

ASTR 308 "Into the Final Frontier"

The Discoverers: BOOK VI

1. In "Ptolemy Revived and Revised"

- (a) Ptolemy was revived about the same time as what other major event? For what great historical period was the revival of Ptolemy a prologue?

The revival of Ptolemy began about the same time as the fall of the Mongolian Empire and the closing of the West-East land paths; his revival was prologue to the Renaissance.

- (b) Describe Ptolemy's view of Africa in relation to the "Great Southern Continent". What was the significance of this relationship?

Ptolemy had charted Africa as connected to the southern continent. This resulted in the Indian and Chinese "seas" as being land locked and thus there was no sea route around Africa to connect the West and the East.

- (c) Who was Fra Mauro? What contribution did he make to map making? What is the name of the Venetian who may have influenced Fra Mauro (though not directly)? What was the influential information?

Fra Mauro constructed a map, or "planisphere", of the whole earth. It was the last comprehensive medieval map. Fra Mauro's map was possibly influenced by the stories of the travels of Nicolo de' Conti, who was a Venetian merchant. The influential information was that Africa opens to the a southern sea and that the Indian Ocean and Chinese Sea are connect to the Atlantic. Fra Mauro showed that a sea passage around Africa was a possibility.

2. In "Portuguese Sea Pioneers"

- (a) Identify at least three reasons Portugal was so well set up to make an organized effort for sea voyages. Elaborate on each and why it was important.

(1) Portugal was an outward facing nation- outward facing to the Atlantic due to its geographical location; the country was not influenced by the commercial on goings of the Mediterranean Sea, but naturally was at home with the westward facing open ocean.

(2) During a period of unrest in Europe (The Hundred Years War and the War of Roses), Portugal was at peace; thus, Portugal was able to focus on commerce and politically and economically healthy.

(3) Due to the persecution of non-Christians (Jews, Hindus, Muslims, etc) in other nations, especially Spain, many very learned people migrated to Portugal, a nation that was tolerant of all races. In fact, the peoples of Portugal were inter-bred with Africans, Muslims, Spaniards, and Gauls (France). Thus, Portugal had a rich population of intellectuals and skilled laborers available to contribute to organized efforts.

(4) A leader, Prince Henry, stepped forward during this time of peace and prosperity. Without a leader with a vision (in his mind first), the other three circumstances would not have led to the effort of organized sea exploration.

(b) Name as many accomplishments of Prince Henry as you can. Provide some type of time line when appropriate.

PH formulated the first every enterprise of continuous discovery. Modern exploration begins with him; he is considered to the Father of Continuous Discovery. He built a modern research center, compiled knowledge from books and charts. He hired mariners: sailors, captains, and pilots. He brought in mapmakers, instrument builders and ship builders (including foremen, engineers, and craftsman).

(c) Why was the Caravel such an important technological achievement?

PH's men built this ship, and it was critical because it had the ability to return against the winds. It had both maneuverability and a large cargo carrying capacity for its size. The most important cargo, however, was the information being returned... seaman had to have the confidence they could return from voyages to unknown locations and PH needed a ship that could return the information he sought.

3. In "Beyond the Threatening Cape"

(a) What is the name of the "threatening cape" and where was it located?

Cape Bajador. It was located on the north west coast of Africa, somewhat south of the Canary Islands.

(b) How many expeditions failed to pass this cape and how many years did it take? Who finally passed it and what year did this happen?

Prince Henry sent 15 expeditions over a period of 10 years (1424-1434). The sea captain that finally passed Cape Bajador was Gil Eannes (after he had already returned and reported that it was in fact impassable).

- (c) Who took over after Prince Henry's death? What year? Who did he hire to lead the explorations and briefly describe the outcome?

Prince Henry died in 1460. In 1469, his nephew, King Alfonso V, took the throne and decided to make the sea explorations profitable. Alfonso hired Fernao Gomes to "make it so". In a period of five years, Gomes covered as much territory along the coast of Africa as Prince Henry's captains had in 30 years! Gomez began the economic boom of the Portugal crown due to imports from Africa, such as pepper, gold, ivory, and slaves.

