technical and scientific education. This early teaching experience solidified his commitment to mathematical pedagogy before the outbreak of World War I interrupted his career trajectory.

As part of his emerging professional network, Brown joined the Edinburgh Mathematical Society in March 1911, shortly after starting at Allan Glen's. This affiliation connected him with fellow mathematicians and educators in Scotland, fostering opportunities for scholarly exchange during his initial years in teaching.

Post-War Academic Roles

Following his release from Japanese internment at the end of World War II, Walter Brown returned to Scotland and briefly resumed his academic career, focusing on engineering and mathematics education during a time of national reconstruction. From 1946 to 1947, he served as a lecturer in Civil and Mechanical Engineering at the Royal Technical College in Glasgow, an institution central to Scotland's post-War technical training efforts.

The Royal Technical College, now the University of Strathclyde, was instrumental in addressing the urgent need for skilled engineers amid Scotland's industrial recovery, as wartime disruptions had depleted teaching staff. Brown's role contributed to rebuilding these programs, leveraging his prior expertise to support the influx of demobilized students.

In 1947–1948, Brown transitioned to lecturing in Mathematics at the University of Glasgow, where he helped restore higher education curricula strained by the war. This position aligned with broader recovery initiatives amid rising enrollments from returning servicemen.

Career in Hong Kong

Appointment and Early Roles

In 1914, Walter Brown left his position as an assistant master at Allan Glen's School in Glasgow to accept an appointment as Lecturer in Engineering at the University of Hong Kong, (HKU) which had opened in 1911 as the Colony's first institution of higher learning.

During the First World War, from 1914 to 1918, Brown assumed expanded responsibilities, acting as Professor of Mathematics and Engineering while fulfilling professorial duties in these fields. This acting role represented his rapid promotion trajectory within the young university's Engineering Faculty, where he contributed to the foundational teaching of technical subjects amid the colonial academic context.

In parallel with his academic work, Brown took on administrative duties supervising the defences of Hong Kong harbour, aiding the Colony's wartime preparedness. His efforts during this period helped shape early engineering education at the institution, integrating practical applications suited to the region's needs.

Professorship in Mathematics

In 1918, Walter Brown was appointed Professor of Pure and Applied Mathematics at the University of Hong Kong, a position he held until his retirement in 1946 following the University's re-opening after World War II.

During his tenure, Brown played a key role in advancing the University's academic structure, particularly by advocating for the establishment of a dedicated Faculty of Science in 1939, where he served as the inaugural Dean until the Japanese occupation in 1941. This initiative integrated mathematics more formally with emerging scientific disciplines, laying foundational support for mathematics and engineering education amid Hong Kong's growing infrastructural demands. His efforts extended to supervising the mathematical aspects of Hong Kong harbor defenses, applying pure mathematics principles to practical engineering challenges during the interwar period.

Brown's influence on the Department was evident through his mentorship of students, fostering a rigorous approach to both theoretical and applied mathematics despite the absence of notable personal publications in the field. His legacy in student development is commemorated by the [Walter Brown Memorial Prizes in Mathematics], awarded annually by the Department of Mathematics at HKU to outstanding undergraduates. Through these contributions, Brown helped shape the mathematics program's orientation toward engineering applications, aligning with local needs for technical expertise in colonial Hong Kong.

Wartime Internment

Capture and Imprisonment

During World War II, Walter Brown, who had been appointed Professor of Pure and Applied Mathematics at the University of Hong Kong in 1918, served as a member of the Royal

Naval Volunteer Reserve to support the British defense efforts in the Colony. The Imperial Japan's attack on Pearl Harbor, Hawaii, on 7 December 1941 precipitated the invasion of Hong Kong the following day, as Imperial Japanese forces sought to seize the British Colony. British, Canadian, and Indian troops mounted a defense, but after intense fighting, Governor Sir Mark Aitchison Young (香港總督楊慕琦爵士) formally surrendered on Christmas Day 1941, marking the end of the Battle of Hong Kong (香港保衛戰). Brown was among the civilians and military personnel captured by Japanese forces in the aftermath of the capitulation.

Brown was interned at Stanley Internment Camp on the southern tip of Hong Kong Island, a facility that held approximately 3,000 British, American, and other Allied civilians from early January 1942 until liberation by Allied forces in August 1945---a duration of over three and a half years. The Camp, repurposed from pre-War colonial buildings like St. Stephen's College (聖士提反書院) and various quarters, suffered from severe overcrowding, with internees crammed into damaged structures scarred by prior bombing and shellfire, often sharing limited rooms without adequate sanitation or shelter.

