

# **Protection or Privacy? An Analysis of Satellite Surveillance and Its Utilization**

A Research Paper submitted to the Department of Engineering and Society

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

**Brandol Galicia**

Spring 2024

On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Advisor

Joshua Earle, Department of Engineering and Society

## **Introduction**

Satellite imagery technology impacts the world in different areas. Google Earth, for example, is the most well-known form of satellite imagery. Satellite imagery images bigger-scale environmental effects and the development of geographical areas. The United States government, however, uses satellite images to watch over other countries and the United States itself, in a process known as satellite surveillance. Starting as early as 1955, the United States began development of its extensive satellite surveillance system starting with the development of the first types of reconnaissance satellites (Erikson, 2005). These satellites would take images and place them on photo film canisters that would fall back down into Earth. Nowadays, even civilians can have access to satellite images, but at a limited resolution.

Satellite surveillance is an issue that should be more in the spotlight. The dangers of advanced satellite capabilities can have detrimental effects on the privacy of American and global citizens. Worldwide governments have already been using satellite images to obtain information on people. For example, Spanish authorities have used satellite images to demonstrate to Mauritanian authorities that immigrants have been departing from Mauritania. (Amnesty, 2008) In Brazil, authorities used satellite images to investigate an area that had ripped out trees. Once the Brazilian authorities got there, they discovered people illegally producing charcoal in that area and proceeded to arrest those said people. (Beam, 2019). These examples show just how much information someone can get from satellite images. Once these satellites continue to advance, the amount of information the satellites uncover will be unknown.

The excess amount of information that the United States government can get from satellite images of America can cause the idea of privacy to disappear. The capabilities of today's reconnaissance satellites are alarmingly unknown to the public. For now, the public knows that

the satellites are for national security purposes. National security can mean the government uses the satellites for international and domestic affairs. Since the United States government uses reconnaissance satellites for domestic affairs, my main research question is as follows: is the advancement of satellite surveillance technology used for the sake of national security a risk to the privacy rights of American citizens?

To answer the question, I investigated the capabilities of reconnaissance satellites and the United States satellite surveillance systems. I also investigated how the United States government uses the satellites and the justifications for why it keeps developing the satellites. The paper will not be solely about the government because I will also discuss American citizens' opinions and role in the technology. The American citizens are at risk of privacy infringement from the reconnaissance satellite technology. With the gathered information, I argue that satellite surveillance technology is a risk to American citizens privacy rights. Satellite surveillance technology is a risk to American citizens privacy rights because of the advanced capabilities of the technology, the support the technology has from the government, and the inability to win a legal battle against the technology.

## **Methods**

I searched the web using keywords such as "satellite surveillance" and "privacy infringement" to find sources for the paper. The sources range from journal articles to Supreme Court Cases and even data sheets. I discuss news articles, videos, and data sheets alongside the topic of satellite surveillance and the privacy of the United States people. I use these sources because they describe recent events involving satellite surveillance. These can be such things as using satellites to image certain areas of the world and how satellites analyze specific data. The

data sheets provide information relating to the American citizen's response to government surveillance.

I use two main Supreme Court Cases in the discussion are *Florida v. Riley* (Florida v. Riley, 1989) and *Katz v. United States* (Katz v. United States, 1967). The case of *Florida v. Riley* questions the legality of using aerospace surveillance without a search warrant. The court ruled that aerospace surveillance does not require a search warrant. The case of *Katz v. United States* surrounds the topic of police surveillance and the privacy of American citizens. In this case, the Supreme Court ruled in favor of citizens' privacy. I analyze the court opinions of these cases to see what arguments and reasonings the court used to make the winning decision. I consider the arguments that reference the 4<sup>th</sup> Amendment because of the different sides the government takes with the 4<sup>th</sup> Amendment. The arguments and reasonings aid in discussing national security/surveillance or privacy rights as both cases have differing opinions on the subject matter.

