

# Handout 9: More Security or Danger?

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Let's recall our discussion of technological determination (TD) vs. social constructivism (SC), the discussion of whether technologies generate a sustained abundance or ecological crisis, and the question of whether technologies make work easier or harder.

<b>Topic 1 (TD vs. SC)</b>	Technologies do not fully determine our behavior. TD is false. Our behavior is not wholly determined by free choice conditioned by social, cultural, and religious factors. Instead, it is partly determined by technologies. SC is false.
<b>Topic 2 (Abundance vs. Crisis)</b>	Our use of technologies has not automatically led to sustained abundance nor ecological crisis.
<b>Topic 3 (Easier vs. Harder)</b>	Our use of technologies has made a lot of work easier but has also made a lot of work harder (exploitation)

## 1. Do Technologies in General Make Our Lives Safer?

If this is the case, then we can ask two different questions about our technologies:

- Q1.** Are technologies developed and used in a way that *increase security* or *escalate danger*?
- Q2.** Is the current trajectory of technological development leading to human extinction and dystopia or human flourishing and utopia?
- Q3.** Should we ban the use and development of certain technologies and encourage the development of others?
- Q4.** Is invention detached from values? Are some technologies bad/good given human nature?

On the one hand, we might say that technology has ushered in a **new world of security**. We can build shelters that keep us safe from the elements, modern medicine can help us recover from injury and extend life, and governments have insisted on safer roads, bridges, airports, and so forth. On the other hand, we might contend that technologies expose us to **new, more terrifying dangers**.

CDQ: In a group, briefly list technologies that have made us safer and technologies that have ushered in new dangers in the table below:

New Securities	New Dangers

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In thinking about whether technologies make the world safer or more dangerous, let's consider the following argument:

ARGUMENT THAT TECHNOLOGY HAS MADE OUR LIVES MORE DANGEROUS (MORE SEVERE)	
P1	There is a correlation between the degree to which we try to <i>overcome</i> nature and the <i>severity</i> of accidents
P2	The development of technologies has increasingly tried to overcome nature.
C	Therefore, the development of technologies has increased the severity of accidents.

**P1** contends that the more we try to control nature through the use of technologies, the more we expose ourselves to serious accidents.

**Example 1:** falling off your bike vs. motorcycle crash

**Example 2:** Rowing a canoe vs. steamboat explosion (p.163)

**Example 3:** Small dam vs. South Fork Dam breakage near Johnstown, PA. The dam was 72 feet high and 931 feet long and was ill maintained in the 1880s. On 31 May 1889, the dam broke, releasing 20 million tons of water, destroying a number of towns, killing 2,209 people, and causing 17 million dollars in damage.<sup>1</sup>

**Example 4:** Increased energy production via nuclear power plants and nuclear meltdowns!

**CDQ:** What other examples can you think of that support P1?

**O1:** Yes, **P1** is true, but it neglects the fact that we don't try to prevent accidents.

**Reply 1:** The cause of many of these accidents isn't always apparent, foreseeable, or intentional. It isn't always the case that we can just point the finger at a broken valve or drunk operator, i.e. the *cause* of a disaster doesn't take the form of X *causes* Y. If this were the case, then we could *identify* the problem, *fix* the mistake, and *avoid* disaster. Rather, the cause of accidents is often *complex*. According to Turner, technologies have a **"disaster incubation period"**, a build-up process where small mistakes that typically go unnoticed accumulate until disaster occurs. These small mistakes, on their own, may not seem very serious, but when they *accumulate* and *interact*, they produce a disaster. That is, rather than X causes Y, we have something like this:

X<sub>1</sub> causes X<sub>2</sub> = no disaster  
 X<sub>3</sub> causes X<sub>4</sub> and X<sub>5</sub> = no disaster  
 .  
 .  
 .  
 All of the above = disaster!

That is, the cause of the disaster is the result of a multitude of factors and these factors *interacting* with each other.

**Response 2:** While these disasters are not intentional, part of the problem appears to be that technological **uptake is often rapid** and some **negative effects are long-term**.

**Example 1:** Asbestos used to fireproof buildings. Turned out to cause lung cancer

**Example 2:** Chemical defoliants used to destroy foliage in Vietnam. Turned out to poison the soil and cause genetic defects.