Living conditions were dire, exacerbated by wartime shortages and Japanese administration. Food rations, managed through camp committees, consisted mainly of rice, salt, and meager vegetables, providing only about 1,000–1,500 calories daily and leading to widespread malnutrition, weight loss, and deficiency diseases such as beriberi and scurvy. Health deteriorated rapidly due to overcrowding, poor hygiene, and limited medical resources, fostering outbreaks of infectious diseases including malaria, typhoid, and tuberculosis, despite the presence of around 40 doctors; mortality, while lower than in military prisoner-of-war camps, still claimed lives from starvation-related complications and untreated illnesses.

Activities during Captivity

During his internment at Stanley Camp from 1942 to 1945, Walter Brown organized numerous study groups in subjects including mathematics, engineering, and other disciplines to provide intellectual stimulation and alleviate the monotony of camp life. These sessions, led by university staff and attended by fellow internees, fostered a sense of community and continuity of education despite the harsh conditions and limited resources. Brown also documented camp experiences in his writings, including《Hong Kong Aftermath》, which captured emotional aspects such as repatriations and food disparities.

Brown also applied his scientific background to assist with the medical needs of prisoners, contributing to welfare efforts by addressing health issues in the overcrowded environment. His practical involvement helped mitigate some of the hardships faced by the approximately 3,000 civilian internees. Through these intellectual and supportive activities, Brown played a key role in sustaining morale among the prisoners, offering structure and purpose amid the deprivations of captivity.

After the War, Walter Brown proposed awarding “war degrees” to final-year students whose studies were interrupted, an idea that was supported by the Hong Kong University Senate.

Professional and Cultural Involvement

Memberships and Fellowships

Brown’s engagement with professional mathematical and engineering societies began early in his career, reflecting his growing reputation in applied mathematics and electrical engineering. He joined the Edinburgh Mathematical Society in March 1911, shortly after completing his studies, which provided a platform for collaboration with leading Scottish mathematicians and contributed to his development as a scholar in the field.

In 1920, Brown was elected an Associate Member of the Institution of Electrical Engineers, recognizing his expertise in electrical applications of mathematics during his teaching roles in Scotland. This affiliation underscored his interdisciplinary contributions, bridging pure mathematics with practical engineering problems.

A significant honor came in 1923 when Brown was elected a Fellow of the Royal Society of Edinburgh on March 5th, proposed by prominent figures including Andrew Gray, George A. Gibson, John Walter Gregory, James Gordon Gray, and Dugald Black McQuistan. This fellowship, one of Scotland’s highest scientific distinctions, affirmed his standing among the nation’s intellectuals and facilitated ongoing involvement in advancing mathematical research. He maintained associate status in other engineering bodies, further solidifying his professional network.

Leadership in Hong Kong Societies

During his tenure at the University of Hong Kong from 1914 to 1946, Walter Brown assumed prominent leadership roles in several key professional and cultural organizations in colonial Hong Kong, reflecting his commitment to fostering community ties beyond academia. Other than Rotary Club, he served as President of the Hong Kong Philharmonic Society, where he played a pivotal role in promoting musical culture among expatriates and local residents during the interwar period.

Brown played major roles in organizations that bridged linguistic, diplomatic, and technical spheres. In the Hong Kong English Association, he advanced efforts to promote English language education and literature, contributing to intellectual exchange in a multilingual society. Similarly, his involvement with the Hong Kong Sino-British Association (中英學會) focused on strengthening relations between Chinese and British communities, facilitating dialogue and mutual understanding amid colonial dynamics. In the technical domain, Brown contributed to the Hong Kong Institute of Engineers (香港工程師學會), where he supported professional development and collaboration among engineers, aligning with his background in applied mathematics.

These roles highlighted Brown's broader contributions to integrating cultural and technical communities in Hong Kong. By leading initiatives in the arts, language, intercultural relations, and engineering, he helped cultivate a more cohesive professional landscape, drawing on his academic expertise to connect disparate groups in the Colony.

Later Life and Legacy

Retirement and Travels

Following the end of World War II, Walter Brown retired from his professorship after more than three decades of service in the Far East. He returned to Scotland, where he briefly resumed academic work, serving as a lecturer in civil and mechanical engineering at the Royal Technical College (now the University of Strathclyde) from 1946 to 1947, followed by a stint as a lecturer in mathematics at the University of Glasgow from 1947 to 1948.

After these short teaching engagements, Brown embraced an active retirement marked by extensive global travels, reflecting his adventurous spirit and lifelong interest in international exploration and cultures. Beginning around 1948, he journeyed through remote and diverse regions, including the vast reaches of the Amazon River basin in South America, the Patagonian wilds, and the Great Rift Valley in East Africa. These expeditions allowed him to indulge his keen observational skills, later sharing insights from his wanderings through lectures to guilds and literary societies in Scotland.

