

Students were asked to write a summary of their experiences in class based on what they learned from their first two assignments. They were specifically asked to answer the following questions:

- What is your topic?
- Why did you choose the topic (what excited you about this)?
- What is the information problem?
- What are the theories you applied and how did you apply them?
- What did you learn from doing the assignment?

Below are the summaries submitted by students.

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Topic: Rendition programs used by the CIA in order to retrieve information from terrorists outside of the U.S.

Description:

The CIA would often capture terrorists and place them in a country where they could perform multiple torture techniques or interrogation. I chose this project because I was interested in getting know some of the techniques that are blamed upon the CIA for violating human rights, but I thought it would more be interesting to do a report that the government denies but a lot of Americans think exist.

Critical Learning:

There were plenty of information problems, such as trying to declare what information solicited from terrorists was factual and what information could have been a decoy. I applied various information theories to understand the problem and come up with solutions.

The general systems theory applies well to the NCTC (the database of terrorists), in which a system interacts with outside sources and combines new components through its multiple sources. The NCTC is not just one unit but a multitude of government bodies and their relationships to each other. In the task technology fit theory, information technology is better used when key components are custom fit to the user's capabilities. For example, at a local level terrorist's investigation, it is more likely that a single police officer will use the system if it is easy and simple to use, compared to slow and complex. In the trans-active memory theory, individual members of a unit need to understand another unit's benefits in order to exchange intelligence as a component of success. Local authorities know to report to the NCTC and to inquire about potential terrorists because the NCTC harvest all valuable information, and the NCTC benefits from local authorities as a source of information tips. The two are able to understand each other's capabilities and use them to their own advantage.

I learned it's hard to find resourceful information on a subject that the government denies, such as torture. I would have rather done a report on something that is concrete instead of stipulation. It's hard to determine what information is factual even if it is from a good

source, such as the *Washington Post*, but a lot of information can be labeled false by many professionals and at the same time be labeled legitimate by many other professionals. So, I don't think I should dismiss some information because the highest parts of the government deny its existence.

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Topic: Examining the confusion behind the regulations of carry-on luggage for domestic air travel

Description:

I chose this topic because I am a frequent flier; I go to school 3000 miles from my home. When I was traveling over the holidays I noticed first-hand the confusion of some of the passengers dealing with the regulations. The information problem is people not receiving the updated information when the new regulations are released. Then when they go to the airport with non-current or no information of the regulations, they hold up all passengers, even the ones who do know of the regulations.

Critical Learning:

The first theory I applied was the institutional theory. I applied this theory with the three pillars of institutions and explained how the airport and TSA are currently a cognitive institution, but I believe that they would run more efficiently if they were a regulative institution. The next theory I applied was the media richness theory with which I explained how, if the TSA used higher richness forms of communication to get the word out about the new regulations, they would be more successful. The last theory I applied was the soft systems, to develop a new system of airport security screening that would help alleviate the hold ups. I learned a lot from doing this assignment. This project helped me to learn about the airport screening process and the TSA and their regulations. I also learned how to do an in-depth look into a problem, and I learned how to think of many solutions that would possible work for it.

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Topic: Analysis of the information failures surrounding the issue of global warming in the United States

Description:

I first became interested in global warming in the fall of 2006, during an Atmospheric Sciences lecture. Prior to this, I acknowledged the probable existence of global warming, but failed to see any significant risks. Upon seeing graphs and images put together by multi-national groups, such as the Intergovernmental Panel on Climate Change, I realized that global warming represented a threat to humanity's current way of life and existence in general. I could not believe that this information was available to the public and, more importantly, the government without either body acting upon such information. Professor Desouza's class gave me the opportunity to further examine the issue at hand: that the scientific consensus supports the global warming theory, and despite routine publications, the United States is still the main contributor to climate change.

### Critical Learning:

I applied the garbage can theory, the planned behavior theory, and the media-richness theory. The garbage can theory I applied to the scientific community. It seemed applicable to their suggested solutions to reduce carbon dioxide emissions (a main cause of global warming).

The planned behavior theory I applied to the governmental administration that has failed to implement laws and regulations aimed at slowing or reducing global warming.

