### Value: Security

* Which is defined by: Jacob Emmanuel Mabe in Security in African Philosophy and Historical Ideas
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Security is **a political principle with the primary function to guarantee national and international peace**. As a philosophical concept security is an ancient human ideal to which individuals as well as communities have constantly aspired. Thus, the concept of security assumes a metaphysical and ethical meaning.

Security is best achieved through the value criterion of **Mill’s Harm Principle**

**Barnes, Philosophy in Practice, 1996**

Eric Barnes, Philosophy in Practice: Understanding Value Debate, Clark Pub., 1996 0931054419, 9780931054419

Mill’s theory begins with the observation that **tyranny of the majority** is a dangerous and bad thing that **must be guarded against**. Merely having a democracy is no protection against this danger, so some other measures must be taken. **What is needed is a means of keeping the government from legislating in an oppressive manner** against minorities **while allowing government enough power to provide the benefits of civil society,** e.g., protection from crime, protection from external attack, enforcement of contracts, etc. What is needed is **a principle that restricts government.** Mill point out that there are two types of actions. First are actions that involve a harm to people other than the agent of the action, and second are those actions that do not involve harm to other people. Mill contends that it is obvious that **the government must be able to legislate** concerning **actions causing harm to others** in order to maintain the existence of a civil society to pass laws regarding actions not involving harms to others. Further, Mill claims that there is good reason to believe that **it is beneficial to society for the government to** have a strict policy of **never pass**ing **laws which restrict actions which do not involve harm to others.**

Mill knew that the benefits of a just government provides to society must be protected by both restricting government’s power but at the same time obligating the government to intervene when individuals may take actions that harm others. As I will show in the negative case, to best uphold security, private entities should not be allowed to appropriate space. Mill’s Harm Principle is the preferred criterion for achieving this balance.

**That is the primary obligation of states.**

**Goodin 95** (Robert E. Goodin. Philosopher of Political Theory, Public Policy, and Applied Ethics. Utilitarianism as a Public Philosophy. Cambridge University Press, 1995. p. 26-7)

The great adventure of **util**itarianismas a guide to public conduct is that it avoids gratuitous sacrifices**,** it **ensures** as best we are able to ensure in the uncertain world of public policy-making **that policies are sensitive to** people’s **interests** or desires or preferences. The great failing of more **deont**ological **theories,** applied to those realms, isthatthey **fixate upon duties** done **for the sake of duty rather than for** the sake of any **good** thatis **done** by doing one’s duty. Perhaps it is permissible (perhaps it is even proper) for private individuals in the course of their personal affairs to fetishize duties done for their own sake. **It would be a mistake for public officials to do likewise**, not least **because it is impossible. The fixation on motives makes absolutely no sense in the public realm**, and might make precious little sense in the private one even, as Chapter 3 shows. **The reason public action is required** at all **arises from the inability of uncoordinated individual action to achieve certain** morally **desirable ends.** Individuals are rightly excused from pursuing those ends. The inability is real; the excuses, perfectly valid. But libertarians are right in their diagnosis, wrong in their prescription. That is the message of Chapter 2. **The same thing that makes those excuses valid at the individual level – the same thing that relieves individuals of responsibility – makes it morally incumbent upon individuals to organize themselves into collective units that are capable of acting where they as isolated individuals are not. When they organize themselves into these collective units, those collective deliberations inevitably take place under very different circumstances and their conclusions inevitably take very different forms**. **Individuals** are morally required to operate in that collective manner, in certain crucial respects. But they **are practically circumscribed in how they can operate, in their collective mode**. And **those special constraints characterizing the public sphere of decision-making give rise to the special circumstances that make utilitarianism peculiarly apt for public policy-making,** in ways set out more fully in Chapter 4. Government house utilitarianism thus understood is, I would argue, a uniquely defensible public philosophy.

### Advantage 1: Space Debris

#### Private companies are cramming satellites into the Earth’s orbit which are quickly becoming defunct pieces of “space junk.”