**Example 3:** Inert artificial chlorine in refrigerator coils. Turned out to leak and damage the ozone layer.

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<sup>1</sup> See McCullough, David. 1968. *The Johnstown Flood*. Simon & Schuster.

## CONSERVATISM ABOUT TECHNOLOGICAL USAGE & DEVELOPMENT

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- P1** If technologies control nature and this control results in the production of serious disasters and these disasters are often **unforeseeable** in a society where technological uptake is often rapid, then we ought to avoid using technologies.
- P2** It is the case that technologies control nature and this results in the production of serious disasters and these disasters are often unforeseeable in a society where technological uptake is often rapid.
- C** Therefore, we ought to avoid using technologies (conservatism).

**Example 1 (Eating Organic):** Avoiding foods that have been genetically modified or sprayed with pesticides.

**Example 2 (Avoiding Vaccination):** Worries about children getting autism due to increased use of antibiotics has led some to avoid having their children vaccinated.

**Example 3 (Cell Phones):** Worries about brain tumors have led some people to avoid using cell phones altogether.

**O1:** P2 is false. Some technologies make our lives substantially safer and they do not expose us to serious risk, e.g. shelter, toothpaste.

**O2:** P1 is false. Even if we assume that *some* technologies expose us to *serious* risks, it is not the case that these technologies are inherently dangerous for dangerous technologies are increasingly becoming safer (airplanes are safer now than ever before).

**O3:** P1 is false. Even if we assume that *some* technologies expose us to *serious* risks, the risks are worth taking, e.g. the convenience of transportation by automobile is worth the risk of getting into an accident.

**Q2.** Is the current trajectory of technological development leading to human extinction and dystopia or human flourishing and utopia?

**Q3.** Should we ban the use and development of certain technologies and encourage the development of others?

**Q4.** Is invention detached from values? Are some technologies bad/good given human nature?

## 2. Do Weapons Make Our Lives Safer?

In considering the question of whether technologies *increase security* or *escalate danger*, we might consider weapons in particular.

### Two Questions About Weapons

**Q5.** Do *guns* make individuals or society safer?

**Q6.** Do *military weapons* make the world a safer place?

Nye argues that guns make us less safe. His argument goes something like this:

### GUNS MAKE US LESS SAFE

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- P1** If guns make Americans safer, then they ought to be used to deter those who are trying to threaten or kill us and countries where individuals don't have access to guns should have higher homicide and accident rates.
- P2** Guns do not deter. Instead, two-thirds of all gun-related deaths were used to kill people they were purchased to protect.
- P3** In countries where gun control laws are stricter, the homicide and accident rate is lower.
- C** Therefore, guns do not make Americans safer.

**O1:** P2 is unsupported. Even if guns are **often** used to kill people we mean to protect, it doesn't mean they don't deter threats. In fact, a 1994 survey by the CDC contends that Americans used guns to frighten away 498,000 intruders trying to break into their homes.<sup>2</sup>

**O2:** P2 is misleading. Nye notes that of the **31,708 deaths** from gunshots and that two-thirds of these involve killing people we wished to protect. But, **17,424** of the **31,708 deaths** are suicides. Nye thus factors suicides into his claim that *two-thirds of all gun-related deaths were used to kill people they were purchased to protect*. This falsely assumes (i) that people purchased guns to protect themselves rather than commit suicide and (ii) those 17,424 people **would be alive** if they did not have access to guns. However, several countries have **stronger gun control laws** but a **higher suicide rate** than the US: Russia, Estonia, Latvia, Lithuania, Belarus, Hungary, Ukraine, Slovenia, Finland, Denmark, Croatia, Austria, Bulgaria, France, Switzerland, Belgium, Poland, Germany, Romania, Sweden, and Norway.<sup>3</sup>

**O3:** P3 is not entirely true. Some countries with stricter gun control laws have **higher murder rates**: Russia, Estonia, Latvia, Lithuania, Belarus, and the Ukraine all have higher murder rates.

**O4:** The conclusion doesn't follow. There is no evidence that increasing gun control laws (or banning guns altogether) would lower the homicide/suicide rate. Some countries with strict gun control laws have higher murder rates, while other countries with high levels of gun ownership (Switzerland) have low murder rates.<sup>4</sup>

Putting aside the issue of whether guns make individuals safer, we can consider whether **military weapons** (Q6) make the world a safer or more dangerous place.

Military technologies include a variety of different technologies, including guns and artillery, fortification, missile-defense systems, medicine, transport, communication systems, bulletproof vests, etc. Certainly better weaponry can lead to military victory.

