

No Anno de 1497 -

Partio Vasco da gama pera a India a vto de Juogo por capitão mór cō quatro vellas, 3. pera seguir  
ho descobrimento da India e hũa carregada de mantimentos pera se cō elles e cō a gente dell  
Reformare, das quaes - Des são os capitães / -



S. granel



C Vasco da gama. D

S. Raphael



C Paulo da gama D

Jmao de Vasco da gama á turnada pera por  
tugal, Varou e os Gayxos Antre amilo e mo  
baca, aos quaes fmao de S. Raphael por tres  
da Mar su: asi se fmana, e a gente della  
se hepartio pelas duas da companhia. -

Corrio



C Nicolao coego D



C goncallo nunez D

Criado de Vasco da gama de pois da Mar ter passado  
ho cabo deboa e speranza e der pouco a vante da agoada  
de são bras se hepartirão os mantimentos e a gente  
della pelas outlas da companhia, e de pois de des pe  
jada e se poserão fogo / -



# The Matter of the Size and the Size of the Matter in Ming China and Portuguese D' Avis Maritime Expeditions A Comparative Analysis of the Mission and Consequences of the Zheng He and Vasco da Gama Fleets

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## INTRODUCTION

The maritime expeditions of Zheng He 郑和 (1371-1433, China) and Vasco da Gama (Portugal) are two important milestone references in the history of Asia and Europe. Zheng He broke the myth of Chinese isolation as well, that it was too far culturally and physically from India, Arabia and Africa. He promoted trade, improving Chinese settlements overseas and made a Chinese presence that influenced maritime policy. Da Gama discovered the direct maritime route to India, opening the way to the Pacific. He refuted the myths that the world ends in an abyss at Cape Bojador (Western Sahara) not far from the Canary Islands and that there was no way to the Indian Ocean, resulting in most of the spices trade from Asia to Europe coming under the control of the Muslim kingdoms of Egypt, Turkey and their Venetian partners for distribution in Europe. He also made possible direct contact with maritime powers like England and France with China. When elaborating on this comparative history of Zheng He and da Gama, we come across some difficulties of interpretation emanating from what we can call the 'fog of memory' and the 'mystification of history'.

The fog of memory increases with time, diluting the contours of history contributing to reinterpretations, myths or inventions that have portrayed some men as heroes and others as villains. Carroll (2004) mentions the impossibility of having a 'neutral' history. Hofstede (2005) mentions the need for heroes for the formation of culture and education in national values. The person writing has always a reason and a perspective, either by belonging to a small-educated elite, such as government 'officials' having written an 'official' story or officials praising glorious success or justifying failure.<sup>1</sup> There is no culture without heroes. The fog of time helps nationalist vision deform history, trying to canonise some and labeling others villains. This Manichean vision makes easy to 'understand' history from the aspect of the 'good' national ones, in opposition to the 'bad' others, from other nations.

Time dilutes memories of past events, creating a gap with room for fanciful build-up of fact that helps to re-create not the true history, but created histories that obscure the real difficulties and merits of the protagonists and the choices they took, right or wrong. At the end they are shown, not as common people but as superheroes. In the case studied here, both men,

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Zheng He and da Gama, were exalted in poetry and in temples.<sup>2</sup> Da Gama is in the national pantheon of the heroes of the discovery age, Geronimo's Cathedral in Lisbon. Zheng He was venerated as a god in Buddhist temples and even had mosques dedicated to him; in many ways he was a maritime version of Guan Yu 关羽, a general of the Three Kingdoms period,<sup>3</sup> worshipped in southern China and overseas, with an image practically omnipresent at the gates.

Lack of records and historical gaps are an open invitation to history opportunists or novelists like Gavin Menzies to fabricate histories by adulterating history, a tendency often found in school manuals. Gavin skillfully mistranslates archeology remains to fit a fanciful fact like Zheng He reaching America in 1421. The success of this first book inspired the author to elaborate a less convincing one for scholars but attractive enough for common people, selling the idea that Zheng He started the Renaissance revolution when he reached Venice in 1434 after crossing a 'primitive' Suez Canal. What is surprising is not the fictitious content of these novels, but the number of scholars who consider the stories in them to be very probable historic facts.

The objective of this paper is not to debunk Menzies' style, or nationalist 'official' histories, both widespread and very harmful to the search for truth, but to learn from the real lessons history teaches all of us. To achieve this process it is important to have comparative studies of history, with scholars from both (and often opposite) sides of historic events. This process will facilitate overcoming cultural barriers, historical bias or ignorance and racist stereotypes. Comparative studies can contribute to an international appreciation of history and promote the 'heroes' virtues. A Chinese hero could be really appreciated in the West, and a man from the West appreciated as a hero, a reference for all.

Quoting the first Chinese Chronicle:

I have examined the deeds and events of the past and investigated the principles behind their success and failure, their rise and decay, in one hundred and thirty chapters. I wished to examine into all that concerns heaven and man, to penetrate the changes of the past and present, completing all as the work of one family.

Sima Qian 司马迁. 'Letter to Ren'an'.<sup>4</sup>

To finish the introduction of the background of this research, this paper arose out of a program on Intercultural and Social Issues in the Tourism School

of Macao. Reading reports of cultural comparative studies, the cultural bias and different historic and often contradictory interpretation of different cultures were very apparent; for example with simplified labelling of some as 'traditional', and others as 'progressive'; again, the good and the bad example. To comment on history is always to take one perspective, or point of view. The comparative studies with researchers from different cultures provide different perspectives that are communicated by writing in a 'neutral' international language. Trying to understand each other's interpretation and going deep into each other's culture was learning process for all joint authors.

We hope this initial exercise and short essay will inspire enthusiasm in others for comparative East-West studies.

## CHINA MARITIME VOCATION AND THE JOURNEY TO THE WESTERN SEAS

For centuries overseas foreign trade with China was dependent on foreign vessels. Benite (2005) elaborate on the trading 'west', and western traders for China were mostly Arabs or Muslim Asians who created large trading communities in Chinese cities. This phenomenon is apparent in Hangzhou and Canton, as well in Siam, Champa (southern Vietnam), Java, the Philippines and many other maritime settlements in Asia. During the Song Dynasty (960-1279), the military and commercial backbone for survival against the Mongols was a large navy, and a network of national and international ports for trading in Southeast Asia from places far away like Sumatra, Champa, Korea, Japan, and the Philippines.

During the Mongol-ruled Yuan Dynasty (1279-1368) the expertise of Persians and Arabs in military technology and commerce was recruited to help control the majority of the Han population. Without Persian help the Mongols could never conquer the fortified cities of the Jing and Song. As mentioned in Schottenhammer (2008), without Muslim<sup>5</sup> and Chinese defectors, the Mongols could never have conquered the Song Dynasty 'Sea Wall' in the Yangtze at the battle of Xiangyang, and the last Song stance at the Naval Battle of Mount Yamen in Guangdong.

Kublai Khan, after establishing the Yuan Dynasty, decided to include in the tributary system far away countries like Japan and Korea, invading

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these countries. The Yuan navy, which inherited all knowledge and power of the Song navies, was the sea arm to invade Vietnam and some kingdoms in Java. However, most of Mongol navy operations resulted in disaster, the one in Japan being the most well-known in history as by the intervention of the gods the kamikaze (divine wind) was sent to destroy the Mongol fleet.

The Ming success in overthrowing the Yuan lay in the naval battle of Lake Poyang (from 30 August to 4 October 1363). The battle was opposite the town of Namchang, held siege by Han rebel forces leaded by Chen Youliang. The Ming leader Zhu Yuanzhang 朱元璋, the Hongwu Emperor 洪武帝 (vastly Martial), sent from Nanjing a relief fleet, with the heavier ships in the center, a formation later replicated by Zheng He's fleet.

The Ming proved themselves powerful in navy operations when they defeated the Dutch fleet in 1633 at the Battle of Liaoluo Bay, lead by Zheng Zhilong 郑芝龙.<sup>6</sup> His son would soundly defeat and expel the Dutch from Taiwan in 1662, making the (Southern) Ming stand until 1662, lasting 294 years. The Hongwu Emperor is enshrined in his temple named Ming Taizu (Great Ancestor of the Ming). His fourth son, and third of the Ming rulers, Zhu Di 朱棣, Prince of Yan 燕王, was enthroned as Yongle 永乐帝 (perpetual Happiness).

Why did China, a natural land-oriented nation, go overseas, so far and on such a large scale? The reasons for exploration were obviously not economic or scientific. An alternative is for political reasons, linked with the tributary system that could incur punishment of war if the diplomatic obligations were not fulfilled. We should clarify that the military aspect was an inseparable part of politics, not only because most rulers and governors had military functions, but also because without military defense, cities, ships or even countries will not last in a general culture and environment when the strongest rules. It is a pattern in history that without a strong arm to implement law and order anarchy, decay and revolution will soon appear, even in societies ruled by law, as was the case of the Roman Empire.

Why was a Ming fleet organised? The 'mandate of heaven' doctrine demands legitimisation, not only by force but also by national and international recognition (in both ways), that in China is the tributary system communication and connection not only by land but



Kublai Khan.

also by sea, which naturally required a navy, that, in the case of China, meant a navy of a size proportional to the size of the country.

Wade's (2004) research supports a dual motive for the maritime expeditions. The promoter of Zheng He's voyages was Emperor Yongle, the successful usurper of the Chinese throne who outsmarted and defeated the forces of the legitimate ruler, his nephew Jianwen Emperor 建文帝. In China, as everywhere in the world, an illegitimate ruler is always in danger of being challenged and destroyed by the ones organised under the legitimate banner. The first commonly accepted motive of the voyages was to make sure there were no survivors or sympathisers of the defeated emperor in Southern regions, from the waters of Guangdong, Annam, Champa or other regions, which according with Jungpang (2012) had many descendants of the refugees and rebels against the Mongol rule Yuan dynasty.

