

**Constructing Arguments**

Label the following sections with the correct classical appeal, define and describe the appeal and explain why the section is an appropriate example.

A. A distinguished bio technology Dr. Expert is introduced at her ted talk and as she walks up onto stage her accomplishments and list of degrees are announced. (7 points)

B. She begins her talk telling a story about her sister as she was a child. Her sister has a degenerative disease which causes the family much hardship and could have been helped by the technology she has developed. (6 points)

C. As she describes her technology she points to a clinical study with a large number of participants who have shown scientifically that her technology is beneficial. The study was validated by peer review, and she shows accurate graphs and charts that support her data and findings. (7 points)

Your Answer:

A. Ethos because this is an appeal through credibility, which is demonstrated through accomplishments and list of degrees.

B. Pathos because this is an appeal of emotion, using her sister and her hardships to portray difficulty. This generates sympathy for the reader, which is an effect of pathos.

C. Logos because this is an appeal of logic and accuracy. The technology presented displays graphs and evidence as to the benefit of the device, showcasing a logical approach to the convince the reader.

### Approaches to Privacy

You are signing up for a new social media service called Speakup. When you register for an account, you are required to agree to a lengthy terms-of-service agreement which describes the code of conduct and privacy policies. Upon the creation of an account, you are automatically opted in for personalized ads, and the company is allowed to collect any information about you. If you go into account settings, you can change what data Speakup is allowed to collect. There are certain data permissions you are not allowed to change, including Speakup's ability to gather your demographic information for "internal purposes".

- a) What is a free market approach to privacy? How does this apply to the consumer's relationship with Speakup? (10 pts)
- b) What is a consumer protection approach to privacy? How does this apply to the consumer's relationship with Speakup? (10 pts)

*Questions will be graded on quality of content, not the length of your response.*

Your Answer:

- a) The free market approach to privacy is simply allowing the market dictate the right to privacy, and to what extent. In a free market approach to privacy, the current scenario would fit the current relationship between the consumer and Speakup as the social media service follows its own guidance and practice to create these policies and the consumer can abide if they would like to by registering and agreeing to the terms-of-service agreement. This allows for a natural flow of privacy dictated by consumers and services.
- b) The consumer protection approach to privacy focuses on restricting services to collect information and overall protect the privacy of consumers who use a service. In a consumer protection approach to privacy, the current scenario would not fit the current relationship between the consumer and Speakup as the social media service does collect data about the consumer. While it does allow users to change what Speakup can collect, there are certain permissions you cannot change, which violate the consumer protection approach guidelines.

**Software Reliability**

Describe the situation surrounding the Therac-25.

- a) Background: What was the device, and how did the problems arise? (5 pts)
- b) Investigation: What type of software error was to blame? (5 pts)
- c) Analysis: Describe two types of practices would have helped catch these issues before they caused such damage. (10 pts)

*Questions will be graded on quality of content, not the length of your response.*

Your Answer:

- a) The device was a linear acceleration used to help prevent cancerous cells through radiation. The problems arose because of outdated software, severe malfunctions during the process of using it, and people who did not properly develop and utilize the Therac-25.
- b) Race conditions in the software were found as the issue, and were the major blame of this situation. Checks were not properly made on software, only hardware, and the developers did not create good tools to run. The device would only run when 0 issues were found, but the limit of 255 with a restart to 0 was a major software defect in the device.
- c) **Only using necessary features from previous devices**, as developers used infrastructure from Therac-20 that would not be plausible and in turn harmed the Therac-25. Developers needed to be careful with the software they used. Quality Assurance Manager should have **thoroughly tested the software prior to use**, which was clearly not done. Again, only the hardware, NOT software, was properly investigated and that was a clear issue that caused such damage.

### Evaluating a Dilemma Using Ethical Frameworks

Professors at Georgia Tech are frustrated that students seem to always be distracted on their devices in class! The professors want students to pay more attention so that they can learn material better and get higher averages on exams. They propose a content filter that would run on Eduroam, the campus Wi-Fi network. This filter would blacklist access to any sites and services during school hours that administrators deem "non-academic", including Facebook and YouTube. These filters would also log whenever a device connected to Eduroam attempts to visit a blacklisted site during school hours.

Should this content filter be developed?

Choose 4 out of the five following frameworks to respond to the question. For each, show that you understand the ethical theory, and arrive at a conclusion with each (10 pts/theory):

- Act Utilitarianism
- Rule Utilitarianism
- Kantianism (Deontology)
- Social Contract Theory
- Virtue Ethics

You may make assumptions about things not explicitly listed in the problem to assist with your analysis, provided that you clearly state them.

Example: "Let us assume that [xyz.com] is another site that might be deemed non-academic..."

*Questions will be graded on quality of content, not the length of your response.*

Your Answer:

- Act Utilitarianism - let us assume that the overall anger of students from their restriction of privacy is of a smaller effect than the benefit in students' studies and their focus on school and the happiness of professors combined. In this case, it would be better to develop the filter because the overall utility of the general student and professor body would be positive, since the focus on school and happiness of professors is valued larger than the feelings of the students.
- Rule Utilitarianism - the intention of the professors and their general framework for performing the creation of the filter can be assumed to be solely for the benefit of the students. Therefore, with the correct intention in mind, it would follow with positive utility to create this filter.
- Kantianism - approaching this from a moral lens, it would be wrong to create this filter because it is morally incorrect to restrict the privacy and lower the happiness of students. Doing so would put the professors on the wrong moral standing, and thus they should not develop the content filter.
- Social Contract Theory - we can assume the general consensus between a college and its students lies between the transaction of money from the student to the college (which pays the professor's salary), and the education that is given from the professor (on behalf of the college) to the student. This is the generally accepted transaction, which does not include a right to restrict what a student does as long as it does not physically prevent the professor from teaching. Thus, it is socially accepted that students can be on their devices and do as they please between students and colleges (including professors). Furthermore, from this lens, professors should not create a content filter.

Rule utilitarianism: some broad calculation of utility, and what rule we are applying, needed to be mentioned Kantianism: either some formulation of the categorical imperative or some explanation of deontology was needed Social contract theory: example of social contract is plausible but not the most appropriate to describe the situation given