- (d) Who was the second monarch to inherit Prince Henry's program? What year? What was this era of Portuguese exploration characterized by (what did they accomplish economically, politically, etc)?

Following Alfonso V, King John II took the crown in 1481 (9 years prior to Columbus's voyage). Politically, King John fortified the Portuguese territories and sent out land parties to explore the inner continent of Africa. Economically, King John continued to enrich the crown's treasury due to continued imports from Africa. During his reign, John II saw that the tip of Africa could be rounded, and even heard from the African locals that the Indian Ocean was wide open.

4. In "To India and Back"

- (a) What was the accomplishment of Bartholomeu Dias? Why was he so disappointed with his accomplishment?

Dias was the first Portuguese captain to take his ships around the southern tip of Africa. He accomplished this with the help of a storm, which had sent him out to sea. He sailed a bit beyond the tip and saw that the way to India was wide open. However, he was forced to turn back by his crew and subordinate captains. Thus, he was never able to realize his dream to be the first to reach India using the sea passage he discovered.

- (b) Who, of historical importance, witnessed Diaz's return to Portugal? What were the implications historically (mentioned what this led to in the coming years- think June 7, 1494 as a start).

Christopher Columbus. Columbus had returned to Portugal following a failed attempt in Spain to sail directly westward to reach the Indies. He was going to campaign King John II to fund the expedition. Dias' discovery made Columbus' venture moot. So, he went back to Spain, and now the Queen of Spain was listening to Columbus with interest. So, she sent him out in 1492. When he returned with news of "success" it started a fierce competition between Portugal and Spain. By 1494, they two countries were practically at war over who owned rights to which territories. This led to the Treaty of Tordesillas (June 7, 1494), which prevented a fighting war, but resulted in a Cold War. This is why Brazilians speak Portuguese and the rest of South America speaks Spanish.

- (c) Why did a ten-year hiatus happen before Diaz's discovery was capitalized upon? What was the major problem? Who resolved the problem and what was the outcome of the resolution?

There transfer of the crown to the next king was problematic. There were also domestic problems at the time (most commerce). And most of all (the major problem), there was the growing argument with Spain as to who had rights to discovered lands. Without knowing of the American continent, the two powers thought their discoveries overlapped geographically. With the decree of the Pope, a treaty was signed in June 1494 (two years after Columbus' discovery). A line of constant longitude was declared in which all land east of the line would be Spain's and all lands west of the line would be Portugal's.

- (c) Who then was the third monarch to take the crown and Prince Henry's program? What year? Who did he hire to continue what Diaz did not?

King Manuel I took the Portuguese crown in 1495. His advisor tried to convince him to stop the sea exploration, but he didn't listen to them. King Manuel I hired Vasco de Gama to sail to India.

- (d) Describe the voyage of Vasco de Gama? What did Gama do when the Samuri of Calicut delayed in surrendering? When Gama left India, what did he leave behind (first time ever in history!)?

Vasco de Gama sailed into Calicut India in May 1498. He sailed wide of Africa and covered 37,000 miles and was at sea for 93 days. When the Samuri wanted time to negotiate, de Gama killed random traders and fishermen in the harbor, hung them, chopped up their bodies, and send them in baskets to the Samuri for his curry. On his departure, de Gama left five Portuguese ships to police the regions; it was the first permanent European navel force in Asia. .

5. In "Why Not the Arabs?"

- (a) In short, explain why the Arabs were not a sea faring empire?

The Arabs had a distrust of the open ocean. They viewed the ocean as a desert, a place not to be trusted due to weather and the ill effect that ships were dwarfed on the open sea, They did have the technology (ships), but they chose not to explore the open water. Another reason is that the Arabs were already at the center of all commerce. They were just across the Mediterranean from Europe in west Africa and near Eastern Europe (Byzantine Empire). They were also geographically adjacent to the east, India and China and were already in India and some as far east as Korea. They had no need to explore the seas to find new trade routes.

(b) What were some of the consequences mentioned by Boorstin?