The purge of any opposition to the new emperor was critical in order to avoid rebellions. Yongle ordered the 'cleansing' of an estimated 50,000 officers and scholars in the administration of the government that could not compromise with the usurper's methods and policies, so opposed to Confucianism principles.

A eunuch class controlling the secret police and key government positions would create efficient leverage to overcome the scruples of the Confucianism administrators. Muslim military leaders supported



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the first Emperor Hongwu (Zhu Yuanzhang), who rewarded them with special protection laws and privileges. Zvi Benite<sup>7</sup> demonstrated this led to Muslim scholars considering the first Ming Emperor, Zhu Yuanzhang, the Ming Taizu, by words, like the 'Hundred Character Praise' and by facts of ordering the building of mosques, as a personal patron of Muslims. Until the end of the Ming the enfeoffment<sup>8</sup> base system of tribute-recognition and alliances with tribes or polities plagued the system, helping first to expand to Yunnan and some Thai polities and Annan.

Following the Confucian and court legitimacy principles and the principles established by Zhu Yuanzhang, the succession to the throne fell to his teenage grandson, who became Emperor Jianwen. Jianwen started curbing the power of his uncles who were lords of large regions. Rebellion broke out. The principle of Yan (Beijing region), uncle of Jianwen, with the help of several Mongolian tribes and the organisational support of the eunuchs, conquered the capital, Nanjing.

Not surprisingly, the choice for leading the maritime expeditions was a trusted eunuch, Zheng He, 34 years old of Muslim nobility background, who was a descendent of the Persian governor of Yunnan (Sayyid Ajjal Shams al-Din Omar al-Bukhari) during the Mongol-ruled Yuan Dynasty. In the war with the Yuan remaining loyalist the power of minority warlords were curbed, and the descendants castrated, making sure in this way that there would be no future claim for local ruling. Nevertheless, Muslims were privileged minorities during Song, Yuan and Ming dynasties, mostly due to their commercial and financial connections, military knowledge and expertise in astrology and navigation. It would have been more difficult to establish trade links overseas without the help of foreign and local Muslims.

The second reason for the maritime expeditions was to legitimise the power by foreign recognition through the tributary system. Yongle ordered the Minister of Rites to send envoys to foreign countries or polities with instructions on the tribute to bring to Nanjing and also to prepare places for accommodation of foreign dignitaries and trade supervision offices in the provinces where the main ports; Guangdong, Fujian and Zhejiang, were located. Many of the foreign rulers

would be brought by sea and land to China. Zheng He was not the only powerful eunuch to be sent in maritime expeditions. Wang Guitong 王贵通, Hou Xian 侯显 and Zhang Qian 张谦 had similar missions designed to bring foreign envoys to China.

The tributary system was deeply changed by foreign northern rulers in past centuries. It implies also sending gifts, or exotic animals to the court, like elephants, tigers, or other payment in goods. Soldiers and silver would be requested, as in the case of Yunnan.

Depending on the tribute system, a foreign ruler could be recognised, receiving the imperial robes from China. Mediation for peace or military support could be given to the recognised ruler, as mentioned in the official history of the Ming, the *Mingshi* 明史, as happened several times during the conflict between Annan and Champa Polities (Northern and Southern Vietnam respectively). The tributary system was not only a diplomatic protocol, but implied trade obligations, and practically a monopoly of maritime trade that could only work by implementing *haijin* 海禁 (sea ban) policies for the private trade. Emperor Hongwu imposed the ban on maritime shipping in 1371. The tributary system and the enlargement of government fleets replaced progressively local private traders and traders from overseas communities. Although intended to curb piracy and rebellion, in fact the new policy labelled officially as 'pirates' or as sea rebels thousand of fisherman and traders who had had to survive by themselves for a living.

## THE CAPITAL AND SHIPYARDS

Nanjing was adopted as the capital by the Ming. Being connected with a network of lakes and rivers, particularly with the water highway provided by the River Yangtze, it was the appropriate place for the location for two different shipyards: Treasure Shipyards, to build treasure ships and the Longjiang Shipyards for other military ships.

Nanjing is strategically well-located to function as the capital of the inner land as well as the overseas domains. Previously Quanzhou, the capital of the Song, was strategically located far from the northern borders where the main threats of invasion come, but well-linked with the Sea. The Ming would use Nanjing as the main imperial shipyard, building the bulk and the larger vessels of the navy; the treasure ships.

The Hongwu Emperor.



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Large ships were nothing new in China; there are records of them in the Han and Song period, as well in other different historic periods. Delgado (2010) mentions previous ocean-going ships in long-range trading with China were from Arab-Muslim countries. During the Song Dynasty a native Chinese navy for rivers and for oceans was developed.

The burning of official and technical documents of the period left room for succeeding writers to elaborate miscalculated dimensions or to be influenced by apocryphal sources or historical novels like the one by Luo Maodeng 罗懋登's on the *Voyage of the San Bao Eunuch* (Zheng He) to the Western Ocean written during the reign of Wanli 万历 (1572-1620) and accordingly with Robert Finley (1992) as a way to foster nationalism inspired by historical figure.

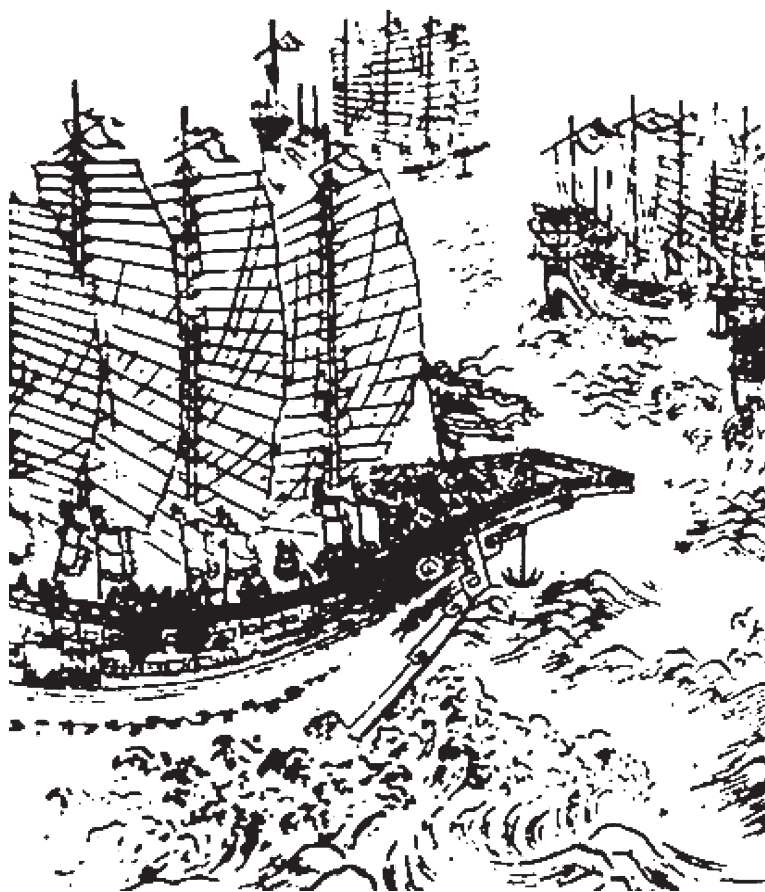
Church (2005) elaborates solid consideration on the size of the ships as well in the need for repair every few years and rebuilds every 10 years, and try to demystify the historical exaggerations that influenced the Ming Shi, the official history of the Ming.

There is no agreement as to the size of the treasure ship, with nautical engineers and some scholars defending a maximum dimension of circa 54 metres long, very different from the 150 metres long and 55 metres wide size often mention in brochures. The 'gigantic' ships of the Song period considered large had a length of 25 metres. Sally Church (2005) elaborated on several reasons for the origin of the large size misconception of the treasure ships that would break the long tradition of ship knowledge and construction in China. Many of the ships in the Zheng He fleet were commercial carriers like grain transporters, which were adapted to be used in the fleet. Sally Church's study concludes the more probable size of the different large ships to be 45, 53 and 60 metres long. Larger ships would have had many structural limitations as the design was limited to the size of trees. Although there are records of large amounts of wood needed to build palaces, there is no similar record of this amount for the ships, leading to the conclusion that many ships of the fleet were adapted from a commercial fleet and retrofitted for the new mission. Different kinds of imported woods were used in the ships, and again, there is no evidence of massive imports. Bin (2005) estimated 2,860 ships were built (probably including adaptations of existing ships) during the Yongle reign.

The excavations in Nanjing shipyard basins showed a system of raised columns and beams for ship construction. Of the 420 metres total length of the shipyard basins only 300 metres was the construction structure while the basins were around 40 metres wide and 4 metres deep. Most probably several ships were under construction at the same time in one basin, with thousands of craftsman working simultaneously, and with some free areas between the ships as working areas, thus bringing the width of the ship to a maximum of 30 metres, a size similar to the Song's ships. A crew of 27,000 men, divided by 300 ships, gives an average of 90 men per ship. An average of 100 crew men was needed for 250 tons of ocean-going junks. Bringing in soldiers in transport troops ships, the ratio of men per ship could rise several times.

Chinese ships were designed inspired in the natural wood, in this case the bamboo internal partition

Zheng He's ships as depicted in a Chinese woodblock print, early 17<sup>th</sup> century.



