

LECTURE ONE

What has been the impact of the Ocean on people? Many varied responses – some emotional, some practical and scientific. WHAT DO YOU THINK OF WHEN YOU THINK OF THE OCEAN? You can see some of this on the slide show as well

What do you think of, when you look at the shore line?

Do you think of a beach like Coney Island?



Do you think of a nice sandy beach?



Malibu beach

Or do you think of this?



Bali Beach Polluted

This is a major problem for today's shorelines. There is a tremendous amount of garbage piling up in both the water itself and then washing up on beaches where there are people already littering.

The shore is not just a problem in terms of people and refuse, but it also a dangerous area when the ocean can come up on the land in very dangerous ways – storm surges and tsunamis can be very problematical to coastal dwellers as people along the Gulf and Atlantic Coasts have known.



The coastline also has rocky shores that can cause serious damage to ships

What about the open ocean? Do you think of it as nice and calm and blue with the sun shining and getting a nice tan (leading to skin cancer?)





Do you think of it at sun set or sun rise looking very beautiful?

Or do you think of it in a storm, with huge waves swamping ships?



What life is in the ocean? There are big scary things like sharks (who are less dangerous than taking selfies. More people are killed each year taking selfies than are killed by sharks!)



There are small things that are almost invisible like jelly fish, with tentacles that have nematocysts that can sting and kill. Some jellyfish can kill a person in less than a minute



People all over the world who live near water develop methods of getting around on it. This replica of the Mayflower, called the Mayflower II is berthed in Plymouth, Mass.



It crossed the Atlantic in 1957 and then travelled up and down the east coast of the US. This is a "tall ship". There are many kinds which are determined by the way the ship is rigged and

how the sails are set. A square rigged ship like this has sails which go across the ship. The last sail on this vessel is a "fore and aft" rigged sail which runs along the length of the ship. This particular vessel is called a barque.

Other people have "outrigger canoes" and "kayaks" and many other forms of water going vessels.



This picture shows Japanese boats involved in whaling back in samurai times.



From boats carry one person, to ships that carry thousands like this huge cruise ship, there is enormous variation in size and style of the vessel.





Ships are used for transporting goods of all kinds and some of them are enormous as well.

Ships are used for moving people and cargo around and have allowed for migrations of people to new lands. This has happened in many parts of the world, but the peopling of the Pacific Islands is one of the wonders of navigation.



People are affected in many ways by the sea. People are moved by it emotionally and this often manifests itself in art.

1. Artistic associated often with emotional responses.

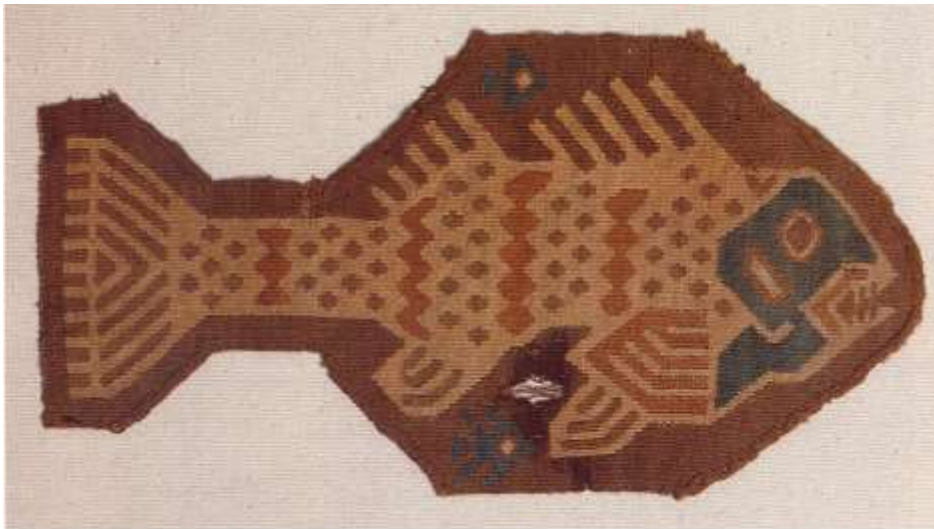
a. Painting

This painting of a great wave in Tokyo bay shows a wave towering over Mt. Fuji.



b. Three dimensional arts (Sculpture etc.)

These are some material representations of marine life: an octopus mask from the NW Coast of the Americas, pottery and textiles designs from Peru and some sculpture in the US.







In addition to these, sea farers often have time on their hands and in the old days when rope work was considered much more crucial (see the ship rigging on tall ships), art forms around rope work developed. Some etching, called scrimshaw, was made on sperm whale teeth and other bits of ivory. Sailors also made clever “ships in bottles”



c. Music

i. Sailor songs "sea chanties"

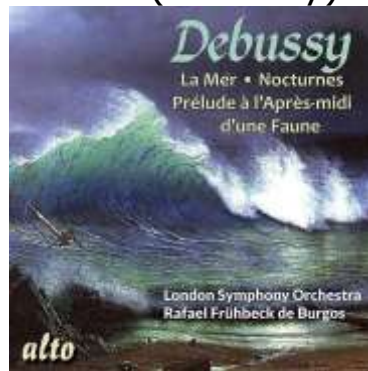
1. "Blow the Man Down"
2. "What Shall We do with the Drunken Sailor?"

ii. Pop music

1. "Ebb tide"
2. "Shrimp boats are a-comin'"

iii. Classical music

1. *La Mer* (Debussy)