Boorstin mentions that as late as 1498 (when America and Russia were developing rocket technology), the Arabs were not even venturing out into the Indian Ocean (which they did prior to de Gama), but their ships hugged the coast of Africa. It is possible that much of the world would have been Islamic had the Arabs explored the seas. It is also possible that if they had a sea going navy that they would have expelled the Portuguese from the Indies and also changed the course of history in the East and the history between Spain and Portugal

6. In “The Chinese Reach Out”

(a) Briefly explain the class struggle between Eunuch’s and Intellectuals in China and their relative relationships to the Emperor.

Eunuchs had the implicit trust of the Emperor and were allowed to “whisper in their ear”. All other government officials had to address the Emperor via documents that were handed up the “stairs”. Eunuchs usually had no formal education and were not versed in the ways of Confucianism. The intellectuals were envious and bitter. The Eunuch’s could control the Emperor into flogging any intellectual and thereby keeping the intellectuals at bay.

(b) Who was Cheng Ho? How many voyages did he make and to where did he voyage? Briefly describe his Navy and compare it to that of the Portuguese?

Cheng Ho was a Muslim born eunuch. He made seven voyages. These included Indonesia, India, Persia, Suez, and east Africa. His Navy dwarfed the Portuguese. Cheng Ho’s largest ships had nine masts and they were as wide across the beam as the Portuguese Caravels were long from bow to stern. The Portuguese sailed only the Caravel with varying degree of armada. Cheng Ho’s navy included: the nine mast Treasury ship, Horse ships, Supply ships and the five mast (smallest!) Combat ship.

(c) What were the political and economic goals of the Cheng Ho voyages? What was this political/economic system called? Compare to the Portuguese.

The political goal was to have the other “nations” recognize that China was the one and only true civilization. The economic goal was minimal to nonexistent. However, they used a “tributary system”. The Chinese gave other peoples gifts as a show of their greatness. The other peoples returned the “favor” with gifts to China, but their gift was a symbolic recognition that China was the Greatest... China avowed that it had no need to receive gifts, for it already had everything it could ever want or need. The Portuguese conquered. Their political goals were to control territories in order to further their economic goals. The two goals were one and the same: to obtain power, influence and economic monopolies over other nations. They also had a religious goal: conversion.

- (d) Describe the political power struggle and change of Chinese regime that stopped the Voyages of Cheng Ho? What were some of the reasons for this change?

The intellectuals argued that the tributary system was a waste of the royal treasury... that there was no need to continue the system. The lack of need, the argument went, was that China did not have any obligation to show the world that it was the one true and only civilization- it was irresponsible to use money to demonstrate what did not need demonstrating. When Emperor Yung Lo died, his successor supported these anti-maritime individuals. However, one more voyage was made after this Emperor's death. But, the power struggle was now in full expression.

7. In "An Empire without Wants"

- (a) What were the reasons for the Great Withdrawal of the Chinese?

The tributary system was, in fact, costly. It was argued to be superfluous for a nation that had "no wants" from outsiders. The controlling bureaucrats used the sea faring as a pawn argument to seize power from the "Eunichacracy". They argued that the money should be channeled into public works, water conservation, farmer aid, granary projects, and internal communications. In actuality, the sea faring excursions was a political pawn in a larger power struggle. It is just that the intellectual's who took power used an argument that resulted in the Great Withdrawal.

- (b) What did the new controlling bureaucrats put in as new policy regarding the use of state money and the rules governing shipping on the oceans?

The new controlling bureaucrats implemented the policies mentions in 7(a). They also decreed it a capital crime to own a two-mast ship and to sail on the open ocean.

- (c) What were the long-term consequences of the Great Withdrawal? How did the self-concept of the Central Kingdom hurt the Chinese?

China doomed itself to be "the discovered". This resulted in several centuries in which China was controlled by and at war with foreign powers, for which it was totally unequipped to deal with due to the dismantling of its navy and its withdrawal into itself. This resulted in the suffering of its people for several centuries. Thus, we see that the end result of self-aggrandizement, and the virus of isolationism, has the combine effect of leaving a people vulnerable to their own hubris. Eventually, reality hit the Chinese, and this reality came in the form of aggressive nations bent on exploiting the Chinese people.