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of its stem by a diaphragm, the hull was also divided into waterproof sections, so that if filled with water this would not transit to other sections, allowing a greater resistance to floating in case of collision or tempest at sea. The first ships were ordered to be built in 1403, and were ready after two years. In 1405 1,180 ocean ships were ordered to be built and three years later, 43 treasure ships. There was no time for research and development of new designs, plus testing them in sea trials. Thus we may conclude that the ships followed well-experimented designs of long-range ocean-going ships, with a long tradition in Fujian and Guangdong.

The miscalculated estimation of Zheng He's large ships to be 450 feet (137 metres) long was made in 1957 after applying calculations of the rudder size to modern steel built ships or low-bottom river ships.

Delivering a mammoth ship 150 metres long, if technically possible (which many engineers doubt), would have occupied most of the resources, workforce and space for building other kinds of ships. The size of the ships is still under debate, with maritime architects and experts like Albion (1926) estimating that the longest possible dimension was around 70 metres long but for safer structure and more efficient performance it was approximated to be 50 metres long.<sup>9</sup> A mammoth ship of 150 metres in length by 50 metres width would be very unstable and very difficult to navigate, like the 7 mast 120 metre long schooner Thomas W. Lanwson that was considered like a floating 'bath tube' difficult to maneuver, with two heavy body for the sailing area.<sup>10</sup>

Naval Architect Chung Chee Kit,<sup>11</sup> also disagree with the 150 metre long, mentioning that this size will be too big to control. He estimates the real size to be 60 to 62 metres long with the shape represented in a contemporary Buddhist prayer scroll engraved by Monk Sheng Hui who participated in the fifth voyage of Zheng He. In this image we see the traditional Song ships, with men on board giving a sense of scale and proportion with 4 masts. The ships in this scroll look more similar to the 160 feet (48.9 metres) long, named *Keying* that navigated in 1846 from Hong Kong to Boston and London, with a curved shape deck and hull was a common for centuries a very common sight in the waters of Southern China.

These large ships of Zheng He fleet were also large carriers of commercial products, in a trade dominated by the court that soon was transformed into a monopoly by curbing private maritime activities. During the

1370s several *haijin* decrees were implemented with the dual intentions of cutting private trade and rebel support. In the Song dynasty, maritime trade was the lifeline of the economy. A blockade to private ships was imposed, and blockade runners if captured were treated as pirates and annihilated.

## MILITARY ASPECT OF THE MARITIME EXPEDITION

It is often described as 'politically correct', that Ming expeditions were just peaceful diplomatic expeditions, promoting friendship and bringing tributes and gifts,<sup>12</sup> while the expeditions from the European age of discovery, like the one of Vasco da Gama, were motivated by imperialist intentions, with the recurrent use of military force, the well-known 'gunboat diplomacy'. This is a simplistic and distorted vision of history, missing the contemporary situation and real political methods of the period. Practically nowhere in history does a case like this exist, that a kingdom prepares a mighty fleet to distribute goodwill wishes and gifts. To navigate in the oceans could be more dangerous than crossing tropical jungles, with plenty of natural dangers and threats from enemies or competitors.

The Ming fleet was no exception, having thousands of crack troops and the best defensive armour and offensive artillery in Asia. The maritime and land operations of the Ming in the Ava Burma region, Yunnan and in northern Vietnam, clearly show a superiority of organisation of attack and defense as well as firepower.

The Ming policies and methods are in great part a legacy of the Yuan Dynasty system with strong tribal division for alliances or rebellion, a pattern apparent during the Ming period, reflected also in the maps' boundaries, of expansion in earlier Ming (incorporation of Yunnan and Annam) and contraction in the last decades.

Zheng He was an experienced military commander, leading thousands of crack troops that would suppress local opposition, or challenge and change local rulers. Zheng He was not the only eunuch sent on maritime expeditions.

The tribute system implies recognition and enfeoffment alliances that are naturally linked with military operations to implement strategies linked with



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foreign policies. As an example we describe some of the Ming navy operations lead by Zheng He:

After the 1406 invasion of Annam, the northern part of Vietnam became the 14<sup>th</sup> Chinese Province, which was under Ming rule until 1428. Ming supported the Champa (Southern Vietnam).

In 1407 Ming planned to attack Ava Burma by sea and its local allies by land. Ming soldiers, like its predecessors of the Yuan dynasty, did not adapt well to the local hot and humid climate and because of difficulties of supplying a large army, there was a need to resort to the use of local allies in military operations. Thai people and Burmese had constant wars, often on the Yunnan frontier. Yunnan, Bin Yang (2009) mentions the Ming fears that Yunnan region, being a Mongol-controlled stronghold that previously threatened the Song dynasty from the southeast, now

could also threaten the Ming. The solution to avoid this threat was the Ming taking over Yunnan with an army of 300,000 troops. This led to confrontation with Thai and Burmese polities. The Ming had three lines of sequential firing of crossbows broke Thai armoured elephants carrying shooting turrets.

Considering the instability of Thai polities at Burma-Yunnan borders engaged in war with China, the Ming strategist decided to support the creation of a new polity situated behind enemy lines of the above mentioned war theatre. The creation of the new polity, the kingdom in Malacca, as well the 'tandem' naval base in Samudera (Java, Pasai, the Pacem in Portuguese) was a masterstroke in the chess war game.<sup>13</sup> Teixeira (2008) refers to Malacca and Samudera as important places for controlling the trade with China, India and Java. With a Muslim ruler in Malacca, no sympathy and support could be expected for the dominant Thai, mostly Buddhist polities in the North. A Ming naval base in Malacca provided a perfect point for maritime operations. Zheng He's ships brought a delegation of 540 guests of the newly appointed Malay royalty to pay tribute to Emperor Yongle in Nanjing. A Chinese princess, Han Libao (Hang Li Poh 韓麗寶), and 500 handmaidens were sent to marry the ruler of Malacca. Bin (2005) mentions that most of the delegation of Chinese women married local men, becoming Muslims, and helping to convert Malacca to the center of the new polity independent from the former Buddhist kingdom of Thailand. However, by the end of the 15<sup>th</sup> and early 16<sup>th</sup> century Ming policies were abandoning the Southern polities, focusing concern on the northern borders of China.

The lack of government control in the seas thus favoured the increase of maritime trade both by Chinese and foreigners.

The Portuguese navigators to China arrived in this period, like Jorge Álvares (1513), being sent from Malacca.

The many years of maritime trade of the Song and Yuan dynasties contributed to the development of Chinese communities overseas; both Muslim and non-Muslim Chinese traders spread over Southeast Asia, with some envoys in contact with the Ming court.

In 1407 Zheng He implemented the *haijin* policy in overseas places, like the Old Port at

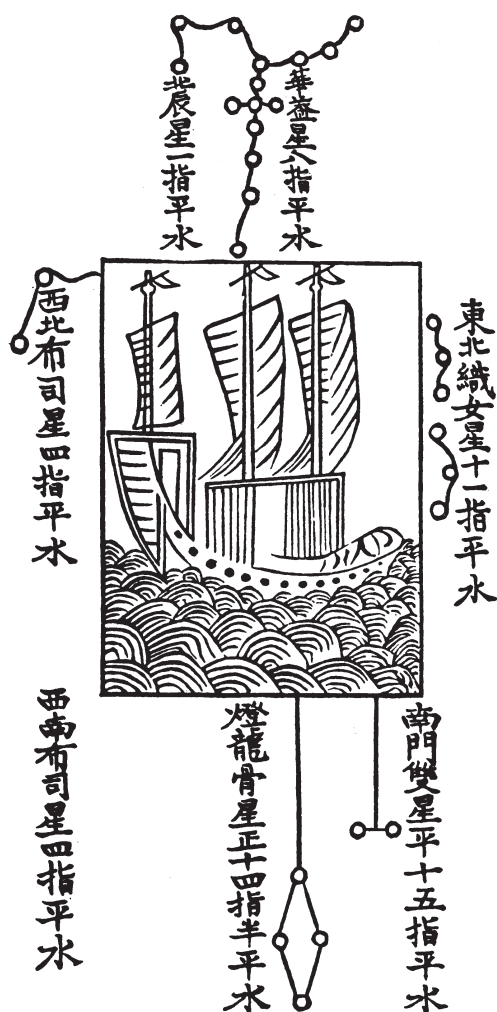
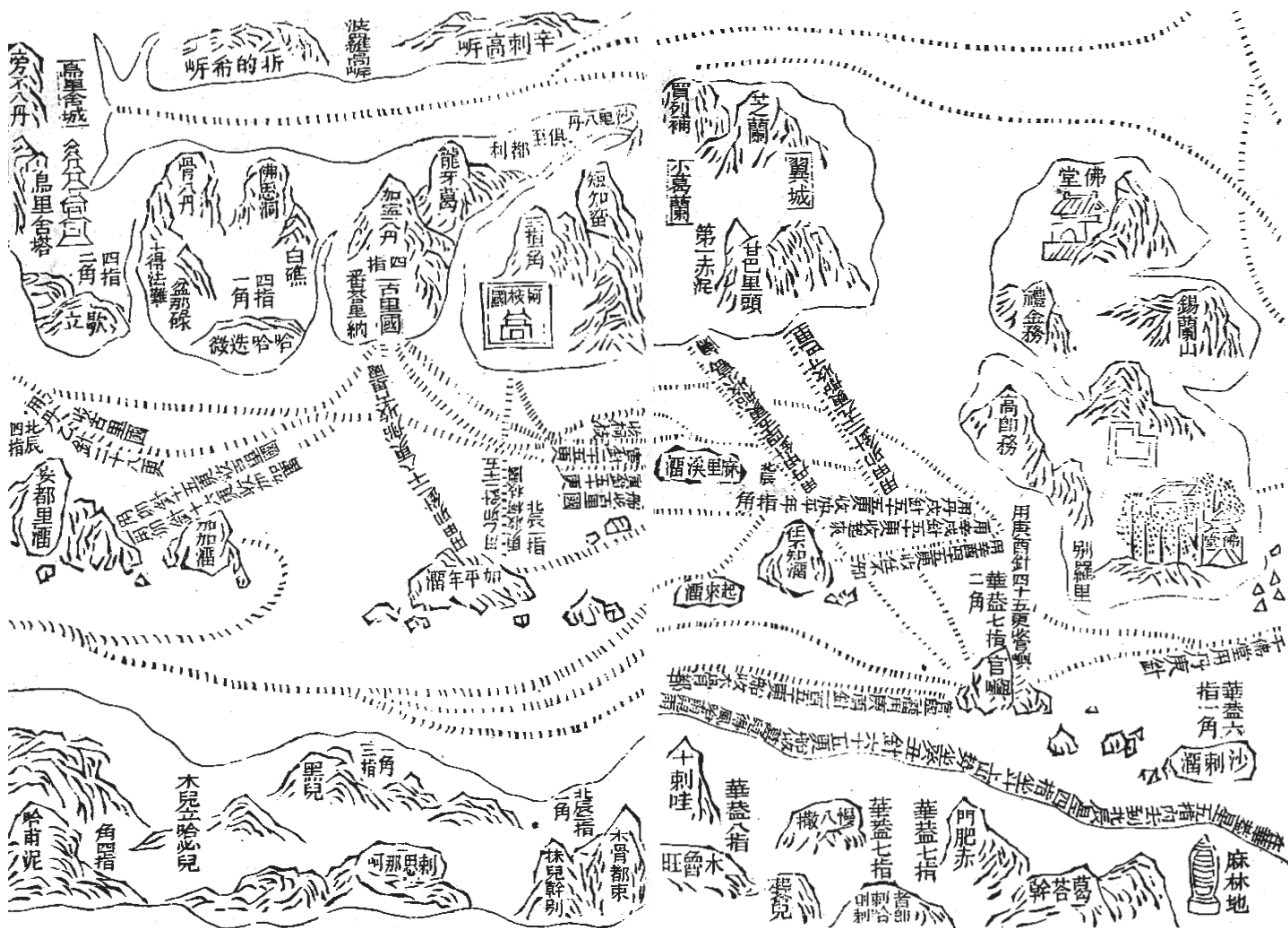