The media-richness theory I applied to the public's overall lack of awareness about global warming. The research available is mainly based on lower levels of media richness, which contributes to the country's apathy.

While completing these assignments, I learned to take a broad topic and slowly narrow it down to a specific point of view through extensive research. I learned that an information system can be almost anything, including a network of humans.

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Topic: National defense and security: port security Information; national shipping ports: weapon scanners

### Description:

The topic sparked an interest when I began to think about some of the national security and defenses issues that are impacting our country. The problem associated with U.S. shipping ports is our inability to physically inspect the cargo entering our country daily. In addition there are informational problems; there is information that suggests that the issue has been solved over the last several years, but that is clearly not the case. Security standards have increased, but the lack of funding continues to be a problem and is preventing implementation of a system that could scan incoming crates to identify any potential threat.

### Critical Learning:

The first assignment addressed the issue at large and the second focused on the nuclear scanners that exist at ports and the issues associated with the information system. The second paper also focused on applying three different information systems theories. The complexity theory was applied because of the process taken to analyze with a nuclear scanner cargo in a shipping crate.. The theory was implemented after outlining questions such as, How long does it take to implement a scanner? How long does it take to scan a crate? What is the percentage of error in scanning? The chaos theory was applied to the scanners and the problems associated with false-positive scans. It was based on an incident at the Port of Oakland, where a scanner detected nuclear contents, but it was a false alarm. Last, General systems theory was also applied. The idea behind this theory is that the technology of nuclear scanners is being implemented while being researched, hence with time the information system should be cheaper, more effective, and address the needs of shipping ports.

Working on both of the assignments showed me the complexity of the informational problems associated with port security and nuclear scanners. I learned that there is not enough public awareness of the issue and there is a lot of conforming evidence. The problem is no one really knows if a weapon has been smuggled into the country, and officials question if a scanner would be able to stop a possible weapon from entering the country. I also learned the steps of research and the resources widely available on the issue if you know where to look. The key is being able to compile research from several sources and be able to bring all of those together to form a solid research paper. I was able to get a solid grasp on the issue and would like to see some sort of action take place. I feel this is a critical issue that if not solved in time could lead to a national crisis.

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Topic: The withholding of information by the government of the People's Republic of China during the SARS epidemic

Description:

This topic was important to me because it is close to home (I was born in Hong Kong). I remember the SARS scare well but did not know enough details about it (especially the part about China's withholding of information).

The main problem was that critical information was not shared and distributed in a timely manner. This happened because China was using its position to control the flow of information. They would have succeeded if the outbreak had not spread internationally through air travel.

Critical Learning:

I applied several theories:. By using the stakeholder's theory we must learn through China's example and analyze a country's motivations, the factors that drive its actions, and other complications that might arise, such as conflict of interest between or within stakeholders. Then we can start to understand how to get countries to cooperate in solving global issues.

The institutional theory is related to stakeholder's theory. In order to understand a country/group/individual's motivation, sometimes we have to consider that particular stakeholder's point of view and situation. If we do not understand why a stakeholder thinks or does something a certain way, we cannot come up with an effective solution..

With the organizational information processing theory, in order to create a plan of action for large organizations, we must first understand the challenges (information processing needs and the capability to do so). Only by understanding the problem/needs can we come up with solutions.

I feel that I have learned quite a bit, especially about China's health care system and some of its problems. This assignment has definitely raised more questions for me than answering some of mine, but I feel that it is good because it has raised my interest in staying updated with current events and political issues.

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Topic: Iran's nuclear issue

Description:

I chose this topic because it impacts not just one country but the entire world. The magnitude of this problem made me excited to investigate it in detail.

Because the U.S. had minimal information about Iran's clandestine nuclear program, it is an information problem. This problem has made it very difficult for the US to strike Iran, although the suspicion that Iran might already be working on the nuclear weapons program is likely to be reason enough to invade Iran.

Critical Learning:

Three theories were applied to this problem: garbage can theory, stakeholder theory, and theory of competitive strategy

Garbage can theory fits this situation because there is no straightforward solution to this problem. So, the garbage is shuffled around and a different problem is picked from it as a potential solution, which is putting sanctions on Iran.