The main STS approach I use is the Social Construction of Technology framework (SCoT). SCoT entails a "multidirectional" view of how a piece of technology interacts or influences the common social groups involved with said technology. (Bijker et al., 1987) The framework also follows two progression concepts that help to easily identify the interactions between the technology and the social groups. The first one is interpretive flexibility. Each relevant social group perceives the main technology differently during interpretive flexibility. Interpretive flexibility is an important concept when discussing the beginning of satellite surveillance history. The second one is the closure stage of a technology. The closure stage establishes the accepted interpretation of a technology. I will discuss the dilemma between

surveillance and the privacy issues of American citizens while tying in the closure stage to support the argument.

Satellite surveillance involves two main social groups. The first social group is the US government, which consists of the executive, legislative, and judicial branches. The executive branch consists of the president, the intelligence community (e.g., CIA, FBI), and the military, however, the focus will be on the intelligence community and the military. Within the legislative branch, I focus on the US Congress. Similarly, I focus on the US Supreme Court within the judicial branch. The second social group are the American citizens.

SCoT helps to analyze each social group's interactions with satellite surveillance. I study the interaction between satellite surveillance and American citizens because they are the most susceptible to the technology and know the least about the capabilities of the technology. The US government, on the other hand, is the developer, the user, and supports using satellite surveillance because the intelligence agencies and the military are the main developers and users of the technology. Meanwhile, the US Congress and US Supreme Court support the technology because they put in laws to uphold the government's advanced capabilities in the technology and rule that aerospace surveillance does not require a search warrant.

Firstly, I investigate the status and state of advancement of satellite surveillance. I use the information to determine how much the technology infringes on a person's privacy and to elaborate on the usage uncertainty of the government's reconnaissance satellites. I also investigate case studies that have involved aerospace surveillance, surveillance, and privacy matters related to the 4<sup>th</sup> Amendment to aid in the discussion. Finally, I discuss whether satellite surveillance will become a dangerous tool for the privacy of United States citizens.

## **Results and Analysis**

### *History of Satellite Surveillance*

After World War II, the United States and the Soviet Union became the two superpower nations. The two nations started to spread their own political systems and ideologies. The spread of each ideology led to the two nations conflicting as each nation wanted more geopolitical power than the other. Therefore, it led to an era of competition between the United States and the Soviet Union that involved advancing their own technologies to seem superior. (Green, 2013) During this time, around 1955, the Air Force submitted a funding request to develop ballistic missiles, reconnaissance satellites, and space technology. Out of these three technologies, President Dwight Eisenhower endorsed the reconnaissance satellites the least. Therefore, the budget for the reconnaissance satellites was only around three million dollars, much less than the funding for the ballistic missiles and space technology. (Erickson, 2005)

Eisenhower's space-for-peace policy led to delays in the development of reconnaissance satellites. The policy emphasized acquiring scientific information about space before flying satellites into space. Eisenhower, however, started to believe that reconnaissance satellites would be a technology that would heavily influence the world. He claimed that reconnaissance satellites are a peaceful and useful technology because the technology only collects information. Eisenhower also believed that the information that reconnaissance satellites received was valuable. Therefore, he decided to push the information-gathering stage to expedite the deployment of reconnaissance satellites. The advancement of satellite surveillance increased in 1959 once the Air Force, the first group in charge of reconnaissance satellites, received more funding. The first reconnaissance satellite deployed by the Air Force was under the program name Corona. It would start operation in 1960 and end in 1972. The Air Force sent Corona

satellites into orbit and took photographs of the Soviet Union's weapon development. The satellites stored photos in film canisters and then dropped the canisters back down to Earth for retrieval. (JPL) The United States government did not mention the development and launch of the Corona program to United States citizens until 1978. Nowadays, the National Reconnaissance Office is the organization in charge of manufacturing and controlling the United States reconnaissance satellites. (Erickson, 2005)

The new iteration of reconnaissance satellites would have cloud cover sensors by 1970 and would have increased resolution capabilities by the second generation just two years later. (Erickson, 2005) Since then, the resolution capabilities of just satellite imagery have increased by 20-fold between 1970 and 2016. In 2019, the world saw the finest commercially allowed image when the Indian Space Research Organization Cartosat-3 satellite had a resolution eight times the size of a phone screen. (Coffer, 2020) A typical phone screen nowadays has dimensions of about 3-6.5 inches. Therefore, the Cartosat-3 satellite has a resolution of around 24-49 inches or 60-121.92 cm.