2. *Peter Grimes* (Britten)

3. *Der fliegende Holländer* (Wagner)



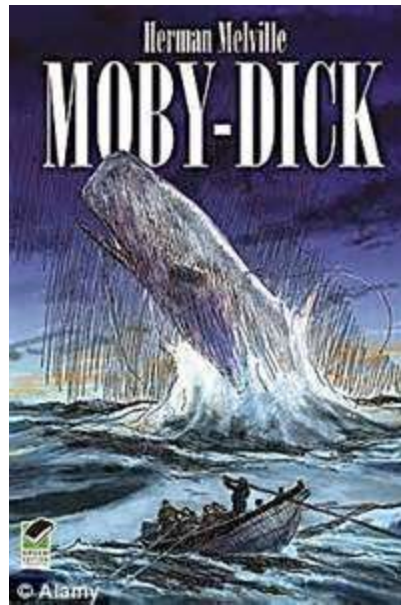
d. Designs

- i. Designs can be found in many places: textiles, pottery and so on

e. Literature

i. Novels

1. Moby Dick



2. Two Years before the Mast

ii. Poems

1. Sea Fever (Masefield)



2. The Rime of the Ancient Mariner (Coleridge)
3. Full Fathom Five (Shakespeare)

f. Films

i. Documentary

1. Blue Planet
2. Man of Aran
3. Victory at Sea

2. Recreational and Economic

- a. The “Blue Economy” is a term covering the overall economic contribution of the oceans and coasts to the national economy. It also advocates the need to address how to keep these national assets functioning. Many people are looking toward innovative ways to examine the critical ocean and coastal resource management issues. Some research demonstrates that ocean and coastal resources are very valuable, and that a healthy ocean with a well-managed coastline will help with a strong economy. Some researchers have data that show that in 2014, the coastal economy contributed 83.7% of the total U.S. GDP and 81.5% of total U.S. employment. Current problems with the environment which are leading to rising sea levels and increasingly powerful and unpredictable storms are leading to the degradation of many critical natural resources such as coastal wetlands. This threatens to significantly damage much of the aspects of the economy the nation has historically relied on.
- b. Activities on the beaches and other kinds of shorelines lead to multimillion dollar businesses. They involve things like pleasure boating including jet skiing, water

skiing, recreational fishing, cruise ships, whale watching.

- c. One organization reports that in 2010, the ocean economy employed about 2.8 million people and produced \$258 billion worth of goods and services. But, according to NOEP (National Ocean Economics Program), an additional 2.6 million jobs and \$375 billion were indirectly associated with or induced by ocean industries. Taking this multiplier effect into account, NOEP says that the ocean economy contributes roughly 4.4 percent of total U.S. GDP (Gross Domestic Product). That's not huge, but it is more than America's creative industries (recently estimated to contribute 3.2 percent of U.S. Gross Domestic Product) or agriculture.
- d. The two most significant aspects deal with mineral extraction and the tourism & recreation sectors. The "minerals" sector includes offshore drilling and exploration of oil and natural gas. This business is thriving. Going to the seashore for vacations impacts another number of industries (hotels, food, etc.) It is held that nearly three out of every four ocean economy jobs are in tourism & recreation, but 65 percent of the ocean economy's GDP comes from other sectors. The workers in the minerals sector, who account for only 5 percent of ocean-related employment, contribute over six times that to the total ocean-related GDP.

3. Food and Transportation

- a. For centuries, it was thought that the ocean could supply an inexhaustible supply of food. We know this is not true. Human populations have grown at a frightening rate and we may soon approach 10 billion.

The use of fertilizers on the land has proved dangerous in some ways and the collapse of fishing industries does not bode well. This will require that we produce ever greater amounts of food from both the land and ocean. The development of aquaponics and aquaculture (the equivalent of agriculture on the land) is one possibility.

- b. The movement of goods and people across the oceans is another important aspect of businesses involved with the ocean. While general transportation by passenger ship is relatively rare for long trips, cruise ships have taken over moving people for multi day tours around various islands and countries.

4. Law Enforcement

- a. The seas constituted a *nullus res* something belonging to no one, however many laws have been promulgated relative to the ocean. Some of these have to do with “claiming” a part of the sea – like exclusive economic zones. As a result of a United Nations Convention on the Law of the Sea (1973-1982) and came into force in 1994 one year after Guyana became the 60th nation to sign it. It made many changes including extending what had been a 3 mile limit out to 200 miles which gives countries. This overruled the old Freedom of the Seas ideas in this the earlier times. Nations now wanted control of local waters relative mineral resources, to protect fish stocks, to deal with pollution and so on. The United States Coast Guard has 4 basic missions (a) military (b) law enforcement (c) marine safety and (d) environmental protection. The many laws that have been passed from boating while intoxicated to the Marine Mammal Act and the like are often enforced by the USCG.

- b. A number of government agencies are also involved. The department of fisheries, the Environmental Protection Agency are just a few.
- c. The armed forces are also involved with the oceans, perhaps none more than the Coast Guard, which deals with much law enforcement on the ocean including illegal alien and drug interdictions, piracy, marine safety and environmental protection.

Another aspect of law enforcement that has returned with something of a vengeance is piracy. Not the kind with Johnny Depp where a bunch of people are going around trying to kill dead pirates?!?!?!? Or stealing from the internet, but piracy on the high seas