Therese **Wood, 20** - ("Who owns our orbit: Just how many satellites are there in space?," World Economic Forum, 10-23-2020, 12-8-2021https://www.weforum.org/agenda/2020/10/visualizing-easrth-satellites-sapce-spacex)//AW

There are nearly 6,000 satellites circling the Earth, but **only 40%** are **operational.** Satellites are a vital part of our infrastructure, helping us to use GPS, access the internet and support studies of the Earth. Out of the 2,666 operational satellites circling the globe in April 2020, 1,007 were for communication services. 446 are used for observing the Earth and 97 for navigation/ GPS purposes. Over half of satellites in space are non-operational. For centuries, humans have looked to space and the stars for answers. The fascination is more than philosophical—it’s coupled with the need to solve problems here on Earth. Today, there are seemingly countless benefits and applications of space technology. Satellites, for instance, are becoming critical for everything from internet connectivity and precision agriculture, to border security and archaeological study. Right now, there are nearly 6,000 satellites circling our tiny planet. About 60% of those are defunct satellites—space junk—and roughly 40% are operational. As highlighted in the chart above, The Union of Concerned Scientists (UCS), determined that 2,666 operational satellites circled the globe in April of 2020. Over the coming decade, it’s estimated by Euroconsult that 990 satellites will be launched every year. This means that by 2028, there could be **15,000 satellites in orbit.** Nearly 10,000 satellites will be launched form 2019-2028. Image: Visual Capitalist With SpaceX’s planned Starlink constellation of 12,000 satellites and Amazon’s proposed constellation in the works, the new space race continues its acceleration. Let’s take a closer look at who operates those satellites and how they apply their technology. Technology with a purpose Humans have long used space for navigation. While sailors once relied on the stars, today we use satellites for GPS, navigation, and various other applications. More than half of Earth’s operational satellites are launched for commercial purposes. About 61% of those provide communications, including everything from satellite TV and Internet of Things (IoT) connectivity to global internet. Over 1,000 satellites are for communication purposes. Image: Visual Capitalist Second to communications, 27% of commercial satellites have been launched for Earth Observation (EO) purposes, including environmental monitoring and border security. Commercial satellites, however, can serve multiple purposes. One week, a satellite may be ‘tasked’ to image a contested border. It could later be tasked to monitor the reclamation of a mining site or even the aftermath of a natural disaster. 54% of operational satellites are for commercial use. Image: Visual Capitalist Government and civil purposes make up 21% of all of Earth’s operational satellites, and military purposes come in at 13%. Who owns Earth’s orbit? Space operators SpaceX—founded by Elon Musk—is not only a disruptive launch provider for missions to the International Space Station (saving NASA millions). It’s also the largest commercial operator of satellites on the planet. With 358 satellites launched as of April, part of SpaceX’s mission is to boost navigation capabilities and supply the world with space-based internet. While the company operated 22% of the world’s operational satellites as of April, it went on to launch an additional 175 satellites in the span of one month, from August to September 2020

#### Increasing space debris levels will inevitably set off a chain of collisions.

Chelsea **MuñOz-Patchen, 19** - ("Regulating the Space Commons: Treating Space Debris as Abandoned Property in Violation of the Outer Space Treaty," University of Chicago, 2019, 12-6-2021, <https://cjil.uchicago.edu/publication/regulating-space-commons-treating-space-debris-abandoned-property-violation-outer-space)//AW>