American citizens recently learned a little bit more about the government's reconnaissance satellite capabilities. On August 13th, 2019, former President Trump posted a tweet talking about the catastrophic accident that happened on a satellite launch site in Iran. The tweet came with a satellite image picture taken from one of the US reconnaissance satellites. The image, seen in Figure 1, had a resolution of 10 cm, which is finer than the commercially allowed limit. (Wang, 2019) The posted image gave an insight into the capabilities that the government's satellites have. The public knows the government withholds information meaning they do not know the maximum resolution of the government's satellite image resolution.



**Figure 1:** Satellite imagery with a resolution of 10cm of a failed Iran satellite launch

*Katz v. United States*

The United States placed a law called The Interstate Wire Act 1961 that prohibits transmitting gambling information from one state to another through wired communication (Interstate Wire Act, 1961). In 1967, federal agents had a suspicion that Charles Katz was committing this crime and therefore proceeded to place a microphone on a phone booth that Katz used. The federal agents used the recordings from the telephone booth to incriminate Katz with multiple offenses at a district court. Katz appealed the decision of the district court, therefore leading the case to go up to the U.S. Supreme Court. The Supreme Court ruled 7-1 in favor of Katz stating that the 4<sup>th</sup> Amendment protects Katz's right to privacy.

The original court that indicted Katz claimed that the telephone booth he used was a public place. It meant that the federal agents had the right to tap Katz's telephone conversations because the booth was in a public setting. Katz claimed that the telephone booth was a "constitutionally protected area". The Supreme Court stated that even if the telephone is in a



public area, the 4<sup>th</sup> Amendment still protects a person's privacy. The 4<sup>th</sup> Amendment does not change if the person is in a public or restricted area. Therefore, the 4<sup>th</sup> Amendment protected Katz because he preserved the privacy of his telephone calls that occurred in a public telephone booth (Katz, 1967).

### *Florida v. Riley*

In 1989, a Florida sheriff arrested Michael A. Riley for growing marijuana on his property. The Florida sheriff caught Riley because he used a helicopter to fly over Riley's property without a search warrant. The Florida sheriff used his own eyes to see Riley's greenhouse and therefore claimed that as evidence to arrest Riley. Riley refuted the claim and caused the Supreme Court to take the case because it involved the 4<sup>th</sup> Amendment and privacy rights. The Supreme Court, in a split court 5-4 decision, ruled in favor of Florida, stating that air and space surveillance does not require a search warrant (Florida v. Riley, 1989).

The case had a majority opinion and a plurality opinion. The majority concluded the police do not need to obtain a warrant to observe something with the naked eye in public airways at an altitude of four hundred feet. They elaborated that the helicopter was flying in navigable airspace as determined by the Federal Aviation Administration (FAA) regulations. Therefore, the majority of justices stated that any member of the public or police is legally allowed to observe Riley's greenhouse from the altitude the helicopter took because of FAA regulations (Riley, 1989).

The plurality opinion, by Justice O'Connor, stated that the majority's opinion was too reliant on the FAA regulations because the regulations do not deal with the Fourth Amendment but instead deal with promoting air safety regulations. O'Connor believed the helicopter did not

infringe on Riley's privacy rights because it was flying in public airways at four hundred feet. O'Connor further stated that public members of air travel can legally take these airways and that the respondent's expectation for privacy, in this case, was not reasonable. O'Connor further justified that the public members could observe Riley's greenhouse from the altitude the sheriff was at (*Florida v. Riley*, 1989).