Diagram showing altitudes of guiding stars between Sri Lanka and Sumatra on the return voyage to China. From *Ancient China's Technology and Science*, Beijing, Foreign Languages Press, 1986.

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Section of the so-called 'Zheng He map': Sri Lanka (large island in the right half, Bengal (top right), India (land mass centre left), East African coast (land mass at bottom).

Palembang in Sumatra, the capital of the former Srivijaya Empire. The port was ruled in 1405 by a person from Guangdong,<sup>14</sup> with many Chinese from Guangdong and Fujian provinces living here. The local Chinese commander, Chen Zhuyi 陈祖义, was captured and brought to Nanjing for public execution. In the operation, 5,000 'pirates' were killed, ten ships burned and seven captured; probably some others escaped the onslaught. No private or local navy could challenge the size and firepower of this Ming fleet. There is some probability that the Crane Wing formation was used, with the heavier battleships in the center, and the light and faster ones in the wing, encircling the enemy in two pincer movements, making it difficult to escape.

The Old Port<sup>15</sup> city new ruler was submissive to the Ming. This situation lasted until the Ming navy was present in Java waters. China only lost the local influence with the end of the voyages after 1443.

In 1407 the Majapahit polity, a former maritime power in the region, was in a civil war process, with Zheng He's troops in the field suffering 170 casualties.

In 1409 Burma was threatened with military invasion from the sea, while Ming allies and troops attacked from the north. The maritime reference could only be to Zheng He, according to the research published by Karl Hack and Tobias Retting (2006).

In 1411 the ruler of Ceylon (Sri Lanka) Alagakkonara (Rayigama kingdom) was captured and brought with his family to the Ming Capital, being replaced by a leader docile to the Ming. In 1414 and 1415 Zheng He succeed in capturing Sukanla of Samudera, helping one side in the civil war in Java by bringing the captured leader to the court.

A man of courage and leadership was needed to lead a powerful fleet with different tasks. Bentley; Herbert (2007) revealed that Zheng He 'walked like a tiger' and did not shrink from violence when he



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considered it necessary to impress foreign peoples with China's military might. Tigers were common in Yunnan, the birthplace of Zheng He.

From this maritime perspective, Ming and Portuguese gunboat diplomacy did not differ much.

Bin (2005) describes the Ming fleet as organised and lined up in four departments:

1. Commanding and Decision-making: 7 *zheng shi tai jian* 正史太監 (Court eunuch), 10 *shao jian* 少監, 5 *jian cheng* 監承, 53 *nei guan* 內官 and *nei shi* 內史. The latter ones are a level lower than the former ones, in charge of commanding the whole fleet in terms of navigation, foreign affairs, military operations and trading;

2. Military commanders, marines force: 2 Chief Commanders (*duzhibui* 都指揮), 93 Commanders (*zhibui* 指揮), 140 *qian hu* 千戶, 403 *bai hu* 百戶. The latter ones are a level lower than the former ones. Then different types of soldiers: *guan xiao* 官校, *qi jun* 旗軍, *yong shi* 勇士;

3. Foreign Affairs and Logistics: 2 *she ren* 舍人 (main tasks: drafting documents), 1 *hu bu lang zhong* 戶部郎中 (main tasks: logistic supply), 180 doctors (*yi guan yi shi* 醫官醫士), 1 *jiao yu* 教諭 (Publicity Commissary);

4. Nautical Service: 1 *yin yang guan* 陰陽官 (Astrologer, main tasks: observing astronomy and forecasting weather).

Naturally each ship will have a captain (*huo zhang* 火長), helmsman (*duo gong* 舵工), the pilot (*ban ding shou* 班碇手) and sailors. From different contemporary records we know of many other supporting roles like: *Tong shi* 通事, translator, a key element in communicating with different regions; *maiban* 買办, person who was responsible for purchasing; *shu shou* 書手, accountant and cashier; *min shao* 民梢, responsible for sails, paddles, cleaning and maintenance. Artillery was abundant not only in canons but also handguns. Repetitive crossbows also very effective at sea as well on land, when used against armed elephants.

The fleet carrying approximately 27,000 men was composed of an average of 300 ships, divided accordingly in Table 1.

The function of these large ships is similar to castles or sea fortresses; headquarters that were at the geometric centre of the navy.

The fleet disposition in arrows allows a better defense on this gigantic but slow ships located in the

center. From records of the Song and Yuan, we know tactical practice of linking large ships together to form extended and formidable defensive platforms. However this strong defense organisation can fail in storms or when attacked by fire boats. In order to increase protection of the fleet periphery, smaller and faster ships provide side, rear and advance protection as well supply and logistics.

After Zheng He era, the Ming fleet was still very powerful when going to support the Korean navy to defeat the Japanese invasion of Korea (1592-1598).

The navigation maps of Zheng He, based in landscape references, were very different from the Portuguese ones that tried to locate position with longitude and latitude references as well as mapping the winds and sea currents. At night both navies, Chinese and Portuguese, navigated by the stars. Zheng He's maps were efficient enough since the fleet was navigating to well-known waters, known for centuries as the highway route of the Sea Silk Road. Nevertheless, pilots familiar with the route and with knowledge of ocean and weather behavior, which varied with seasons, were doubtful about the success of the trip. Many of these pilots were from Muslim trading communities living in China. Navigation of the fleet was mostly done near the shores, in sight of land. Table II details the period, site and mission.<sup>16</sup>

In a prevision that become prophetic, the first Ming Emperor, Zhu Yuanzhang, on foresaw the possibility of future military threats to the Ming, mentioning that the North was dangerous, but the South not. This principle of tolerance to the South may be one of the reasons for allowing the Portuguese settling peacefully for four centuries. In fact they did not threaten the Empire, but helped protect the South, replacing in many ways the previous Muslim networks of traders.

## PORTUGUESE EXPANSION TO THE ASIAN SEAS

We can consider that there were three main reasons for the Portuguese expansion to the oceans.

The first was the definition in the 14<sup>th</sup> century of its land's borders with the neighbouring kingdoms in the Iberian Peninsula, with mutual recognition treaties confirmed by Papal authority, which was concerned that Christian countries fight among themselves when

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TABLE 1. MAIN TYPE OF MING CHINESE SHIPS<sup>13</sup>

Type	Characteristics
Treasure ship	The largest ships in the fleet, large carriers for dignitaries as well cargo
Attendants	Support ship for personal or troops
Food supply	Logistics, for distribution to the fleet, as well for refitting on ports
Water supply	Water containers
Horse carrier	Cavalry were crucial for land operations
Warship	Mobile platforms for sea war; there were many different types

the Muslim threat to Europe was growing. The fall of Constantinople in 1453 at the hands of the Ottomans shocked Europe, which saw how clear and present was the danger of a massive Muslim invasion of Europe, now supported by a great navy after the capture of Constantinople shipyards. Since the foundation of Portugal, the legalisation of the ruler, in way different but similar from the Chinese the 'mandate from heaven', depended on victory, the re-conquest and liberation of previous Christian lands from the Arab invaders who had dominated the Iberian Peninsula since the 8<sup>th</sup> century. The expansion of the Portuguese territory was limited by the borders of the neighbouring Christian kingdoms.

