

Midterm - INTD262

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1 Unit 3

1. Recall the fascinating story about psychological research, in which the author shares that 67 percent of psychologists who were asked to share their data did not share it. (a) Were the rates of error higher or lower in the studies for which the authors did not share data? (b) In whose favor were the errors?

A.) they were lower than other findings b.) those errors were in the scientific communities favor

2. "Recent research in behavioral economics has shown that groups are often better than individuals at finding errors in reasoning." (a) Why do you think this is the case? (b) Can you give an example of the wisdom of crowds thus far in our study of Latin American science?

A.) more people means more findings to compare and contrast

B.) the "discovery" of the cinchona plant in the age of exploration

3. Recall the story of cold fusion. (a) List three facets of the peer review process that went wrong in this episode. (b) How long, from start to finish, did it take for the scientific community to sort out the errors in the cold fusion research?

A.) reviewer selection / critical evaluation / feedback

B.) it took them months to sort out all the errors

4. Note that we encountered several examples of viceregal engineers becoming Latin American leaders. (a) What are some examples of professions that involved modern technical skill in Río de la Plata and Perú? (b) What is the primary profession of modern US leaders, for example, elected to The United States Congress?

A.) mining / botany / engineering

B.) Lawyer

5. José Mariano Mociño and others were ordered by the Mexican viceroy on an expedition to Nootka Island. What was the purpose of the expedition? (Take INTD255 to learn more!)

To see the origin of the Aurora Borealis

6. In Perú, we must take note of the work of Hipólito Unánue. (a) What are some of his other scientific contributions? (b) In Nueva Granada, we must take note of the work of José Celestino Mutis. What are some of his main contributions?

A.) the dissertation of coca / botany / notes of ocean tides

B.) the Marquita / more botanical libraries / the distribution of cinchona trees

7. (a) When did Latin American wars of independence begin, approximately? (b) Give some examples of scientists and engineers who fought and died for their countries.

A.) 1808

B.) Simon Bolivar / Jose de San Martin

2 Unit 4

1. How long after Semmelweis's solution to childbed fever was germ theory introduced?

It took roughly 20 years

2. Where did the practice of autopsies begin? In what way does performing an autopsy fit with the scientific attitude?

Autopsies began in Europe & Asia

It entails finding evidence and changing theories on the basis of knowledge

3. (a) Do you think the discovery of penicillin was an accident? Why or why not? (b) Louis Pasteur is quoted as saying "chance favors the prepared mind." What did he mean by this? (c) In light of (a) and (b) do you regard the discovery of cinchona as accidental or scientific?

A.) I don't think so, because people were looking for a cure to stop mold, but they weren't exactly expecting a result like the one they got

B.) Cinchona on the other hand I think is accidental because the Spanish weren't interested in finding scientific cures as much as other resources like gold

4. What event catalyzed the formation of the Establecimiento de Ciencias de Médicas in 1833?

A cholera outbreak

5. (a) List some reasons the authors give to explain why medical reforms were slow to materialize in Nueva Granada, relative to the struggle for reform in Nueva España. (b) Who led the medical reform process in Nueva Granada in the 18th century? (c) When and where was the Facultad de Medicina reestablished in Nueva Granada, and what happened next?

A.) politics / lack of funding

B.) Simon Bolivar

C.) 1822 in Buenos Aires and then more and more people enrolled

6. (a) How many medical schools were there in Brazil in the eighteenth century? (b) What happened to the Portuguese Crown in 1807? What influence did this have on medical reform?

A.) there were only 10 med schools

B.) the crown had fled to Brazil to escape Napoleon and with their wealth they funded the resident med schools and funded the construction of more

7. As the generation of doctors in Columbia returned from France in the late 19th century, what three cultural institutions did they establish to enhance medical practice?

Hand washing / germ theory / cell theory

8. **Triangulation** Suppose you observe a distant mountain from a flat plain. Suppose you walk a baseline of 1 km, perpendicular to the direction towards the mountain. The difference between the compass headings to the mountain at either end of the baseline is 5 degrees. How far away is the mountain?

11.5 km away

9. **Latitude and Longitude** (a) Suppose two cities lie along a constant line of longitude. If we measure a change of 30 minutes (0.5 degree latitude) between them, how far apart are they, in km? (b) Suppose two cities lie along a constant latitude of 45 degrees North. If they are 600 km apart, what is the change in longitude between them?

A.) 600 km apart

B.) 111.1 km apart

3 Unit 5

1. (a) When were the first medical journals published in Columbia? (Give a few examples). (b) Compare this time frame to the publication of the first mining, chemistry, and physics journals in Mexico. (c) How, or through whom, were these journals connected to medical schools in Columbia?

A.) 1852, Universidad Nacional de Colombia / Sociedad de Medicina y Ciencias de Naturales de Bogota
B.) Mexico was slow to learn to say the least due to internal and external conflicts
C.) Students and staff used these as basis of knowledge

2. In 1833, two Enlightenment period institutions were merged into the beginnings of a modern medical school in Mexico. What were the three institutions?

3. Consider our major in kinesiology and nutrition science (KNS). To what extent would we consider this medicine, in the absence of modern germ theory? That is, are there other holistic forms of medical development we encountered in Latin American history besides vaccines and drugs that fight bacteria and viruses?

We would revert to a more ancient and medieval way of thinking without the germ theory called “the terrain theory”
In Latin America, there are other ways of combatting viruses and the like; such as cinchona, essential oils, cacao all of them were used to combat sickness and allergies

4. (a) What historical event in 1808 led to the creation of the first medical and surgical schools in Brazil (b) When did Brazil declare independence from Portugal? (c) How long after independence did the Brazilians introduce modern reforms into the medical schools in Bahia and Rio de Janeiro?

When the Portuguese crown came to Brazil to escape Napoleon they put their wealth into funding med schools

Brazil was independent Sep 7 1822

It took them another seven years to apply anything modern into their med schools

5. In Columbia, the Escuela de Medicina was founded in 1865. It was centered on hospital-based anatomy and physiology. Consider the following quote from the text: “The second phase is notable for the slow progress of laboratory-based medicine, especially etiopathological procedures. Its final stage, starting in the 1950s, is defined by the introduction of Flexnerian reforms from North American technological medicine.” What does quote mean by Flexnerian? Think back to our reading in The Scientific Attitude.

Since medical progress was slow to grow that means that the scientific attitude was not taken into account while other places used the scientific method and their medical progress was a lot more positive

6. (a) What was a major driver of modern epidemiology in 19th Century Brazil? (b) What was the purpose of the Tropicalist School of medicine? (c) When did the bubonic plague enter Brazil, and how did the Brazilians respond?

A.) The bubonic plague had entered Brazil and killed loads of people

B.) To study and combat tropical diseases

C.) they used the Knowledge they had acquired in their medical schools and came up with a vaccine