Debris poses a threat to functioning space objects and astronauts in space, and may cause damage to the earth’s surface upon re-entry.29 Much of the small debris cannot be tracked due to its size and the velocity at which it travels, **making it impossible to** anticipate and maneuver to **avoid collisions.**30 To remain in orbit, **debris must travel at speeds of up to 17,500 miles per hour**.31 At this speed even very small pieces of debris can cause serious damage, threatening a spacecraft and causing expensive damage.32 There are millions of these very small pieces, and thousands of larger ones.33 The small-to-medium pieces of debris “continuously shed fragments like lens caps, booster upper stages, nuts, bolts, paint chips, motor sprays of aluminum particles, glass splinters, waste water, and bits of foil,” and may stay in orbit for decades or even centuries, posing an ongoing risk.34 Debris ten centimeters or larger in diameter creates the likelihood of complete destruction for any functioning satellite with which it collides.35 Large nonfunctional objects remaining in orbit are a collision threat, capable of creating huge amounts of space debris and taking up otherwise useful orbit space.36 This issue is of growing importance as more nations and companies gain the ability to launch satellites and other objects into space.37 From February 2009 through the end of 2010, more than thirty-two collision-avoidance maneuvers were reportedly used to avoid debris by various space agencies and satellite companies, and as of March 2012, the crew of the International Space Station (ISS) had to take shelter three times due to close calls with passing debris.38 These maneuvers require costly fuel usage and place a strain on astronauts.39 Furthermore, the launches of some spacecraft have “been delayed because of the presence of space debris in the planned flight paths.”40 In 2011, Euroconsult, a satellite consultant, projected that there would be “a 51% increase in satellites launched in the next decade over the number launched in the past decade.”41 In addition to satellites, the rise of commercial space tourism will also increase the number of objects launched into space and thus the amount of debris.42 The more objects are sent into space, and the more collisions create cascades of debris, the greater the risk of damage to vital satellites and other devices relied on for “weather forecasting, telecommunications, commerce, and national security.”43 The Space Debris Mitigation Guidelines44 were created by UNCOPUOS with input from the IADC and adopted in 2007.45 The guidelines were developed to address the problem of space debris and were intended to “increase mutual understanding on acceptable activities in space.”46 These guidelines are nonbinding but suggest best practices to implement at the national level when planning for a launch. Many nations have adopted the guidelines to some degree, and some have gone beyond what the guidelines suggest.47 While the guidelines do not address existing debris, they do much to prevent the creation of new debris. The Kessler Syndrome is the biggest concern with space debris. The **Kessler Syndrome** is a cascade created when debris hits a space object, creating new debris and **setting off a chain reaction** of collisions that eventually **closes off entire orbits.**48 The concern is that this cascade will occur when a tipping point is reached at which the natural removal rate cannot keep up with the amount of new debris added.49 At this point a collision could set off a cascade destroying all space objects within the orbit.50 In 2011, The National Research Council predicted that the Kessler Syndrome **could happen within ten to twenty years.**51 Donald J. Kessler, the astrophysicist and NASA scientist who theorized the Kessler Syndrome in 1978, believes this cascade may be a century away, meaning that there is still time to develop a solution.52

#### This leads to what is known as the Kessler effect. This leads to a massive decrease in security and safety.

Les **Johnson 13**, Deputy Manager for NASA's Advanced Concepts Office at the Marshall Space Flight Center, Co-Investigator for the JAXA T-Rex Space Tether Experiment and PI of NASA's ProSEDS Experiment, Master's Degree in Physics from Vanderbilt University, Popular Science Writer, and NASA Technologist, Frequent Contributor to the Journal of the British Interplanetary Sodety and Member of the American Institute of Aeronautics and Astronautics, National Space Society, the World Future Society, and MENSA, Sky Alert!: When Satellites Fail, p. 9-12 [language modified]