Stakeholder theory is another good fit to this issue. The major stakeholders in Iran's case are Russia, China, U.S., India, Pakistan, and North Korea. China already has invested in Iran heavily and Russia has about \$10 billion worth of projects in progress as well as over \$1 billion in arms sales agreement with Iran. India and Pakistan are working on a gas pipeline deal that will be worth more than \$7 billion and the U.S. is being left out. Iran is a perfect example in which each stakeholder is trying to get a bigger piece of the pie.

The theory of competitive strategy applies to this problem because there are many countries with nuclear technology who are ready to sell it. It is difficult for one country to monopolize this industry, and since there are many different options available, the selling of nuclear technology becomes more competitive.

This was one of the most interesting assignments I've done. I learned how to apply the theories to the real-time situations. During this research I did a lot of reading from different sources and learned how media and people from different countries approach the same problem. For example, Iran's nuclear program is a threat for the U.S. but it is commerce for Russia.

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Topic: The information flow and its breakdown in establishing a relationship between Iraq and Al Qaeda, one of the reasons that the U.S. went to war with Iraq

Description:

Two information problems were identified: the government administration and the intelligence community had an information breakdown and the intelligence community failed in internal communication due to its fractured nature, the vast amounts of data gathered, and the lack of a good information system.

Critical Learning:

I applied the information system of research agency, complexity, and evolutionary theories to this problem. Specifically I looked at how the agency theory helped define some of the information problems such as information asymmetry for both intelligence problems, how the complexity theory helped identify the problem in the fractured intelligence community, and finally how the evolutionary theory showed the need of a good information system for sharing and relating information in the intelligence community. Ultimately I concluded two things: 1) The issue between the administration and the intelligence community will not be solved as long as the administration plays the role of principal and the intelligence community plays the role of agent, and 2) An information system similar to some of the social bookmarking websites (such as <http://www.del.icio.us>) would facilitate information analysis and relation, in addition to providing the capability of sharing information between agencies. One of the obvious things that I learned from doing this assignment was some of the questionable reasons that our government preached as gospel to the public in making a case for going to war. However, I also learned how to apply the information concepts that we read about and talked about in class to a complex situation. I learned how to analyze information exchanges and identify failures and possible failures.

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Topic: Information problems that plagued Boston during the January 31, 2007, Boston Mooninite scare

Description:

Information problems plagued Boston during the January 31, 2007, Boston Mooninite scare, in which small LED signs advertising the cartoon show Aqua Teen Hunger Force caused a terrorist bomb scare and shut down traffic in the city. The stakeholders I identified were the party of Cartoon Network/Turner Broadcasting/Interference, Inc., the city of Boston and its various law enforcement and political agencies, the media, and the general public.

Critical Learning:

I identified three information problems: 1) the failure of the CN/Turner/Interference party to notify the city of Boston about the signs, 2) the city of Boston's failures of interagency communication, and 3) the media's portrayal of the incident to the public. I applied the

social cognitive theory to describe the mindset of the CN/Turner/Interference party and their failure to report placing the signs, the garbage can theory to explain the response of the city of Boston, and the agency theory to describe the media's difference in coverage of the incident compared to what the city of Boston would want the public to believe. From this assignment, I learned about the relationship between the media and the government, the fact that there were no laws on the books to deal with a situation like this, and the ways in which the media can systematically blow an event out of proportion.

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Topic: The royal massacre in Nepal

Description:

My topic for the 2nd assignment was the royal massacre in Nepal. Since the assignment concerned national security issues, I thought that this topic would fit and it is one about which I already had some knowledge.

The information problem concerning the massacre was that the information was mishandled or misrepresented over time, which fueled the anger of the citizens. On June 1, 2001, the assassination of ten royal family members took place at 9 p.m. The government had declared by June 14th that Crown Prince Dipendra had shot his family and others over an argument about the choice of a bride and he then shot himself. Before being declared the new King, the Regent King Gyanendra, brother of late King Birendra, declared in a press conference that an automatic weapon went off killing all the royal family members. Later, an eyewitness, Rajiv Shahi, told reporters that Dipendra had consumed drugs and alcohol and had done the shootings. These conflicting statements led to violent street protests among citizens, curfews, and high political instability.