### *Government Surveillance and Privacy*

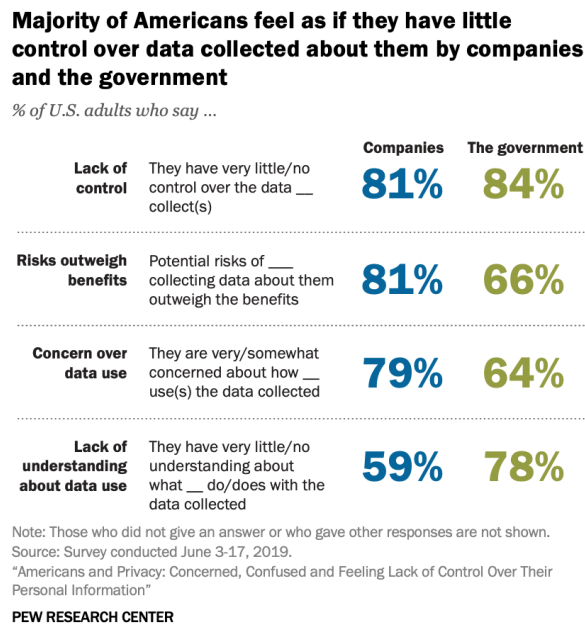
With the age of rapid technological development, there has been more discussion based on finding the balance between national security and an individual's privacy. These discussions stem from being able to massively improve surveillance systems with the new technological advancements. The dilemma has gone as far as to reach the United Nations General Assembly (UNGA). In 2013, the UNGA released a statement that would uphold the right to privacy. More specifically, the UNGA elaborated on how technological developments have or can enhance government surveillance capabilities (Kannegieter, 2023). They deemed the act of governments continuously improving their surveillance technology to collect data from their citizens as an act that abuses human rights. The UNGA therefore has advised countries to hold higher the privacy rights of their citizens.

Unlike the UNGA, the United States government, whether implicitly or explicitly, favors improving national security over respecting the privacy rights of an individual. The main idea that supports this fact is the concept of "surveillance capitalism", a term coined by Professor Shoshana Zuboff. Professor Zuboff defines surveillance capitalism as companies profiting from collecting and utilizing personal data from users (Zuboff, 2019). Google contributes to surveillance capitalism the most out of any corporation. Google collects data, such as search

engine history, and uses it to their advantage. For example, Google uses the collected data to improve the search engine for the desired user. Google also uses the collected data to make advertisers bid over a person's data to better target ads for that person. At the same time, Google is a US-based company and therefore is more complicit in providing data information to the US government (Whittaker, 2013). In 2013, the public learned about the Upstream program, which exposed the relationship between the US Government and Google. In this program, the National Security Agency was conducting warrantless surveillance of American communications such as collecting phone call records with the help of Google (Toomey, 2021).

Even with the help of data from tech companies, the US government invests enormous quantities of money into surveillance technology to further add to surveillance capitalism. After the 9/11 attacks, the US government invested money into improving national security. The national security funding mostly went towards surveillance technology such as communication wiretapping, financial information tracking, and Internet activity tracking (ACLU, 2023). Ever since then, the US government has further increased funding for the surveillance industry. In 2023, the House of Representatives passed a \$900 billion defense spending package. The focus of the spending bill was to increase the surveillance capabilities of the US government (Weiss, 2023). With both implicit and explicit information, the US government tends to want to increase national security without regard to anyone's invasion of privacy.

The United States government tracks data and information from United States citizens every day. Figure 2 is an infographic to show how Americans feel about their tracked data. Americans believe that they cannot go on with their lives without companies or the government tracking their data. A noteworthy part of the infographic is that most Americans do not know why the government is tracking their data.



**Figure 2:** Infographic from Pew Research Center talking about how Americans feel about data collection from companies and the government.

## Discussion

### *The Legislative Branch*

The US Congress has supported the technology of satellite surveillance since the beginning of the technology's conception. At the beginning of the reconnaissance satellite lifecycle, the US Congress was the entity responsible for funding the technology. They are the ones who propose how much funding goes into federal programs each year. Congress barely funded reconnaissance satellite technology at the beginning of its lifecycle. It is not known how much money Congress allocated to satellite surveillance during these times. All that is known is that Congress majorly increased the allocated funding for satellite surveillance after the launch of Sputnik in 1957 (Berkowitz, 2011). President Eisenhower denied the proposed funding because

he wanted to ensure that technology was suitable and would not fail in space. The funding trend continued even up to 2023 when they approved a \$900 billion spending bill that focused on further developing satellite surveillance technology. The development of satellite surveillance has been able to keep going because of the funding Congress has given to the technology.