Whatever the initial cause, the result may be the same. A **sat**ellite destroyed in orbit will break apart into thousands of pieces, each traveling at over 8 km/sec. This virtual shotgun blast, with pellets traveling 20 times faster than a bullet, will quickly spread out, with each pellet now following its own orbit around the Earth. With over 300,000 other pieces of junk already there, the tipping point is crossed and a runaway series of collisions **begin**s. A few orbits later, two of the new debris pieces strike other satellites, causing them to explode into thousands more pieces of debris. The rate of collisions increases, now with more spacecraft being destroyed. Called the "Kessler Effect", after the NASA scientist who first warned of its dangers, these debris objects, now numbering in the millions, cascade around the Earth, destroying every **sat**ellite in **l**ow **E**arth **o**rbit. Without an atmosphere to slow them down, thus allowing debris pieces to bum up, most debris (perhaps numbering in the millions) will remain in space for hundreds or thousands of years. Any new satellite will be threatened by destruction as soon as it enters space, effectively rendering many Earth orbits **unusable**. But what about us on the ground? How will this affect us? Imagine a world that suddenly **loses all of its space technology**. If you are like most people, then you would probably have a few fleeting thoughts about the Apollo-era missions to the Moon, perhaps a vision of the Space Shuttle launching astronauts into space for a visit to the International Space Station (ISS), or you might fondly recall the "wow" images taken by the orbiting Hubble Space Telescope. In short, you would know that things important to science would be lost, but you would likely not assume that their loss would have any impact on your daily life. Now imagine a world that suddenly loses network and cable television, accurate weather forecasts, Global Positioning System (GPS) navigation, some cellular phone networks, on-time delivery of food and medical supplies via truck and train to stores and hospitals in virtually every community in America, as well as science useful in monitoring such things as climate change and agricultural sustainability. Add to this the [destruction] ~~crippling~~ of the US military who now depend up**on** spy satellites, space-based communications systems, and GPS to know where their troops and supplies are located at all times and anywhere in the world. The result is a **nightmarish world**, one step away from **nuclear war**, **economic disaster**, and potential **mass starvation**. This is the world in which we are now perilously close to living. Space satellites now touch our lives in many ways. And, unfortunately, these satellites are **extremely vulnerable** to risks arising from a half-century of carelessness regarding protecting the space environment around the Earth as well as from potential adversaries such as China, North Korea, and Iran. No government policy has put us at risk. It has not been the result of a conspiracy. No, we are dependent upon them simply because they offer capabilities that are simply **unavailable any other way**. Individuals, corporations, and governments found ways to use the unique environment of space to provide services, make money, and better defend the country. In fact, only a few space visionaries and futurists could have foreseen where the advent of rocketry and space technology would take us a mere 50 years since those first satellites orbited the Earth. It was the slow progression of capability followed by dependence that puts us at risk. The exploration and use of space began in 1957 with the launch of Sputnik 1 by the Soviet Union. The United States soon followed with Explorer 1. Since then, the nations of the world have launched over 8,000 spacecraft. Of these, several hundred are still providing information and services to the global economy and the world's governments. Over time, nations, corporations, and individuals have grown accustomed to the services these spacecraft provide and many are dependent upon them. Commercial **aviation**, **shipping**, **emergency** services, vehicle fleet tracking, **financial** transactions, and **ag**riculture are areas of the economy that are increasingly **reliant** on space. Telestar 1, launched into space in the year of my birth, 1962, relayed the world's first live transatlantic news feed and showed that space satellites can be used to relay television signals, telephone calls, and data. The modern telecommunications age was born. We've come a long way since Telstar; most television networks now distribute most, if not ali, of their programming via satellite. Cable television signals are received by local providers from satellite relays before being sent to our homes and businesses using cables. With 65% of US households relying on cable television and a growing percentage using satellite dishes to receive signals from direct-to-home satellite television providers, a large number of people would be cut off from vital information in an emergency should these satellites be destroyed. And communications satellites relay more than television signals. They serve as hosts to corporate video conferences and convey business, banking, and other commercial information to and from all areas of the planet. The first successful weather satellite was TIROS. Launched in 1960, TIROS operated for only 78 days but it served as the precursor for today's much more long-lived weather satellites, which provide continuous monitoring of weather conditions around the world. Without them, providing accurate weather forecasts for virtually any place on the globe more than a day in advance would be nearly impossible. Figure !.1 shows a satellite image of Hurricane Ivan approaching the Alabama Gulf coast in 2004. Without this type of information, evacuation warnings would have to be given more generally, resulting in needless evacuations and lost economic activity (from areas that avoid landfall) and potentially increasing loss of life in areas that may be unexpectedly hit. The formerly top-secret Corona spy satellites began operation in 1959 and provided critical information about the Soviet Union's military and industrial capabilities to a nervous West in a time of unprecedented paranoia and nuclear risk. With these satellites, US military planners were able to understand and assess the real military threat posed by the Soviet Union. They used information provided by spy satellites to help avert potential military confrontations on numerous occasions. Conversely, the Soviet Union's spy satellites were able to observe the United States and its allies, with similar results. It is nearly impossible to move an army and hide it from multiple eyes in the sky. Satellite information is critical to **all aspects** of US intelligence and military planning. Spy **sat**ellite**s** are used to monitor compliance with international arms treaties and to assess the military activities of countries such as **China**, **Russia**, **Iran**, and **North Korea**. Figure 1.2 shows the capability of modem unclassified space-based imaging. The capability of the classified systems is presumed to be significantly better, providing much more detail. Losing these satellites would place global militaries on **high alert** and have them operating, literally, in the blind. Our military would suddenly become vulnerable in other areas as well. GPS, a network of 24-32 satellites in medium-Earth orbit, was developed to provide precise position **info**rmation to the military, and it is now in common use by individuals and industry. The network, which became fully operational in 1993, allows our armed forces to know their exact locations anywhere in the world. It is used to guide bombs to their targets with unprecedented accuracy, requiring that only one bomb be used to destroy a target that would have previously required perhaps hundreds of bombs to destroy in the pre-GPS world (which, incidentally, has resulted in us reducing our stockpile of non-GPS-guided munitions dramatically). It allows soldiers to navigate in the dark or in adverse weather or sandstorms. Without GPS, our **military advantage** over potential adversaries would be dramatically reduced or **eliminated**.