Death and Recognition

Walter Brown died suddenly on 14 April 1957 in Marandellas, near Salisbury, Rhodesia (now Marondera, near Harare, Zimbabwe), at the age of 70, while staying at the home of a former colleague from Hong Kong during one of his extensive post-retirement travels.

His obituary, published in the 《Royal Society of Edinburgh Year Book 1958》, underscores his profound influence as an educationalist and lecturer, particularly in fostering scientific and mathematical learning across diverse institutions. The tribute emphasizes his lifelong dedication to education in the Far East, where he shaped generations of students through his professorial roles and organizational efforts.

Brown received posthumous recognition for his resilience during World War II internment by Japanese forces in Stanley Camp, where he organized study groups to sustain intellectual activity among internees and contributed to their medical welfare amid harsh conditions. His foundational work in establishing academic infrastructure at the University of Hong Kong, including supervision of harbour defenses during World War I, cemented his legacy in advancing higher education in the region. Notably, while Brown's career highlighted his applied expertise in mathematics and engineering, documented records of his original mathematical research remain sparse, with emphasis instead on his broader educational and institutional impacts.

香 港 大 學

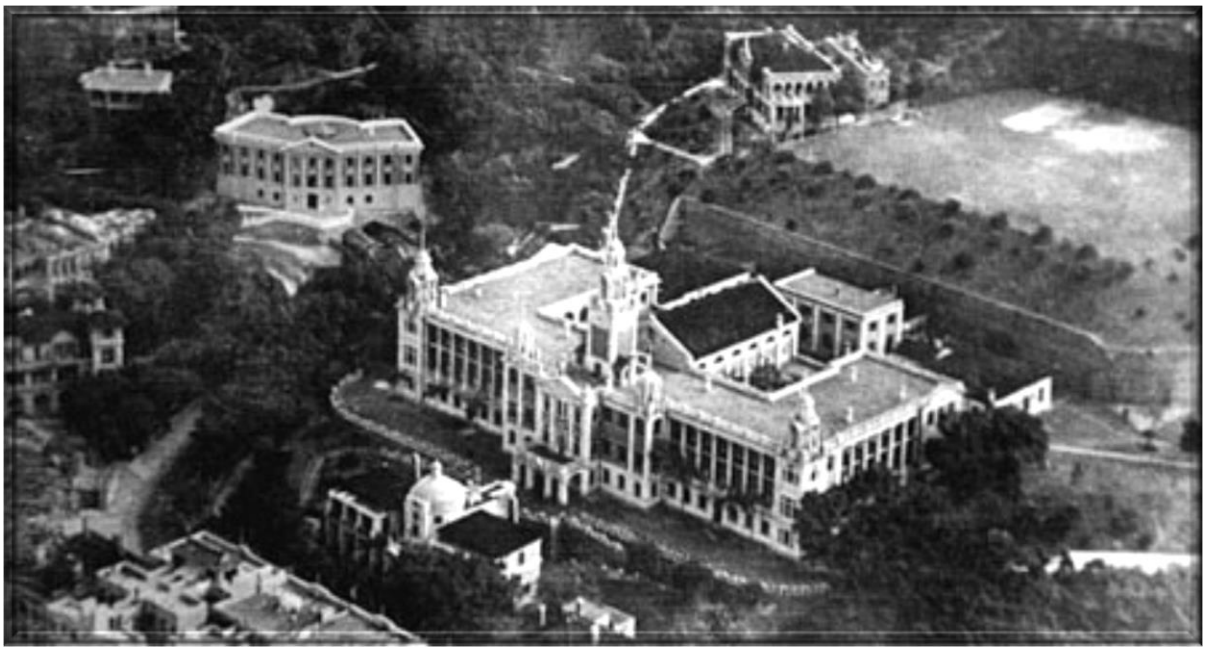
THE UNIVERSITY OF HONG KONG

Walter Brown Memorial Prizes in Mathematics

Emeritus Professor Walter Brown is remembered fondly by former students for his dedication and assistance during the War. The "Walter Brown Memorial Prizes in Mathematics" was established in his honor by the University of Hong Kong awarding to:

(i) The best student in Mathematics, on the recommendation of the Head of Mathematics, among those completing the BSc 2nd year

(ii) The best student in Mathematics, on the recommendation of the Head of Mathematics, among those completing the BSc final year.



Main campus of the University of Hong Kong in 1930-40s

Rotary Proud