The second reason was the medieval organisation of Portuguese society during the 15<sup>th</sup> and 16<sup>th</sup> centuries, with a medieval structure forged on centuries of war resisting and counter-attacking the many jihads launched by the Muslim kingdoms in Spain and their allies in North Africa. Feudalism and war were normal and the reason d'être of the nobility, formed by a military aristocracy. The king was the first among pairs (*primus inter pares*) without absolute power, needing the support of other nobles, as well the assemblies of the representatives of different classes, known as *Cortes*, that met in the city of Coimbra, for popular support and legitimisation for King John I, on politics as well as raising taxes and giving privileges. King John I, the founder of the Portuguese Dynasty of Avis as Emperor

Yongle needed legitimisation of his power, obtained after rebellion, called the 1835 Revolution, against John of Castile, the legitimate pretender to the Portuguese throne.

The social revolution led by the Master of Avis (military order) started in 1383 with a rebellion in Lisbon against the representatives of the legitimate but foreign ruler, followed by a siege of the city by a large Castilian army supported by many Portuguese and French noblemen. Martins (2006) narrates how the siege and survival of Lisbon was due to the pestilence that decimated only the attacking army, not the city, seeing in this phenomenon the hand of God (mandate of Heaven?) in supporting the claim of John as King of Portugal, later victorious in civil and foreign wars. After the 1385 revolution and struggle for independence from Spain, the national assembly met to define the attributions (powers) of the crown, war finances, and chapters proposed by different states, represented by the clergy as well as the bourgeoisie (people, mostly artisans and merchants living in 'burgos', that is, villages or cities). In the 1385 revolution the bourgeoisie and most of the commoners sided with the king and a few nobles against the local powerful nobility supported by the Spanish legitimate pretender to the Portuguese crown.

John I centralised the government and reduce the power of local lords.

Powerful dukes and counts, if growing too strong in resources and land, could challenge the king, provoking civil wars. Since 1147 Portugal independence owns much to nobility and to several military orders retained great military power were compensated with lands. A joint project of re-conquest or holy war (to counteract muslim Jihads) was an initiative that could unify the conflicting nobility as well as the common people, with gain of glory, land and resources.

The third reason was for maritime and economic explorations due to the limited access of the nation to the thriving Mediterranean market and the limited



King John I (1357-1433).



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TABLE II. PERIOD, REGIONS AND MISSIONS ALONG THE WAY<sup>13</sup>

Voyages period	Polities visited	Mission-
1405-1407	Champa, Java, Palembang, Malacca, Aru, Samudera, Lambri, Ceylon, Kollam, Cochin, Calicut	Built a base in Malacca, where there was already a Chinese community, Attack on Old Port polity and destruction of Pirates
1407-1409	Champa, Java, Siam, Cochin, Ceylon	
1407-1411	Champa, Java, Malacca, Sumatra, Ceylon, Quilon, Cochin, Calicut, Siam, Lambri, Kayal, Coimbatore, Puttanpur	Capture of Ceylon ruler, who is brought to Nanjing
1413-1415	Champa, Java, Palembang, Malacca, Sumatra, Ceylon, Cochin, Calicut, Kayal, Pahang, Kelantan, Aru, Lambri, Hormuz, Maldives, Mogadishu, Barawa, Malindi, Aden, Muscat, Dhofar	Capturing Sunganla of Samudera. Helping one side in the civil war in Java, bringing the captured leader to the court
1416-1419	Champa, Pahang, Java, Malacca, Samudera, Lambri, Ceylon, Sharwayn, Cochin, Calicut, Hormuz, Maldives, Mogadishu, Barawa, Malindi, Aden	Continuation of the Trade – Tribute and military operations
1421-1422	Hormuz, East Africa, countries of the Arabian Peninsula	Return of Ambassadors to their home country
1430-1433	Champa, Java, Palembang, Malacca, Sumatra, Ceylon, Calicut, Fengtu	Last mission - Zheng He died in the returning trip, near Calicut

size and resources of Portugal, then estimated to be a country of approximately one million people. Bin (2005) estimates Ming China in 1381 to have had a population of 60 million. The difference of population size and resources will determine the way China and Portugal expansion to the seas.

Centuries of struggle ended in the liberation in 1260 of the southern regions of Portugal, the Algarves. The kingdom was unified, but the southern lands and parts of the coast were insecure because of constant attacks by pirates from the Moorish kingdoms, mostly from North Africa, as well from pirates or corsairs from Europe. Corsair, a pirate activity under the flag of a nation or feudal lord was a common practice not only in the Mediterranean but also in Atlantic waters. In 1411 Portugal concluded a peace treaty with the Castilian Kings. Four years later King John I headed a fleet of

200 ships, 1,700 sailors and 19,000 warriors in the crossing of the Mediterranean and conquering Ceuta, an important target in the reconquest process. Since at that time law forbade direct commercial activities with the Moors, this conquest was only justifiable as a bold military expedition. The Moroccan coast was since the 8<sup>th</sup> century the bridgehead where the Muslim Military and pirates departed on expeditions against the Iberian Peninsula. The king's third son was Henry (1394-1460), Duke of Viseu and Master of the military Order of Christ. (The caravels' sails bear the cross of this Order.) In 1422 the Master, 'Henry the Navigator', had begun to send ships to explore the end of the ocean world, the 'Bojador Cape'. As a Prince and scholar he was directly involved in the research, design and construction of the new seaworthy ship, the caravel. He pressed the captains of the expeditions to sail farther and farther.

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In 1488 the caravel of Bartolomeu Dias crossed the Cape of Good Hope. The sea gate to the Indian Ocean and to Asia was definitively open, representing a new opportunity for the establishment of a profitable trade with areas previously monopolised by Muslims. From the coast of Africa to China, the explorers found Christians and non-Christians willing to support the new overseas allies and partners in the trade. In 1492 Columbus reached American shores. Eight years later, Pedro Álvares Cabral landed in Santa Cruz, Brazil, as part of the Iberian 'discovery race to India'. The two former adversaries in the Iberian Peninsula, Portugal and Spain, now often met at sea competing for the same goals. This created several conflicts like the Canary and Madeira Islands incidents. Each part justified its position according to international rights (under the framework defined in the 1456 *Bula Inter Caetera* for Portuguese sailors, which was 'conceded' to Prince Henry from Cape Bojador to India) and geographically inaccurate maps (which were kept secret by each party). Columbus always believed that he had reached India and not a new continent, later called America. After several confrontations with Spain, in 1494 the Tordesillas treaty was signed between Portugal, under King John II (1455-1495), and the Spanish monarchs, Isabel and Fernando. This treaty defined more clearly the geographic borders for ocean exploration under the Portuguese or Spanish flags. This treaty was a corner stone that had helped to peacefully define the delimitation of the Iberian cities in Asia, America and Africa.

The 'Padrão', a stone column with the Portuguese coat of arms, was used as reference for explorers and a mark of new borders since cosmography and sea mapping definitions were not as accurate as in modern times.

The King who promoted the final leap converting the Portuguese expansion in an overseas empire was Manuel I (1469-1521), king of Portugal from 1495 to 1521.

King Manuel I was a patron of the arts, sciences, religion and a reformer of the law codes. He was also a military visionary who revolutionised the sea strategy, like the new tactic of avoiding direct boarding of ships, fighting at distance in order to minimise casualties. Many of the nobility opposed the king's decision to explore the maritime route to India, with concerns about lack of human and economic resources for

this endeavour as well as the enormous risks. Many nobles in the court opposed the ocean journey to India, to the evident cost in economic and human resources. However, Manuel I was committed to the sea expansion, a fact that was apparent in the 1498 decision to move the court and palace for the safe high grounds of the city castle to the Tagus river shore, side by side with the shipyards and the storage and workshops facilities (called the Tercenas).

The shipyards and the maritime commerce were now direct neighbours of the court. With the international prestige and the economic success brought by the discovery of the direct way to India by Vasco da Gama, most opposition to the trips diminished and the country, from top to bottom, embraced it with enthusiasm.

With the mapping of the landcoast, winds and sea currents, the way was opened to other European countries, who prized highly the Portuguese maps, which showed for the first time a scientific and more accurate vision of the world. An example of contemporary espionage for navigations maps is the 1502 Cantino planisphere, obtained illegally by Alberto Cantino from Portugal by the Duke of Ferrara. Since the late 1480s spies were sent to learn about the trade in India, Africa, and the Middle East, like Pero da Covilhã



King Manuel I  
(1469-1521).



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and Afonso de Paiva, as well some Jewish traders such as Rabi Abraham, to communicate with them. These spies visited faraway places like Cairo, Aden, Sofala, Ethiopia, Zaila and Calicut. Information brought by spies, although with many lacunae and inaccuracies, was critical for success in the field.

### THE CHOICE OF DA GAMA FOR THE VOYAGES

Madan (1998) is one of the more complete narrations in English on the life and voyages of Vasco da Gama.

The choice of the Portuguese of da Gama, was not the choice of one man's performance and skills, namely Vasco's, but of the family and the group or clique that he represents. Vasco da Gama was born in 1460 in the coastal village of Sines. His father was mayor-governor of Sines and knight of the king and member of the military order of Santiago. He learned the physics, geometry, mathematics, languages and skills in the art of war in the Order of Santiago, whose grand-master was Prince John, the future king John II. In this period military virtues can be easily be tested in the common conflicts with the neighbouring polities, either Muslim or Christian. Following orders of King John II, in 1492 Vasco proved his maritime skills by capturing French ships in retaliation for French pirate attacks on the Portuguese coast.

