Reading Quiz 0.2 part II, and 1.1 - INTD290

Dr. Jordan Hanson - Whittier College Dept. of Physics and Astronomy January 24, 2021

Nueva Espana

1. Discuss some examples of the book trade between France, Spain, and New Spain. What is the implication for the growth of Enlightenment knowledge in New Spain?

The monarchies were afraid that with the Enlightenment movement, its people would revolt, just as what happened to France in the French Revolution. Since the monarchies feared a revolt from its people, the supply of books, scientific tools/instruments, as well as professors were delayed. Nevertheless, since New Spain constantly wanted to expand their knowledge, nearby communities supported the movement by translating them into Spanish. New Spain then had the ability to publish their own scientific papers and books of their accumulated findings.

A takeaway from the Enlightenment in New Spain is that they allowed their society to transform from both a scientific and social standpoint. As their perspective and standpoint changed, scientific practice became part of their everyday life and soon altered their train of thought. This acquisition of knowledge allowed them to create a social framework that did not have anything to do with the authoritarian and colonial political regime that had governed until then. Finally, leading to them parting ways with Spain.

Nueva Granada



Figure 1: A map of the Northern edge of South America and the Caribbean.

- 1. On Fig. 1, label the locations of the following cities:
 - Quito
 - Santa Fe (de Bogotá)
 - Caracas
- 2. List the universities in each of the above cities. Which ones were founded with Enlightenment

ideals in mind, and at which ones were taught concepts from Newtonian (as opposed Scholastic) physics?

Quito: Universidad Gregoriana

Santa Fe de Bogotá: Universidad Javeriana

Caracas: Universidad de Caracas

Both the Universidad Gregoriana and the Universidad Javeriana of Santa Fe de Bogotá were the first to promote the scientific spirit and taught Newtonian concepts. The Universidad de Caracas, however, did not allow the introduction of Copernicus's and Newton's theories.

Comparisons of Adoption of Scientific Revolution

1. What do the contrasted examples of Jose Ignacio Bartolache and Jose Celestino Mutis say about the acceptance of the Scientific Revolution in the different *virreinatos*? Give examples of the accomplishments of each person, and give context for the acceptance of the work of each in their respective *virreinato*.

They are a demonstration that each *virreinato* had their own perspective and take on the Scientific Revolution. Mutis embraced it and went on and presented sixteen theses to support the heliocentric system. A significant recognition I made was his dedication to proving these theories were not forbidden and that teaching them was ordered in the new reforms proposed by Charles III.

2. Discuss the educational roles of the Jesuits and the Dominicans in Nueva Granada¹. When did the Jesuits leave Nueva Granadan education, and why? How did the Dominicans operate educational institutions as they asserted control over various universities?

The Jesuits left Nueva Granada in 1767 since they were banished for embracing the new teaching. The Jesuits and Dominicans disagreed regarding the implementations of scientific concepts and knowledge. The Dominicans monopolized the universities with the help of the Crown as they disagreed with the education. They wanted to promote the ideas they believed in and support the movement of believing in the same ideals that made it easier for them.

3. Eventually, the Spanish Crown took control of education. How did this happen, and more importantly, why would the Crown wish to do this? Now turn your attention to the time before the Spanish Crown took over education. **This one is worth a bonus point.** How did control of education grant political control? Why would the power to confer degrees give someone political power?

The Spanish Crown established royal patronage, which meant they had enacted the right to have control over the education of the public. Their goal was to take control of education as knowledge reciprocated to power during this time period. A degree higher than the high school level meant that a person had the ability to one day have political influence or standing in the country. Therefore meaning that having the power to give someone a degree meant that you could control and limit who had power. The Crown wanted to be the only one in control and only sought to give that power to those that were supporters of The Crown.

1. Discuss the significance of the geodetic expedition of Charles de la Condamine in 1735. What was the goal? What were the cultural outcomes for Creole peoples, according to the writings of Alexander von Humboldt?

The expedition proved the Copernican and Newtonian theories regarding the shape of the earth to be true. Humboldt wrote "the setting up of printing presses was prohibited in cities of forty to fifty thousand inhabitants; peaceful citizens, who retired to the countryside and secretly read the works of Montesquieu, Robertson, or Rousseau, were suspected of harboring revolutionary ideas." The fact that there seemed to be some truth to these revolutionary concepts, the church and the crown wanted to suppress this information and prevent it from getting to the public; which is why they prohibited the use of the printing press and the talk of such ideas.

- 2. Which Catholic religious order first taught Newtonian physics in Nueva Granada?
 - Carmelites
 - Dominicans
 - Franciscans
 - Jesuits

Did this order always teach Newtonian physics

No the Jesuits did not always teach Newtonian physics as they shifted from a Cartesian philosophy to a Newtonian take on physics.