#### Contention 2 is Blackout

#### Collapse spills over to all other forms of critical infrastructure---specifically, destroys the power grid.

**Pellegrino & Stang 16** --- Massimo Pellegrino, Master’s Degree in Space Studies from ISU, with Gerald Stang, Senior Associate Analyst at the EUISS, holds BSc and MSc degrees in chemical engineering from the University of Saskatchewan and an MA in international affairs from the School of International and Public Affairs at Columbia University (“Space Security for Europe”, *EU Institute for Security Studies*, published July 2016, <https://www.iss.europa.eu/content/space-security-europe>, accessed 7-10-2019) bm

Modern societies are **highly dependent** on the **continuous operation of critical infrastructure** to ensure the provision of basic goods and services. They consist of assets, systems or parts thereof which are so vital, that their disruption would significantly impact the economy, national security, public health, safety, or social well-being. Examples of critical infrastructure include **energy**, **water**, **food supply**, communication, transportation, and waste processing systems. Space assets are so deeply embedded in developed economies that **a day without fully functioning space capabilities** would **severely** restrict or even **endanger our lives.** Space systems are critical for running **energy grids** and telecommunication networks, **border** and **maritime surveillance**, **crisis management** and **humanitarian operations**, environmental and **climate monitoring**, **verification** of **international treaties** and **arms control agreements**, and the fight against organised crime and terrorism. Space assets also provide the **technological backbone** for **other critical infrastructures**. The synchronisation of **power grids** and telecommunication networks, for example, is heavily dependent on GNSS timing signals and **any disruption would create a domino effect on other critical infrastructures** (see Figure 5). Satellites also play a central role in supporting defence systems and military operations. They are force multipliers that provide intelligence, surveillance, and reconnaissance (ISR) capabilities, as well as communication, navigation, positioning and timing signals. Armed forces do not only use their own space systems, but are also significant consumers of space services provided by private operators. In fact, about 90% of US military communications traffic passes through civilian satellites, many of which privately owned, rather than through dedicated systems designed to withstand attempted interruptions.1 The reliance of both civilian and military users on space systems therefore places them firmly in the area of critical infrastructure. Some critical space systems, such as the American GPS, are under foreign control, and the governments controlling those systems retain the authority to disrupt services, even for allies, in case of a national emergency. While the United States announced that it has no intention of ever intentionally degrading public GPS signals (also known as ‘Selective Availability’) and that the next generation of GPS satellites will not include this feature, other governments might still do so.2 These **dependences** engender **new** and **growing vulnerabilities**. Reliance on space is likely to increase further as space capabilities and services improve in diversity, quality and affordability. Close to 1,500 satellites with a launch mass of over 50 kg are expected to be launched over the next decade; an increase of 50% compared to 2005-2014. This estimate excludes both the **expected proliferation** of **smaller satellites** (such as CubeSats), but also the planned OneWeb and Steam mega-constellations for global internet broadband service. Advances in small satellite capabilities and in launch technology (e.g. SpaceX’s Falcon rocket family) have already lowered the cost of access to space. About 45% more CubeSats were launched in 2014 than in 2013 (130 vs. 91), accounting for 63% of all satellites launched3 . However, just as the reliance on space increases, so **too do threats and vulnerabilities**. Therefore, in order to realise the full potential of investments in space, **critical space systems need to be adequately protected** and the **space environment properly managed**.

#### Grid collapse causes anarchy and disaster.

**Friedemann 16** --- Alice, transportation expert, founder of EnergySkeptic.com, citing Dr Peter Vincent Pry, executive director of the Task Force on National and Homeland Security, a Congressional advisory board dedicated to achieving protection of the United States from electromagnetic pulse and other threats, (“Electromagnetic pulse threat to infrastructure (U.S. House hearings)”, 1-24-2016, <http://energyskeptic.com/2016/the-scariest-u-s-house-session-ever-electromagnetic-pulse-and-the-fall-of-civilization/>)

Modern **civilization cannot exist** for a protracted period **without electricity**. Within days of a blackout across the U.S., a blackout that could **encompass the entire planet**, emergency generators would run out of fuel, telecommunications would cease as would transportation due to **gridlock**, and eventually **no fuel**. Cities would have no running water and soon, within a few days, exhaust their food supplies. Police, Fire, Emergency Services and **hospitals cannot** long **operate in a blackout**.**Government and Industry** also need electricity in order to operate. The EMP Commission warns that a natural or nuclear EMP event, given current **unpreparedness**, would likely result in **societal collapse**.