After the death of King John II, the successor, King Manuel, choice was Vasco, as a way to please both nobility parties in favour and against the king's maritime project. In July 1497 Vasco da Gama departed to India in four ships, two naus (carracks) a caravel and a smaller supply ship, with an estimated crew of 160 to 170 men.

The caracks were named after the three archangels in the Bible: Gabriel, Raphael and Michael. The flagship, *S. Gabriel*, commanded by da Gama, was a 120-ton carrack built of wood from the king's forest in Leiria. This three-masted vessel was 110 foot (33 metres) long. The main mast used square sails, with a mizzen triangular sail in the rear castle. The ship carried 20 guns. Later ships would increase in size, tonnage and crew capacity. The *São Rafael* carack was commanded by Paula da Gama, brother of Vasco.

After crossing the South Africa coastal divide of the Atlantic and Indian Ocean, the rest of the voyage

was in seas and ports mostly controlled by Muslims, a few welcoming them, but most strongly opposed to the newcomers, who would compete not only in commerce but challenge their religious authority, which often prompted for the call of Jihad. Da Gama was extremely prudent about ambushes that could easily destroy his small force. This first trip was mainly an exploratory trip to find the way to the spice cities in India, particularly Calicut, and to look for Christian allies in the Cruzades-Jihad efforts, that had the ultimate objective to liberate the Holy Land, Israel, from Muslim control. Vasco survived several ambush attempts in East Africa and with the help of the friendly ruler of Malindi (Kenya) and local pilots, reached Calicut on 20 May. In Malindi Vasco met Indian traders, who, when they saw the image of Holy Mary with the child Jesus, prostrated themselves on the ground and shouted what Vasco's men understood to be 'Christ, Christ', probably confusing this with the sound of 'Khrisna. Khrisna' and leading them to believe that Calicut and its ruler were Christians.

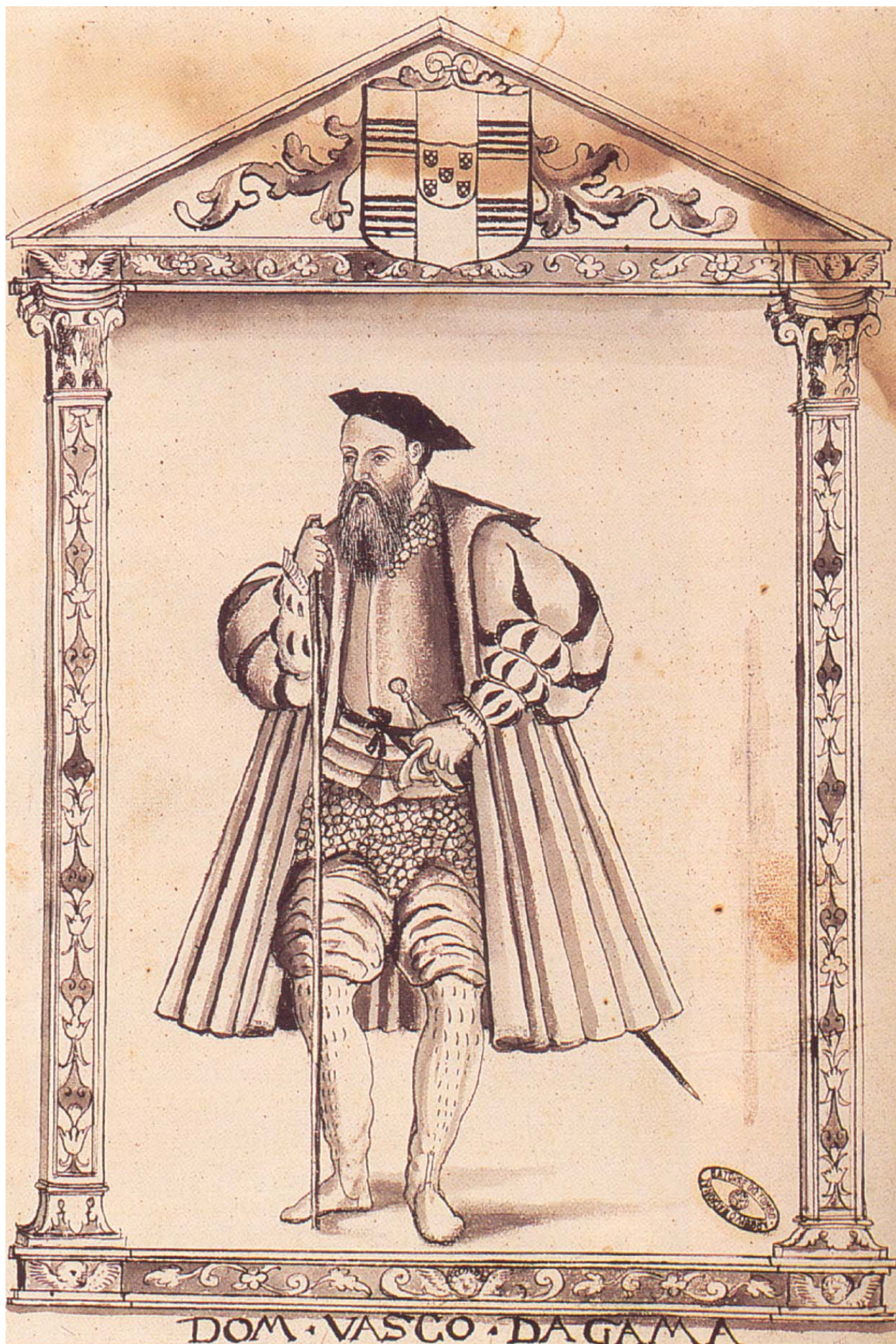
Da Gama, like Zheng He, wanted to implement an enfeoffment relationship with local polities. This Portuguese version of a tributary system was called *vassalagem*, the feudal vassallage tradition of a local ruler to a king.

The gifts of textiles, some metal artwork, and sweet products like sugar and honey brought by da Gama to the Zamorin, the Hindu ruler of Calicut, were ridiculous considering the enormous wealth of the city.

The proposal for friendship and alliance with the far away Portuguese king was also not attractive, when considering that the Zamoring had more powerful local allies; the Arab and local Muslim community, the Mappila, that practically controlled the sea trade. However, the Portuguese were initially welcomed by the Zamorin as well by Chinese traders, who saw Portugal as a potential new partner and alternative to the Arab-Mappilas control. Here da Gama heard about some white men dressed in metal, that came a long time ago in large ships, Vasco thought they may be Germans or Russians. Chang (1997) mentions these white men with metal armour and in large ships were not German or Russians but part of the Chinese Ming fleet led by Zheng He.

Vasco da Gama, in the mid-16<sup>th</sup> century *Lendas da Índia* by Gaspar Correia.





DOM VASCO DAGAMA



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The misunderstandings in Calicut ended in a conflict with the Muslim traders trying to annihilate the Portuguese, who nevertheless being in the minority managed to escape on 29 August. Vasco returned, losing most of his crew to scurvy, with the death of his older brother in Azores during the return trip, and having to abandon ships like the *S. Rafael* due to lack of crew, reaching Lisbon in September 1499 in a small caravel from the Azores.

Although the trip did not achieve the diplomatic objectives, it nevertheless achieved the main objective which was to discover the maritime way to India and the way trade was done in the region. Vasco's ships brought spices that largely compensated for the investments in the voyage. The second trip was led by Pedro Álvares Cabral, ordered to establish relations with the Zamorin, believing that he was a heretic Christian and opposed the Muslim control. Cabral was an impulsive and violent leader who created more enemies than allies in India and lost most of the ships. Nevertheless it is to his credit to have been 'officially' discovered, or rediscovered, Brazil with friendly Indians, leaving two *degradados*<sup>17</sup> to explore the place. Cabral's expedition with 13 ships tried to repair relations and implement a *feitoria*<sup>18</sup> (trade post) in Calicut. Cabral's mission in Calicut was also a failure; after 70 Portuguese were killed by a Muslim revolt, he ordered a bombardment of the city and destroyed the Muslim ships. In coming to Cochin (or Kochi), a port competing with Calicut, Cabral was well received. Cochin would remain the oldest ally of the Portuguese in India. Later Cananor and Quilon would offer their trading ports for Portuguese trading, starting a network of cities and settlements in India.

### GAMA SECOND TRIP, A REVENGEFUL RETURN

Da Gama was sent again in 1502 to India, this time with 800 soldiers, in 10 large ships, and Vicente Sodré, uncle of da Gama, in command of five caravels. Five smaller ships would follow under the command of Estevam da Gama, a cousin of Vasco. His other maternal uncle, Brás Sodré, was also in the fleet. Here we see the link of nobility and the familiar connections.