### *The Executive Branch*

The executive branch, specifically the presidential side, gives even more support to satellite surveillance by viewing the technology through a paternalistic and utilitarian lens. Paternalism is the idea that a government makes decisions that improve the safety of its citizens, even if it goes against the will of its citizens (Dworkin, 2020). Utilitarianism entails the belief that governments make the decision that benefits the most people (Driver, 2014). The executive branch uses these two concepts to justify increasing surveillance because they claim it will make American citizens safer. The two concepts are prominent in Eisenhower's space-for-peace policy, a policy that was prevalent at the start of satellite surveillance technology. As mentioned before, Eisenhower believed that reconnaissance satellites were for the greater good as they were peacefully collecting information and not causing wars. Eisenhower kept reiterating the importance of how non harmful reconnaissance satellites are. This belief would continue from then on with other presidents such as Lyndon B. Johnson saying:

We've spent \$35 or \$40 billion on the space program. And if nothing else had come out of it except the knowledge that we gained from space photography, it would be worth ten times what the whole program has cost. Because tonight we know how many missiles the enemy has and, it turned out, our guesses were way off. We were doing things we didn't need to do. We were building things we

didn't need to build. We were harboring fears we didn't need to harbor.

(Heppenheimer, 1999)

President Jimmy Carter would add to this belief stating in his 1980 State of the Union

Address:

...photo-reconnaissance satellites, for example, are enormously important in stabilizing world affairs and thereby make a significant contribution to the security of all nations. (1980)

These interpretations that the presidents have had add to the interpretive flexibility of satellite surveillance. The presidents and US government have always interpreted satellite surveillance as a safety measure and a tool of peace as mentioned in Carter's address.

Therefore, the government wants to continue improving the resolution and the number of operational reconnaissance satellites for national security.

As the presidential side supports satellite surveillance technology, the intelligence community and military side of the executive branch utilizes and advances satellite surveillance technology even more. As stated before, the original organization in charge of making reconnaissance satellites was the Air Force. The satellite images from these satellites at first were just macro shots on film. That duty has now shifted to the National Reconnaissance Office (NRO). With the responsibility now on the NRO, the military and intelligence community therefore decided to improve the resolution of the satellite images. They knew that improving the resolution of the images would give them even more information than before. The satellite image of the Iranian satellite crash site shows the resolution improvement. The satellite image's resolution was 10 cm, which is one

thousand times better than the first satellite images which had a resolution of 10 m. (Blacksky, 2021) That image, however, was the only type of government satellite imagery the government has released. It confirms that the satellite imaging technology the government has is far better than commercial satellite imagery on applications like Google Maps. The intelligence community and military will continue to improve satellite image resolution because they want to get more information from each image.

### *The Judicial Branch*

The last part of the US Government that supports and allows the technology of satellite surveillance to be prominent is the Supreme Court. The Supreme Court deals with more Fourth Amendment and privacy rights issues than the other two branches of government. *Katz v. United States* is a landmark Supreme Court case that deals with privacy rights and the 4<sup>th</sup> Amendment. The Supreme Court seemed to stand by the people and support individual privacy rights based on the decision of this court case. The main idea that came from the court case was that the Fourth Amendment protects people and not places. This also applies to satellite surveillance since it is a type of surveillance, and surveillance was one of the main topics in the case.

Therefore, if satellite surveillance is a type of surveillance, then the case decision protects American citizens from warrantless satellite surveillance. The ruling of *Riley v. Florida*, however, overrules in a satellite surveillance case. In this case, the Supreme Court determined that warrantless aerial surveillance is legal because the aircraft used to take the photograph was flying in a public airway. The Supreme Court deemed it as not invading Riley's privacy because anyone in the public could see his marijuana farm from

that altitude. The Supreme Court further stated that Riley does not own the airspace above his home and established that people do not own the airspace above their homes. Satellite surveillance goes on spacecraft that technically fly in the airspace. The decision from this case would allow the government to further justify satellite surveillance on United States citizens. The argument would be that satellite images coming from a spacecraft that flies in the airspace above anyone's house would be legal. Therefore, it would be hard for an American citizen to win a case against the government for privacy invasive satellite surveillance technology.

