

## **ESSAY QUESTION FOR BCONE 2021 CCNY SCHOLARSHIP**

**During the course of the semester, we discussed the importance of reading the environmental canon, starting with Rachel Carson's "Silent Spring," which launched the environmental movement in the U.S. in the 1960s. We explored common themes and archetypes found in the books that comprise the canon. Some of these include the following:**

- **Correlation v. Causation**
- **Accidental Discovery**
- **Synchronicity**
- **Intuitive Link Between Environment and Public Health**
- **Lack of Government Oversight & Regulations**
- **Profit Motive**
- **Corporate Deception**
- **Scientific Knowledge (Individual) v. Scientific Consensus**
- **Tipping Point in Environmental Awareness**
- **Seismic Event to Raise Consciousness- Cancer Cluster**
- **Role of Gender, Class, and Race Bias**
- **Labor Rights**
- **Citizen Activists and Citizen Scientists**
- **Archetypal Characters: the obsessed attorney; the "hysterical woman"; the earnest civil servant; the diligent journalist; the intuitive scientist; the indefatigable citizen activist; the formidable foe; and the hero.**

**Your assignment is to discuss how the reading of "A Civil Action" over the course of the semester has affected your understanding of environmental issues and how your environmental consciousness has been changed. Has this change made you reconsider your field of study or has it validated your choice? You can choose to discuss any of the topics listed above in your analysis (but be sure to include at least three.)**

**Remember, the word count should range from 800-to 1200.**

“A Civil Action” was an interesting read that affected my understanding of environmental issues by illustrating and solidifying some ideas that I had been considering regarding my field of study. Reading it opened my eyes to what kind of timeline these environmental issues can move on but it also validated my career choice. As an aspiring environmental engineer, I have to maintain a fine balance between the communities my work will affect and the environment my work will impact. These decisions must be informed by the latest scientific information available. This balancing act is well represented throughout the book. The three topics that best illustrate this balancing act are the archetypal characters in the story, the clear distinction between correlation versus causation, and the way the scientific knowledge of the individual versus scientific consensus is weighed.

There are many archetypes in "A Civil Action" that we have seen in previous environmental cannon works. The obsessed attorney; the “hysterical woman”; the earnest civil servant; the diligent journalist; the intuitive scientist; and the indefatigable citizen activist are all members of the community whose goals and perspective actively contributed to the story's unfolding. Their tireless work made it possible for justice to eventually prevail, and for the responsible parties to be held accountable. The most striking aspect of "A Civil Action" is how many people were responsible for events to unfold as they did. It often seemed like fate intervened for things to line up perfectly. There were many instances where Schlichtmann was in just the right place and at just the right time to meet someone who would be able to unlock the next step in this years-long venture. Each archetype in the book played their part in this interdisciplinary challenge. Every character has a different time scale associated with their contribution. Nonetheless, every contribution was vital for things to unfold as they did. This was very familiar to me, considering that many of the environmental projects that tackle environmental issues that lead me to pursue environmental engineering were instigated, led, and maintained by a multitude of people from different backgrounds. It's a challenge that needs to be addressed on many fronts.

Another topic that has been stressed during my tenure as a student, and which featured predominantly in the book, is the clear distinction between correlation and causation. A big problem with determining whether the pollution led to children getting leukemia was the small sample size. Throughout the book you see many scientists of many different fields tackle this issue and eventually they generate enough lines of evidence to say that there is a correlation between them. Unfortunately, that was not enough. It is never enough to say that something is correlated. That is something that I have learned many times over during my time as a student. Correlation is not something to ignore, especially if you have an understanding of the subject and a well established scientific basis. However, if you are good enough with numbers you could very easily make almost anything correlated. Although the events in this book took place throughout many years, there was not enough time for causation to be established in time for the trial.

The third topic that was very important when reading this book was how the scientific knowledge of the individual versus scientific consensus is weighed. It is very important to have rigorous standards concerning scientific consensus. It takes many people many years of hard work to come to a scientific consensus. Although there are many cases in which it has had to be updated or even scrapped entirely, that process takes time to happen because of how rigorous these standards have to be. The events in this book prompted an advancement in our understanding of groundwater hydrology. Unfortunately for the results of the trial, it takes time for lines of evidence to build up. Even though the scientist that would ultimately be right in terms of how groundwater hydrology actually behaves argued his point, there was not yet a scientific consensus. This led to the judge giving more weight to the scientist on the opposing side. In this, there was also a lack of time. However, these lines of evidence set the groundwork that eventually advanced our understanding of hydrology.

Reading this book while taking my Phase I class really stressed how important it is to recognize that our understanding of how we impact the environment and who should be held accountable for environmental concerns, will inevitably be updated as time passes. This point was reinforced considering that this year there was an update made to the ASTM E1527 standard. "A Civil Action" showed how it took a group of dedicated people from all walks of life to make meaningful change. It was very much a community effort. This book validated my career choice because it showed me that I can make meaningful change as long as I am steadfast and steady in my pursuits.