After submitting and ordering the Sultan of Kilwa to pay tribute, da Gama engaged in corsair activities. Monteiro (2009) mentions the incident

with the great ship *Miri*, a military and cargo carrack, belonging to the Sultan of Cairo, bringing many rich moors from Calicut on a pilgrimage to Mecca. The *Miri* had 260 men, crew and soldiers. After an artillery duel, the *Miri* started to sink slowly. Only a few children were rescued from the ship; da Gama decided that there would be no prisoners. After pillaging the ship, the moors struggled and overcame the Portuguese on board, who had to withdraw to their ships. The next day the *Miri* was set on fire and sunk with the loss of lives on board. This act of cruelty and revenge against the Arab and Mappila traders, even against the advice of his own men, marks the second trip of da Gama as a revenge journey for repairing the failure and humiliations from previous trips, far exceeding the king's orders. Da Gama blockaded the Calicut sea trade, making an effective economic embargo against Cairo-Venetian traders. Da Gama asked for compensation for the treatment of the Portuguese during Cabral's expedition. The Zamorin was ready for the treaty to establish a Portuguese factory in Calicut but da Gama demanded also the expulsion of the hostile Muslim community, a petition that could not be accepted without damaging the trade. Da Gama's ships survived two traps for capturing his ships. Calicut was bombarded for two days and ships were captured. War was declared and the Zamorin fleet was assembled and ordered to intercept and destroy the Portuguese in their loading harbour. Da Gama was informed of the threat that outnumbered him in the number of ships and men. On the return trip from the harbour of Cochin and Cananor, loaded with spices, da Gama was intercepted 1 February near Calicut. Guilmartin (2002) narrated the Arab and Zamorin cooperation in organising a fleet of two squadrons composed of ten Red Sea Egyptian dhows and 60 Indian prahus (the *paraus* in Portuguese sources). Da Gama avoided boarding tactics in order to fight at a distance, keeping the enemy at bay, by navigating in line, with the lighter caravels on the front and the loaded carracks at the back. Here is probably the first time in history that a line formation of the fleet is used opposed to concentration on rows inspired in land formation, like was the case of the battles of Lepanto and Invencible Armada. Portuguese fleet also used the innovation technique to fire the canons '*ao lume da água*', near the waterline, making the stone balls bouncing on the water, reaching farther and accurately enemy's targets. Other innovation in local combat, later improve by

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Albuquerque marines, was to keep a sequential and continuous line of fire, avoiding the tradition to fire all guns at the same time then waiting for recharging. The large number of the Portuguese small breech loading guns allowed a higher sequence of fire than the larger muzzle loading guns of their enemies, creating a devastating effect at short range.

The caravels, like light cavalry, with a crew of approximately 30 men could fire four heavy guns under deck and six falcons of light artillery. The tall carracks carried six large guns and several light swivel guns on deck. At this time the Portuguese were the best navigators and navy, with a crew spending years at sea. In the artillery duel several Arab and Zamorin ships were sunk without Portuguese losses. Mameluc Egypt would organise a fleet and would defeat the Portuguese squadron in 1508 in Chaul, but would lose the next combat in Diu. The caravels' mission under the Sodré brothers was to protect the factories of Cochin and Cananor, and have corsair activities in the ships from the Red Sea. The political and military instability in India, with different polities fighting among themselves, had a strong appeal to corsair activities, that according to Pelucia (2010), led many Portuguese and other Europeans to corsair and pirate activities, particularly in the early 17<sup>th</sup> century; curiously, a phenomenon also affecting some overseas Chinese communities. However, with the greed of getting more personal

profit, the Sodré brothers engaged in corsair activities against the Red Sea trade, leaving Cochin and Cananor unprotected from the powerful land army of the Zamorin that attacked Cochin with 50,000 men against the 5,000 defenders.

The Sodré brothers' action was much criticised in the court. Da Gama's, who although with the title of Admiral of the Fleet was ostracised for 20 years, saw now a new opportunity for returning to India and clean his name from his enemies critics.

## GAMA THIRD TRIP: REDEMPTION

The third and last trip of da Gama to India, was in part a consequence of Gama's threat to the court to leave Portugal and dedicate himself to the service of Spain, as did Ferdinand Magellan, who led an expedition to the Spice islands in 1521, in a period when the new Portuguese King John III took the crown. The mission of da Gama now was to put order in the mismanagement and corruption of Duarte the Menezes' governorship of 'Portuguese India'. There were two different approaches and practical proceedings of the leaders of the government in India; the one that implemented the court monopoly and control of the trade, and the other that indulged in self-service trade and corsair activities, a 'liberal' attitude that wanted little intervention from the crown. Since governors, soldiers, and other investors

TABLE III. MAIN TYPE OF PORTUGUESE SHIPS TO INDIA

Type	Characteristics
Nau	A carrack was the largest ship in the fleet, for military transport as well as cargo. Large artillery guns for defense
Caravel	Fast sailing ship for exploration or support activities. Easy to handle with a small crew. Lighter ordinance. Caravels could be of different size and design
Galera, Fusta, Catur	A galley, rowing ship of average 30 oars (3 men per oar) with auxiliary sails, with a central heavy gun. Fusta has 10 oars (1 man per oar). The Catur was the smallest of the type with 6 oars
Galeça	Hybrid ship between a Nau and a Galera (could have 25 oars of 7 men per oar)
Batel	Small rowing boat, sometimes protected by wooden planks for operations under enemy fire
Warship	Mobile platforms for sea war, there were many different types

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in the trade (ship owners, etc, among them Vasco da Gama) could have a share in the trade, there was a strong temptation for greed in the local government as well in the soldiers to serve as mercenaries and corsairs overseas where they could benefit much more than dedicating themselves to rural activities. Camões, the greatest Portuguese poet, cursed the discoveries age as the cause of the country's de-population and ultimately the loss of national independence.

Leaving for India with two of his sons, Estêvão and Paulo, on 9 April with nine large ships and five caravels with 2,500 men, but only 10 ships arrived in India, the others having been lost in storms, reef shipwreck and mutiny. Vasco flagship, *The Santa Catarina do Monte Sinai* was a large carrack 38 metres length, width 13 metres armed with 140 guns, built in Cochin, India a decade before. After arriving in India, now with the title of Viceroy, da Gama arrested Menezes and put order in the governance and trade. He also captured a Muslim ship from Aden, but this time no harm was done. The crusading-Jihad violent spirit changed in the old da Gama. He advised the king to abandon the military operation, the crusade in North Africa, and focus on the Indian trade. He imposed a system to navigate with a permit, the 'Carta', to implement the sea trade monopoly. The small size of Portuguese ships paid off, leading the nation to a race to Asia, then to South America and Africa, depopulating the country, but creating many settlements overseas with populations now counted in millions, forming the Portuguese Commonwealth of Nations.

Teixeira (2008) illustrated in the period of King Manuel rule (1495-1521), the building of sixteen fortified settlements in the Indian and Pacific Ocean, from the coast of East Africa to Indonesia Archipelago that survived by the proved formula of building fortifications in strategic points with the support of the fleet.

Da Gama died on 24 December in Cochin, India, aged 64 years. Muslim potentates reacted to the Portuguese presence, from the Mamluk Sultana in Cairo to the rulers of the Ottoman Empire and the Moguls of India. However, the Portuguese would only be dislodged, in some places, by their European Dutch or British rivals, leaving the last outpost in India after 1960s independence movements, and Macao-China in 1999 after peaceful negotiations, been the first European nation to arrive to Asia and the last to leave.

## CONSEQUENCES OF DA GAMA OPENING THE SEAWAY TO INDIA

Da Gama's discovery opened the way for western countries to India and China, breaking the isolation of centuries of several countries. In Malacca the Portuguese started the quest for friendship with China, and after a long period of difficulties managed to reach an agreement for renting a place on the coast of China, known as Macao. The process of trading, culture and politics was a progressive one by trial and error. The monopoly of the crown gave way to East Indies companies and during the Industrial Revolution, to a colonisation process.

Another consequence of the age of discoveries, was feudal Portugal literally moving to the sea, not only represented in the floating castles of the *naus* (Portuguese man of war), but also in the stone keeps, like the Belem tower that was built in the middle of the Tagus River on the shores of Lisbon. Copycats of these medieval towers with small artillery ordnance were built in Portuguese overseas settlements, to protect the *feitorias*, that were fortified maritime outposts. The medieval tower (Macao also had one in Monte Fort, as archeological remains and documents show), was progressively replaced by a more efficient system of bastions, trenches and ramparts, that provided a more effective defense against the growing power of cannons.

Da Gama, like Columbus, was pursuing a misconception, in fact an error. Columbus reached a new continent believing he had reached India. Da Gama believed Indians were Christians and potential allies against the powerful Muslim countries.