### *American Citizens*

The United States government's development, support, and enforcement of satellite surveillance can and will be a danger to an American citizen's privacy rights. There is already a lack of transparency from the United States government about the data it collects from its citizens. As seen in the data from the Pew Research Center, American citizens are not aware of what the government does with the information they gather. Interpretive flexibility describes the phenomena of distrust in this situation. United States citizens view satellite surveillance as dangerous because they do not know the capabilities of the technology. The government, instead of being transparent, hides the capabilities of satellite surveillance and reiterates how helpful satellite surveillance is. President Carter's State of the Union Address specifically shows the tactic. Even though there is a difference in interpretations of satellite surveillance from the government and American citizens, the government's interpretation is the most mainstream because they are the only ones who develop the technology.



At the same time, a United States citizen would lose a case of privacy versus satellite surveillance because of the past Supreme Court decisions. As mentioned before, the Supreme Court has claimed that United States citizens do not own the airspace above their own homes. It also means that citizens do not own the area of space above their home as well. Even though *Riley v. Florida* was a case about aerial surveillance, the logic the Supreme Court used supports the claim that warrantless aerial surveillance is also warrantless air and space surveillance. The logic suggests that an American citizen does not own the space region above them because it is above the unowned air of their home. Therefore, if a citizen believed the government infringed on their privacy through satellite surveillance, the case would not rule in their favor as the Supreme Court ruled that aerial, and therefore space surveillance is legal.

The closure part of the SCoT framework is that most United States citizens have accepted the government's view that satellite surveillance is for safety only. United States citizens believe this because they simply do not know the circumstances and capabilities of satellite surveillance. I believe that the government should communicate their satellite surveillance technology better to the United States citizens. Regulations need to be in place because the privacy of an individual is more important than national security. The danger of satellite surveillance comes from the lack of information that the government has about its reconnaissance satellites. The rapid pace of technological development will eventually lead to the government being able to view everyone in the country in real time from satellites in space. The citizens should know the usage of these types of satellites to protect their own privacy. Regulations will also slow down the progression of these satellites to further ensure the protection of privacy.

## **Conclusion**

The original question posed was as follows: will the advancement of satellite surveillance technology used for the sake of national security be a compromise of the privacy rights of United States citizens? With the help of the literature and the SCoT framework, I believe that the advancement of satellite surveillance will infringe the privacy rights of American citizens. The SCoT framework showed how all the branches of the United States government have continuously supported satellite surveillance from the beginning of the technology. The legislative branch, specifically the US Congress, has and will continue to provide more funding to continue the advancement of satellite surveillance. With more funding provided by Congress, the executive branch of the United States government will be able to develop and deploy even more reconnaissance satellites into space. The executive branch will continue to develop reconnaissance satellites and tell American citizens that the satellites are for the 'greater good' and safety. The judicial branch will strictly enforce and allow the United States government to continue using satellite surveillance. The previous court decisions that established the legality of aerial surveillance allow the government to continue using satellite surveillance on its own citizens because it is an extension of aerial surveillance.

The closure of satellite surveillance is that the government has established that satellite surveillance is a national security measure that the American citizens do not have a say in. American citizens' privacy rights are at risk with continuous satellite surveillance advancement. The continuous advancement of the satellite imagery resolution alongside the potential of even more reconnaissance satellites in orbit will allow the government to gain more information from all American citizens. Once they

gained that information with satellite surveillance, the government could go as far as saying that they need the information for safety purposes or even continuously impose satellite surveillance because the United States Supreme Court will enforce the ruling of *Florida v. Riley*. Satellite surveillance needs to be a topic that is relevant in the minds of American citizens. American citizens should raise their voices to impose regulations against satellite surveillance advancement and the usage of the technology in the United States. For now, the government will continue to use and advance satellite surveillance to capabilities that will be unknown to the public.