Critical Learning:

I applied three theories to this problem. Chaos theory was applied to sensitivity of the initial conditions (missing security forces, anger of the crown prince, and inconsistency in information) led to vastly different outcomes (political instability). With media richness theory, there was a lack of certainty in information (whether the crown Prince had consumed drugs or not) and equivocality (Gyanendra announcing that an automatic weapon accidentally fired). The theory of reasoned action was used on the crown prince's act of killing his family members, which was motivated by the disagreement of his parents on his choice of bride.

I have not had much interest in any political issues whether of my own country or any other's. Also, since I moved to the United States for my study, I have not been efficient at learning the news in Nepal. Therefore, by doing this assignment, I learned to analyze a problem in depth and also motivated myself to keep track of political news and current news of Nepal or any other country and learned to identify the relationships between the consequences that arise from a problem.

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Topic: Misuse of pesticides in food

Description:

I am interested in health on a national level. I would like to share the information to people who do not realize what they are putting into their bodies. There is an asymmetrical information advantage that pesticide companies have over consumers. Consumers don't have much access to the studies done on the effects of pesticides.

Critical Learning:

I applied the stakeholders theory and explained that all of the stakeholders need to be involved and therefore knowledgeable about the system to have information symmetry. I used Simon's theory of administrative behavior to explain some of the problem. The pesticide companies are profiting over administering ethics.

I explained the reason for slow change with the competitive strategy theory. Porter describes five main stakeholders that determine the attractiveness of a market. They consist of the bargaining power of customers and suppliers, the threat of new entrants and substitute products, and the intensity of the competitive rivalry. They are forces close to a company that affect its ability to serve its customers and make a profit. A change in any of the forces requires a company to re-assess its marketplace.

I also applied the user acceptance of information technology theory. In this case the behavioral intention is the consumer's intent on buying pesticide-free foods and the facilitating conditions are the types of foods that are available to the consumer. Behavioral intention as well as facilitating conditions creates use behavior. I think that we can change the use behavior with enough change in behavioral intention to override the influence of the facilitating conditions.

I found it interesting that the organic label doesn't mean 100 percent organic, but rather only 70 percent. The Environmental Protection Agency (EPA) isn't doing its job to get the information from the pesticide companies to the consumers. It is our job as the consumers to demand it.

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Topic: Analysis of specific requirements of the REAL ID Act of 2005 as an information problem

Description:

In my assignments I analyzed specific requirements of the REAL ID Act of 2005 as an information problem. I specifically dealt with choosing a "common machine-readable technology with defined minimum data elements," which will allow information to be stored on all state-issued driver's licenses and ID cards by 2008. The technologies I considered for use on the new cards were RFID (radiofrequency identification), magnetic stripes, and two-dimensional barcodes. I chose this topic because I had heard a lot of bad things about RFID, and I was concerned about potential abuses. This assignment taught me about the complex nature of making a decision that will affect millions of people.

### Critical Learning:

Ultimately, I made the recommendation to use two-dimensional barcodes, as they had the best mix of required features (including error-correction, low cost, and decent storage capacity) and the fewest pitfalls (cannot be 'skimmed' from a distance, do not store unnecessary personal information that could be abused by identity thieves).

I analyzed various components of each technology, including ease of use, security, durability, storage capacity, cost, and longevity. Also, I identified and analyzed information flow between four main stakeholders in the problem of choosing the most appropriate technology: the federal government, state governments, American public, and terrorists.

Three models or theories of information systems were applied to the problem. First, I showed how the technology acceptance model applies directly to the choices that will have to be made by the Secretary of Homeland Security and the Secretary of Transportation. Next, the unified theory of acceptance and use of technology was used, taking into account the voluntariness of use as a main factor affecting behavioral intention of the American public. Last, the theory of planned behavior was applied to the behavior of potential terrorists, specifically considering the new ID requirements enacted by Real ID as a perceived behavioral control in preventing acts of terrorism.

