

# Reading Quiz 0.2 Part II, and 1.1 – INTD290

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## 1 How to Submit this Assignment

Once you answer the questions, take a picture of your work and convert it to a PDF. Submit the PDF to the assignment link on Moodle.

## 2 Nueva España

### 1. Discuss some examples of the book trade between France, Spain, and New Spain.

“The first properly scientific magazine of the American Enlightenment, *Diario Literario de México* (Literary Magazine of Mexico, established in 1768), was published by a citizen of New Spain, José Antonio Alzate y Ramírez. ... Alzate’s scientific and popularizing works had great repercussions in Mexico as well as in other places in the Americas and Europe (he was, e.g., elected corresponding member of the Académie Royale des Sciences of Paris).” (pg 63)

“Hispanic American scientific magazines also helped broaden the Creole Enlightenment’s influence on sectors of the population involved in the task of reform. As a result, in the areas of education, culture, agriculture, mining, and industry, diverse reforms were introduced, for example, the gradual abandonment of Scholasticism in teaching; the rescue and dissemination of languages and other aspects of native culture; measures to improve indigo, mulberry, cotton, and tobacco crops, among others; and innovations in mining and other industrial areas.” (pg 67)

### What is the implication for the growth of Enlightenment knowledge in New Spain?

“In New Spain, which was part of the “education and culture” hub, scientists participated in journalistic endeavors uninterruptedly starting in the 1770s, as previously mentioned. The appearance of scientific journalism and its permanence, in spite of censorship and the viceregal government’s prohibitions, reveals the widespread interest in “enlightenment,” the emergence of a new mentality among the elite, and, more specifically, the existence of a scientific tribune in which to publish new theories (like those of Lavoisier, Linnaeus, Newton, etc.) and even to debate innovation (Linnaeus, Lavoisier, Bohr).” (pg 83)

### 3 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 – White
- Santa Fe (de Bogotá) – Yellow
- Caracas – Red

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?

“The Universidad Gregoriana became a remarkable place for the development of the scientific spirit in the 1740s. Santa Fe underwent similar changes, as the Universidad Javeriana was the first educational institution that permitted the teaching of Enlightenment philosophy. The Universidad de Caracas, however, did not allow the introduction of Copernicus’s and Newton’s theories until later, by Prof. Baltasar de los Reyes Marrero, around 1788.” (pg 93)

“The attempts to introduce and develop Enlightenment philosophy in the universities of Santa Fe, Quito, and Caracas came from within the academic environment. Professors like Father Juan de Hospital, Miguel Antonio Rodríguez, José Mejía Lequerica, and Pedro de Quiñones in Quito, Marrero from the Universidad de Caracas, and, among others, Mutis, Valenzuela, Vallecilla, Vásquez, and Padilla, in Santa Fe’s universities taught Newton’s and Copernicus’s theories in their philosophy or mathematics lessons. These professors attempted quite successfully to awaken scientific interest in the rigid university life of Santa Fe, Caracas, and Quito. Their efforts to institutionalize Enlightenment thought and scientific knowledge in university classrooms were remarkable, although, unfortunately, they were never fully successful during the colonial period.” (pg 94)

## 4 Comparisons of Adoption of Scientific Revolution

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

“The cultural dynamics of the different vicerealties cannot be studied without stressing the importance and economic priority of each. Furthermore, the wish of every religious order to monopolize education led them to fight each other, especially for the privilege of granting academic degrees.” (pg 96)

Examples:

“In the Viceroyalty of New Granada, the state (i.e., the non-Creole) academic elite coalition is seen only in the exceptional case of José Celestino Mutis, whose Expedición Botánica received extraordinary support starting in 1783. In contrast, we can see that an alliance was achieved between the Crown and the Creole elite in the Viceroyalties of Peru and New Spain outside the universities, for example, in the founding of the Escuela de Minas (School of Mining), the Jardín Botánico (Botanical Garden), and the Colegio de Cirugía (College of Surgery) in New Spain. Inside the universities, however, there continued a constant, eager debate caused by the incorporation of Enlightenment philosophy, as exemplified by the case of Prof. Ignacio Bartolache.” (pg 96)

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

“Creoles, in particular, “began to be aware of their historical initiative, influenced culturally by the Enlightenment movement and scientific awareness awakened by the Expedición Botánica.” (pg 95)

The Jesuits left Nueva Granadan education in the middle of the eighteenth century due to being banished.

“After 1767, the Dominicans were given the right to monopolize education. They requested donations, buildings, and prerogatives normally reserved for expatriates for the schools and universities of their community.” (pg 96)

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 Crown had enacted its right of “royal patronage” and fully reestablished the Regium Execuator, which bequeathed to the state—under the king’s dominion, not that of the pope—the control of public education and of university studies.” (pg 97)

“Therefore, the Dominicans’ attempt to keep the property of the banished Jesuits was thwarted by the decision of the Crown to control such property—and to keep it out of anyone’s hands except the state’s.” (pg 97)

Bonus point:

*“Although it is true that the Crown tried to reform and control education, the civil sector’s attempts to direct university study in Santa Fe and Quito were actually subdued by the political-economic power of the clergy, specifically, by the Dominican order.” (pg 97)*

*“Fiscal Moreno—a Creole reformer—said that, “if many, because of their poverty, do not have the necessary money to obtain a college degree and finance the customary pomp and gratuities, they will have to be content with a high school degree, which gives the necessary skills to employees, and the degree will be more appreciated and less common than at present.””(pg 97)*

## 5 Advent of Newtonian Physics in Nueva Granada

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?**

“La Condamine’s expedition is considered “unfortunate” when compared to Maupertuis’ expedition to Lapland at the same time to confirm Newton’s assertion that the Earth was a sphere flattened on both poles; the latter took only eighteen months. Yet cultural outcomes—as Humboldt would point out years later—show that the interest in scientific investigation in these territories should be attributed, among other factors, to the influence exerted by Bourguier and La Condamine’s expedition.” (pg 98–99)

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

**Did this order always teach Newtonian physics?**

“The Jesuits, as primary sources show, were the first to systematically teach the theories of Descartes, Copernicus, and Newton at the universities of the Viceroyalty of New Granada. It should be pointed out as well that by the middle of the eighteenth century, this community constituted an undeniable power, with the most significant influence on educational institutions in the entire world. This gave them, perhaps more than other orders, the possibility of internationalizing their educational strategies.” (pg 99)