## References

- Berkowitz, B. (2011). *The National Reconnaissance Office at 50 Years: A Brief History*. National Reconnaissance Office.  
[https://www.nro.gov/Portals/65/documents/history/csnr/programs/NRO\\_Brief\\_History.pdf](https://www.nro.gov/Portals/65/documents/history/csnr/programs/NRO_Brief_History.pdf)
- Best, R. A., & Elsea, J. K. (2011). *Satellite Surveillance: Domestic Issues* (CRS Report for Congress 7–5700). Congressional Research Service. <https://sgp.fas.org/crs/intel/RL34421.pdf>
- Bijker, W. E., Hughes, T. P., & Pinch, T. (1987). *The Social Construction of Technological Systems*. Massachusetts Institute of Technology.
- Blacksky. (2021, August 13). *Blacksky*. <https://www.blacksky.com/satellite-imagery-history/#:~:text=In%201986%2C%20France%20deployed%20the%20Satellite%20pour%20%E2%80%99Observation,images%20using%20sensors%20sensitive%20to%20all%20visible%20colors.>
- David, J. E., & Bvyik, C. (2023, March 13). *What's Up There, Where Is It, and What's It Doing? The U.S. Space Surveillance Network*. National Security Archive.  
<https://nsarchive.gwu.edu/briefing-book/intelligence/2023-03-13/whats-there-where-it-and-whats-it-doing-us-space-surveillance>
- Driver, J. (2014). The History of Utilitarianism. In *Stanford Encyclopedia of Philosophy*.  
<https://plato.stanford.edu/entries/utilitarianism-history/>
- Dworkin, G. (2020). Paternalism. In *Stanford Encyclopedia of Philosophy*.  
<https://plato.stanford.edu/entries/paternalism/>
- Erickson, M. (2005). *Into the Unknown Together: The DOD, NASA, and Early Spaceflight*. Air University Press.

<https://web.archive.org/web/20090920093817/http://aupress.au.af.mil/Books/Erickson/erickson.pdf>

Florida vs. Riley, (Rehnquist Court January 28, 1989). <https://www.oyez.org/cases/1988/87-764>

Green, J. (2013, November 8). *The Cold War: Crash Course US History #37*.

[https://www.youtube.com/watch?v=9C72ISMF\\_D0](https://www.youtube.com/watch?v=9C72ISMF_D0)

Heppenheimer, T. A. (1999). *The Space Shuttle Decision*. Library of Congress. chrome-

extension://efaidnbmnnnibpcajpcgiclfndmkaj/<https://www.nasa.gov/wp-content/uploads/2023/04/sp-4221.pdf>

Interstate Wire Act. 18 U.S. Code § 1084 (1961)

Katz v. United States, 35 (Warren Court December 18, 1967).

<https://www.oyez.org/cases/1967/35>

Kelly, K. C. (1995). Warrantless Satellite Surveillance: Will our 4th Amendment Privacy Rights be Lost in Space? *Journal of Computer & Information Law*, 13(4), 729–762.

<https://repository.law.uic.edu/cgi/viewcontent.cgi?article=1367&context=jitpl>

Kordoy, P. (2005). Satellite Surveillance within U.S. Borders. *Ohio State Law Journal*, 65(1627). <https://core.ac.uk/download/pdf/159585753.pdf>

*MAURITANIA : « NOBODY WANTS TO HAVE ANYTHING TO DO WITH US »* (AFR

38/001/2008). (2008). Amnesty. <https://www.amnesty.org/en/documents/afr38/001/2008/en/>

Moran, L. (2013). *Marijuana farmer busted after cops see neat rows of plants on Google Earth*.

Daily News. <https://www.nydailynews.com/2013/10/23/marijuana-farmer-busted-after-cops-see-neat-rows-of-plants-on-google-earth/>

- Wang, B. (2019, September 1). *US Spy Satellites at Diffraction Limit for Resolution Since 1971*. Next Big Future. <https://www.nextbigfuture.com/2019/09/us-spy-satellites-at-diffraction-limit-for-resolution-since-1971.html>
- Weiss, B. (2023, December 14). House approves defense spending package, surveillance program extension. *Courthouse News Service*. <https://www.courthousenews.com/house-approves-defense-spending-package-surveillance-program-extension/>
- Whittaker, Z. (2013, January 28). What Google does when a government requests your data. *Zdnet*. <https://www.zdnet.com/article/what-google-does-when-a-government-requests-your-data/>
- Zuboff, S. (2019). *Surveillance Capitalism and the Challenge of Collective Action*. 28(1). <https://journals.sagepub.com/doi/10.1177/1095796018819461>