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Topic: American foreign and domestic policy through the perspective of long-term time and information systems

### Description:

For my assignments I analyzed American foreign and domestic policy through the perspective of long-term time and information systems. In Assignment 1, I demonstrated the similarities between the fall of the Roman Empire and the current state of American policy. For Assignment 2, I expanded on this information problem and focused on a large-scale solution. This essay built off the problems stated in Assignment 2.

### Critical Learning:

In assignment 1, I looked at the analysis historians have produced on the fall of the Roman Empire. In choosing this topic, I was reminded about my interest in American history. After researching the status of the U.S. and the fall of the Roman Empire, I connected all of the similarities. Specifically I chose political, economic, and morality factors. I reasoned that the problem was that the lack of a person in power who has the appropriate historical view to make future policies. I learned that the current U.S. leadership, although good intentioned, is creating policies now that will cause drastic problems in the future.

Assignment 2 built on the points and references of assignment 1 and focused mainly on creating and describing a long-term solution to the lack of foresight of current policymakers. My solution was to create a new cabinet-level department. The Department of Longevity Assurance is made up of four services: internal compilation,

historical analysis, policy projection, and educational institute analysis. A large part of the essay focused on the fourth service. It described how building a stronger and more efficient school system could be achieved by using this service as a status check. It concluded with how analysis of the development of the Department of Homeland Security could be used as a model on how to build a new governmental department. Through the researching and writing of this essay, I learned a lot about how information flows through the government and created ways on how this could be improved.

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Topic: The issue of Jammu and Kashmir

Description:

My assignment 2 covered the issue of Jammu and Kashmir (J & K) and how this disputed area has been one of the mainstays of tension between Pakistan and India, leading both countries to develop nuclear weapons.

I wanted to get down to the fundamental reason behind such an issue, which started off at a national level and has escalated to an international security threat. Being a Pakistani myself, I have heard of the issue of J & K all my life from family, friends, media, etc., but I never fully understood the problem. Therefore, I was interested in getting to the bottom of the issue through my own research and understanding without any outer influences or biased thinking.

Critical Learning:

The information problem lies in the lack of understanding between the two countries. Even with the involvement of the United Nations and the passing of resolutions and referendums, both countries have failed to come to a mutual agreement. Kashmir is one of the most beautiful places on earth and attracts uncountable tourists and sightseers. Pakistan and India, two stakeholders in this problem, have their own benefits and interests in mind for the occupation of J & K. Some of the main sources of rivers originate in Kashmir and then branch off into Pakistan and India. If either of the two countries takes over J & K, they risk having their water supply cut off by the other country. After applying Weavers' three levels of problems that arise in communication, I learned that the information problem came about at the very beginning stage, the technical level. The first information was not accurately transmitted between the sender and receiver. Communication is on-going, but a conclusion and mutual agreement on the issue is still pending.

I applied game theory, conflict theory, and communication theory. Game theory related specifically to prisoners' dilemma. I placed Pakistan and India as the two players with four choices: both sides share Kashmir, only India compromises, only Pakistan compromises, and both parties defect.

Conflict theory includes four primary assumptions, which I applied to the dispute of J & K in competition—water; structural inequality—occupation of disputed territory provides monetary benefits; revolution—if plebiscite is implemented, Kashmir can separate from

both India and Pakistan; and war—both countries go to war and either unify or end the societies completely

For communication theory, I applied Weaver's model of three problems that arise in communication between the sender and receiver: technical, semantic, and effective. I learned that the problem began at the first level, at which both countries failed to fully comprehend each other, which led to the problems at levels 2 and 3.

I learned a lot from this assignment. First, all of the historical information that I had been oblivious to before, now made more sense to me and helped me in understanding the dispute from its' core. Second, I learned that being able to understand a problem is one thing, but actually applying theories in order to break down the problem and understand it is a much harder task. This had to be the hardest part of the assignment for me. Gathering information, collecting resources, and reading up on facts is easy, but application with information system theories was definitely a challenge.

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Topic: The U.S. federal agency that issues national security letters

Description:

The government agency was analyzed as an information system in which national security letters are used as an input stream of information. Consequently, the fact that national security letters are the major factor in the information system's decision-making and action became problematic. Another issue was the government's invasion of privacy and infringement of personal rights.