## CONCLUSION

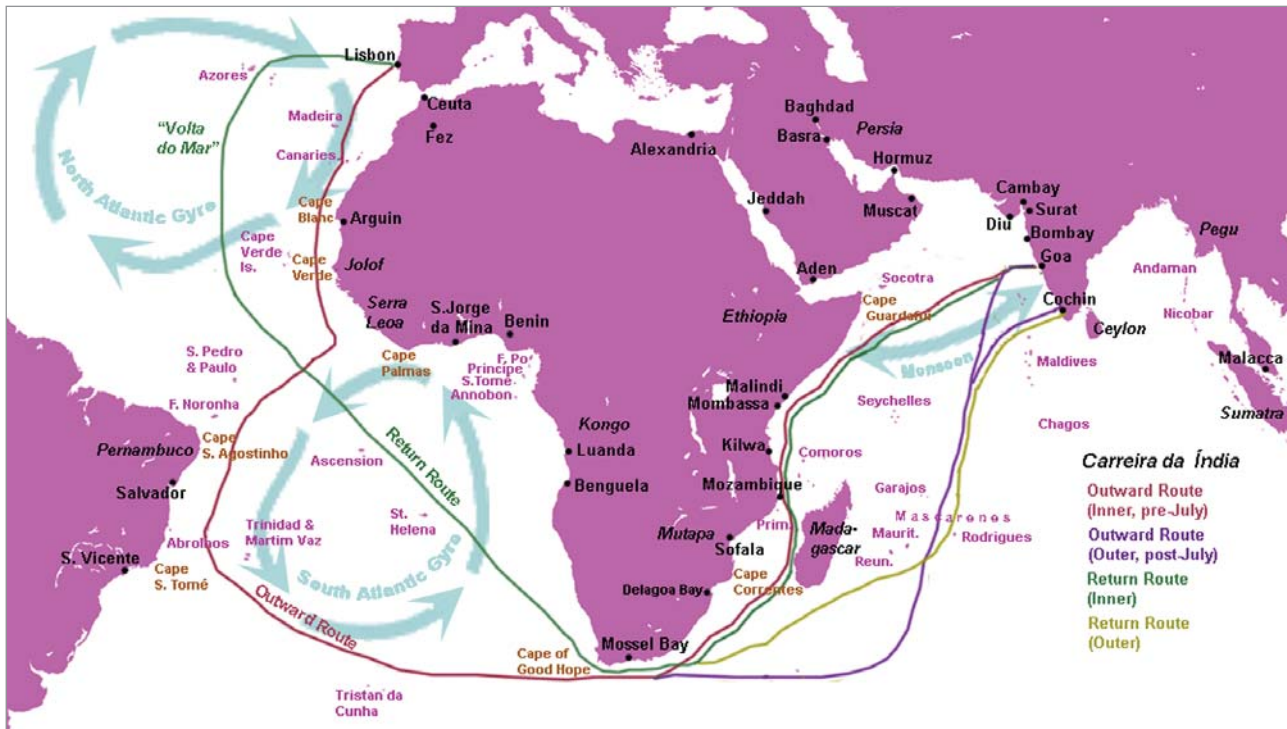
Zheng He and da Gama gave contributions not only to maritime development, but also helped the first direct contact and globalisation in history. Both men made a deep impression in the history and culture of China and Portugal, each one with navies proportional to the nation's size, and with contemporary technology, the top of the line respectively in Asia and Europe.

These are some common features of the Portuguese and Chinese voyages:

- Initial internal opposition to the voyages
- Implemented state monopoly in maritime trade
- Very profitable economic return



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Map of Portuguese 'Carreira da Índia' ([http://commons.wikimedia.org/wiki/File:Map\\_of\\_Portuguese\\_Carreira\\_da\\_India.gif](http://commons.wikimedia.org/wiki/File:Map_of_Portuguese_Carreira_da_India.gif)).

- Imperialist perspective and search for international recognition and prestige
- Overseas power-playing, legitimising or removing foreign rulers
- Opening new ways of sea trade to distant countries
- Cultural presence and science/technological exchange
- Ethnic mixing
- Inspiration for the future

These are some of the differences:

- In China the internal opposition was continued by the Confucian-inspired administration that managed to cancel the voyages. In Portugal the initial opposition was overcome, receiving popular support from all levels of society (aristocracy, clergy, traders, commoners).
- Closure of trade, focus on internal affairs and military threats from the north that could challenge dynastic rule. It was decided to abandon the maritime expeditions to the South, and reinforce the defenses in the North provided by the Great Wall. However the lack of resources, Portugal decided to favour sea trade, abandoning unprofitable positions in North Africa and focusing on the route to Asia.

- The imposition of restrictive measures in China overseas trade *haijin* led to an increase of illegal activities, piracy, and isolation of the country. Portugal's increased exposure and expansion led to contact with people and cultures of different continents.

• Zheng He voyages had reinforced the overseas communities (and some future Chinatowns) with a flourishing trade that made them sustainable without government support. In spite of the efforts, Portuguese settlement in Asia had limited influence in local national cultures, considered always as European, and was in a continuous struggle for economic and political survival.

• China had superior ship technology, with stronger hulls composed of three layers of planks, divided into separate compartments, making them more resistant to sinking. Portugal had better navigation maps and knowledge of East and West seas as a result of decades of research and exploration, a learning that in the long run profited all Europe.

• In the long term China's isolation was forced to end in the mid-19<sup>th</sup> century by western powers that were technologically more developed and more organised with an efficient economy and administration, starting a painful process of colonisation that lasted a century.

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• Although very different in many aspects, Macao was the first place in Asia where Chinese and European culture met and interacted in a peaceful way, a good sign for the future.

Both countries have a long coast and long maritime tradition. Although China often preferred to focus on the country alone, ostracising overseas ventures, Zheng He's voyages show the importance and capability of China as a maritime nation, a factor that cannot be neglected in a globalised world. Maritime expeditions and trade help spread Chinese culture to several Asian countries, contributing to multi-ethnic and multicultural societies.

The commemoration of 500 years of Portuguese-Chinese relations in 2013 is a unique opportunity for East and West comparative history. Zheng He and Vasco da Gama are related in the way they helped connect the world.

The idea for this study by eastern and western researchers came about during a class on inter-social and cultural studies, after several students presentations had shown the need to re-access from different cultures

and historical backgrounds the contribution of different cultures to similar events.

Comparative history research has the enormous benefit of bringing learning from the past to the international audience. Heroes from the past are not angels or demons, but people like us. Finally, this essay provides a small and limited analysis, hoping more will follow, on the parallel journeys of nations, like the ones by the greatest and most ancient nation in the East, China, and a small country in Western Europe, Portugal. They started a community journey to the seas that led to meeting and discovering each other. In a 500 years period, a unique relationship of cooperation and tolerance was developed, influenced by the living side-by-side of Chinese and Portuguese communities, apparent in the existence of Macao, recognised by UNESCO as part of the World Heritage. **RC**

**Author's Note:** I would like to thank to Professor Ian Chaplin, University of Macau, for the revision and advice and to Professor Paulo Pinto, Catholic University of Portugal, for his insight and suggestions on da Gama's relationship with the court.

## NOTES

- 1 Sima Qian (ca. 145 or 135 BC – 86 BC). A Han court official who was castrated as a less honorable alternative to death penalty after writing the first chronicle annals of Chinese history, relating true facts that were unpleasant to the rulers.
- 2 There is a statue of Zhen He at the grand Dajue Temple in the City District of Semarang. 10 Kilometers away are the Sam Po cave with the portrait of Zheng He. In Semarang muslims also praise Zheng He for helping spreading Islam as mention by Bin, Lin at Zheng He's Voyages Down the Western Seas. China Intercontinental press. 2005. P 65
- 3 From the romance version written during the Ming Dynasty.
- 4 Reference from [http://en.wikipedia.org/wiki/Sima\\_Qian](http://en.wikipedia.org/wiki/Sima_Qian).
- 5 In 1277, the city of Fuzhou was captured by the Mongols. The leading Song General, Zhang Shijie 张世杰 wanted to use Quanzhou, an important port of the Song for organising a navy. For this he asked the help of the powerful Muslim Merchant Pu Shougeng 蒲寿庚 who, became wealthy through the trade with Southeast Asia (Champa Brunei) and was in charge of the Song Maritime Trade Office. He refused the request from help of the Song. Nevertheless Song General Zhang confiscated the boats and fled with the court. Pu Shougeng retaliated by killing an Imperial clan member and officials left in the city, and surrendering to the Mongols, who used Quanzhou as a navy base, helping in the collapse of the Song.
- 6 Zheng was born in Fujian, came to Macao and was baptised Catholic with the name Nicolas Gaspar. He spoke Portuguese and worked as translator for the peace negotiations with the Dutch. His son from a Japanese woman in Nagasaki, Zheng Chenggong 郑成功 is known in the west as Koxinga.
- 7 Zvi Ben-Dor Benite is a prolific writer on Islam in China. With several articles like 'The Marrano Emperor: The Mysterious, Intimate, bond between Zhu Yuanzhang and his Muslims' demystify the bold claims that the first Ming Emperor was a 'Marrano' (hidden Muslim); 'Follow the white camel: Islam in China to 1800' in The New Cambridge History of Islam. Here he describes how one third of the superintendents of Fujian ports were Muslims. <http://nyu.academia.edu/zvi>
- 8 The enfefment system is not new in China, but was greatly promoted during the Yuan dynasty, as feudalism was in the very base of the tribal system of Mongol tribes. Its differences from European feudalism are rooted in the nomadic character of the Mongols.
- 9 This was the British battleship of the line, 74 guns.
- 10 [http://en.wikipedia.org/wiki/Thomas\\_W.\\_Lawson\\_\(ship\)](http://en.wikipedia.org/wiki/Thomas_W._Lawson_(ship)).
- 11 From the documentary "Emperor of the Seas" by Discovery Channel. Film produced by Bang, Singapore
- 12 Geoff Wade mentions the demand from Si Lunfa ruler of the Thai Mao polity (Burma-Yunnan) of Lu-chuan/Ping-mian to provide for the Ming, 15,000 horses, 500 elephants and 30,000 attle, as well large amounts of silver. The use of force can be applied if the demands are not corresponded.
- 13 Pacem was occupied by the Portuguese in 1521, a consequence of the conquest of Malacca.
- 14 <http://www.epress.nus.edu.sg/msl/polities.html>, entry on Old Port.

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- 15 Geoff Wade mentions that the Old Port was recognised as a 'Pacification Superintendency', designating a polity ruled by non-Chinese on the Chinese borders.
- 16 Based on the table of the trips in Wikipidea on Zheng He and on *Maritime Silk Road* edited by Li Qingxin.
- 18 *Degradados* is the word for degraded men, people condemned to jail, but replacing their penance by participating the voyage dangerous mission. Banished criminals were often used in Portuguese maritime expeditions, and Australia was a target for sending these men far away. In China during the Han dynasty many *degradados* were used in the front line position in conflict or in war regions.
- 19 The *feitorias* in Portuguese India were fortified storage and shop area.

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