**Example 1 (Civil War):** Transportation of the North gave them an advantage over the South

**Example 2 (Atomic Bomb in WWII):** Quick end to the conflict in Japan

**Example 3 (Gunpowder):** The use of gunpowder to fire cannonballs to destroy walls and ships

If military technologies seem to issue in advances in firepower and destructive capacity, then we might contend that military technologies make us *safer* as it shortens the duration of warfare.

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#### AN OPTIMISTIC ARGUMENT THAT MILITARY WEAPONS MAKE US SAFER

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**P1** If military technologies increase firepower and increase surveillance, and either of these minimize or reduce the duration of conflict, then military technologies make us *safer*.

**P2** Military technologies increase firepower

**P3** Increased firepower shortens the duration of conflict

**C** Therefore, military technologies make us *safer*.

**O1 (WWI):** P3 is false. When military technology is shared equally, it can lead to a stalemate.

**O2:** P2 is misleading as it assumes that increased firepower will only be used *offensively*, but military technologies can actually help in *holding* one's position.

**Example 1:** Trench warfare. The machine gun can be used to fortify one's position. Any individuals exiting the trench will be mowed down, e.g. the British at Gallipoli and The Battle of Somme.

**Example 2:** Bombing during the 1940s was ineffective as anti-aircraft fire shot bombers down and night bombing was inaccurate.

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<sup>2</sup> "Estimating intruder-related firearm retrievals in U.S. households, 1994." By Robin M. Ikeda and others. *Violence and Victims*, Winter 1997. <http://www.ncbi.nlm.nih.gov/pubmed/9591354>

<sup>3</sup> Kates, Don B. and Gary Mauser. Would Banning Firearms Reduce Murder and Suicide? A Review of International and Some Domestic Evidence. *Harvard Journal of Law & Public Policy*, p.687.

<sup>4</sup> Kates, Don B. and Gary Mauser. Would Banning Firearms Reduce Murder and Suicide? A Review of International and Some Domestic Evidence. *Harvard Journal of Law & Public Policy*.

**A PESSIMISTIC ARGUMENT THAT MILITARY WEAPONS MAKE US SAFER (MAD)**

- P1** If military technologies increase destructive capacity and every country is equally capable of destroying every other, then no country would attack any other as this would *mutually assure destruction* (MAD), an option everyone wants to avoid.
- P2** Military technologies do increase destructive capacity and *many* countries are equally capable of destroying every other (via nuclear weapons and missile-defense systems)
- P3** A scenario involving mutually assured destruction (MAD) makes us safer as it reduces conflict.
- C** Therefore, military technologies make us *safer*.

**A MAD Game**

In a group, consider what the likely outcome would be of the following game.

**Rule #1:** If country A attacks country B, **A destroys B** if and only if A’s military power is greater than (or equal to) B.

**Rule #2:** If country A attacks country B, **B destroys A** if and only if B’s military power is greater than (or equal to) B.

**Rule #3:** You have the choice of one and only one of the following: (1) *attacking*, (2) *passing (doing nothing)*, or (3) *increasing or decreasing your military power*.

**Rule #4:** On any given turn, you may increase your military power as much as you would like, but your country cannot exceed a military power of 100.

**Rule #5:** Play begins by *first* calculating any increase of military power, and *then* all decisions to strike are factored.

Country Name	Military Power (Max = 100)
Coalition States	50
Farfelu	40
Federated Peoples’ Republic	30
United Kingdom of Peace	20
Barclay Islands	10

**Result #1:** Country is destroyed (0 extra credit points)

**Result #2:** Preserve your country (1 extra credit point)

**Result #3:** Destroy another country while preserving your own country (2 extra credit points)

CDQ: Variant of the MAD Game

**O1:** P3 is false as MAD could simply lead to *total destruction*.

**Example 1 (False Threats):** Missile-defense systems can fail or malfunction as they did in the US between 1979-1980 (the US missile defense system malfunctioned five times).

**Example 2 (Terrorism):** Increased firepower available to countries might get into the wrong hands, e.g. biological weapons

**CDQ1:** Do some or all technologies make us safer? Which ones and why?

**CDQ2:** Assuming some technologies increase danger, are some dangers worth the risk? How do we go about deciding which technologies are worth the risk? What makes a technology worth the risk?