The quest for an interesting and challenging topic seemed easy to approach but I found the task difficult. Fortunately, I found an internet news article about national security letters. While being relevant enough to the national defense criteria, the topic stimulated my natural instinct to quench my curiosity.

Critical Learning:

Organizational information processing theory deals with information processing needs, information processing capability, and the fit between the two to obtain optimal performance. It also described environment uncertainty and the complexity. Contingency theory is a class of behavioral theory that contends that there is no one best way of organizing /leading and that an organizational / leadership style that is effective in some situations may not be successful in others. With knowledge base theory of the firm, information systems can be used to synthesize, enhance, and expedite large-scale intra- and inter-firm knowledge management.

After completing the two assignments, I was able to understand, analyze, and apply the fundamental concepts of information perspective and information problems. Then the view of evolutionary theory of information and information systems perspective was applied. Finally, I have learned how to apply different information systems theories in a complex environment.

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Topic: An analysis of media coverage and accountability during the Iraq war

Description:

I began my research and analysis of the American media's coverage of the Iraq war with the basic assumption that the public is receiving an inaccurate portrayal. However, I didn't realize the extent of the implications: Inaccurate reporting, as it turns out, is merely a symptom of the problem, not the true issue. My research uncovered a comprehensive problem in media relations — conflict of interest.

Critical Learning:

In order to develop this problem, I applied several theories. When comparing the media to a black box system, the media richness theory demonstrates that the process equivocality in report publishing creates the possibility of multiple interpretations or manipulations of a single story. The systems and resource dependency theories outlined the complex relationships among the main stakeholders, thus demonstrating their mutual conflict of interests that put a continual spin on American journalism.

The problem of the media is extremely serious and has a huge impact on current and future U.S. policy. The media is the primary channel of information-sharing in the U.S., and when compromised, the informational integrity of the country is at stake. Furthermore, because the media is an open system unbound by constraints, its impact reaches far beyond national issues and influences foreign relationships.

I initially chose this topic with a general interest in the media's sociological impact but discovered my interest in communications over the course of this assignment. After reading about the complexities of the problem, I've decided to add a Communications minor to my degree.□

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Topic: The information problems in Saddam Hussein's death articles

Description:

Information about Saddam Hussein's death articles was fragmented in different newspapers, all credible sources. This was a problem because it affected the decision-making process. The stakeholders are decision makers because decisions are based upon information, and if the information is fragmented, fragmented decisions take place.

Critical Learning:

The theories I related in this are media richness theory, illusion of control theory, and structuration theory. All these theories have something in common, and that is the user gets to pick the information he/she wants based on the information they already have regarding the event and structure it on the basis of their perceptions. That is the reason fragmented information takes place. From this assignment I learned how to deeply

analyze a problem and look at the source on how it originated and how to apply credible theories to explain it.

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Topic: Cuban missile crisis; Analysis of the effect of quantum computing

Description:

While I had heard the phrase "Cuban missile crisis," I didn't know anything about the event. For my second assignment I chose to analyze the effect that quantum computing (QC) would have on encryption and computer security. I did this to get a better understanding of cryptography, which interests me, and the direction it's heading.

Critical Learning:

Cuban missile crisis—During the assignment I analyzed the Cuban missile crisis using the semiotic ladder. I concluded that the United States fell prey to the information overload trap, as well as the paranoia trap. The information overload is self explanatory, and the paranoia came from the U.S.'s fear of communism and their preemptive/failed attack in the Bay of Pigs, which was a direct cause of the Cuban missile crisis.

Analysis of the effect of quantum computing—The problem I addressed evolved throughout the paper. I had initially determined that QC would be a hazard to the computing world because it was so much faster that it would be able to decrypt most things via brute force. Later I learned that it would also provide a more secure encryption, at which point the problem became the transition period between regular and QC technologies, as well as the public reaction to such a technology. The problem of the transition period is that current technologies won't be able to encrypt something strongly enough for QC. The other problem is something we have already faced regarding technology—misinformation regarding technology, accompanied by gloom-and-doom theories, from the media. This has been evidenced in the past by the Y2K bug, and while it won't necessarily happen with QC, it is easy to see how it could.