

Science and Imperialism

Presented by
Socialists of Caltech

Is America an empire?

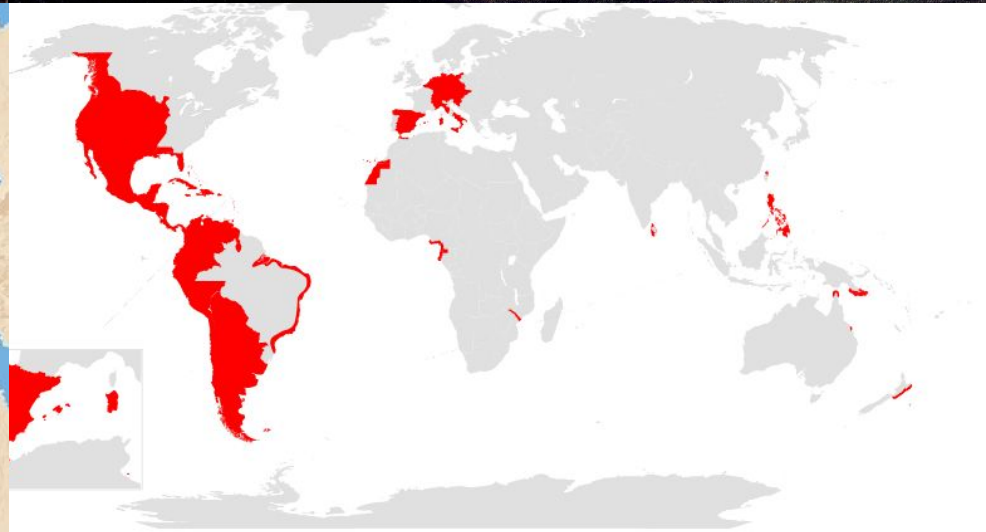
Empire: An empire is a political construct in which one state dominates over another.

Imperialism: the policy of imposing economic and political control over other peoples in a way that **undermines their sovereignty** and takes away their freedom to make political and economic decisions.

What are typical characteristics of an empire?

- Strong, centralized government/power
- Control over vast territory
- Strong military
- Global trade networks

What is an empire?

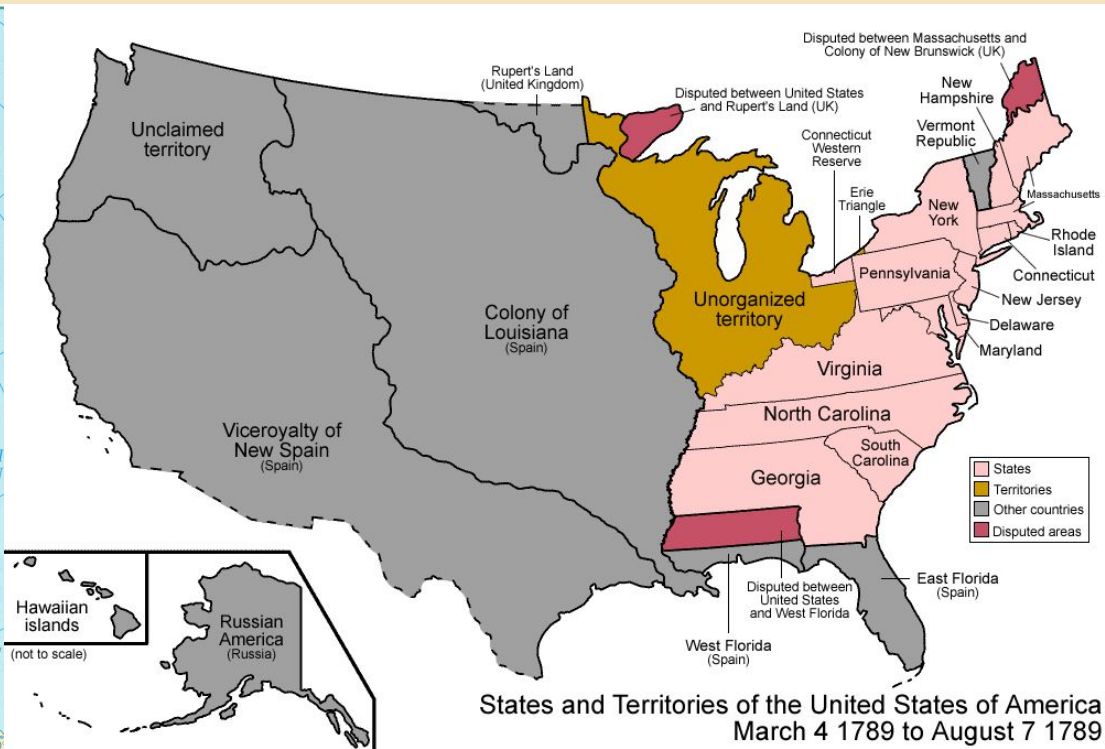


Roman Empire

Spanish Empire

USA is built on conquest and genocide

"We shall drive them [the savages] – We shall drive them with the beasts of the forests into the stony mountains," and the country will ultimately be "free of blot or mixture" -Thomas Jefferson



States and Territories of the United States of America
March 4 1789 to August 7 1789

The Spanish-American War



Cuban insurgents in 1899.

SPORTING SPECIAL. **NEW YORK JOURNAL** BASEBALL
 AN AMERICAN PAPER FOR THE AMERICAN PEOPLE.
 NO. 5622 P.M. NEW YORK, THURSDAY, MAY 16, 1898. PRICE ONE CENT

SPANISH SHIPS ON OUR COAST!

DIED IN FOLDS OF OLD GLORY!

Mysterious Warships Seen by Incoming Vessels May Be Privateers.

FIRST DEAD OF THE WAR.
 ENSIGN WORTH BAGLEY,
 OILER J. VAVARESE,
 FIREMAN J. DENESEE,
 COOK E. B. TUNNELL,
 FIREMAN G. B. WICK,
 The Wounded,
 Lieut. J. B. Bernadou,
 William Patterson,
 Daniel McGowan.

Bagley and His Men to Be Revenged by the Machias and Wilmington.



\$50,000 REWARD.—WHO DESTROYED THE MAINE?—\$50,000 REWARD.
 EDITION FOR GREATER NEW YORK.
NEW YORK JOURNAL
 AND ADVERTISER.

DESTRUCTION OF THE WAR SHIP MAINE WAS THE WORK OF AN ENEMY

\$50,000!
\$50,000 REWARD!
 For the Detection of the Perpetrator of the Maine Outrage!

Assistant Secretary Roosevelt Convinced the Explosion of the War Ship Was Not an Accident.

\$50,000!
\$50,000 REWARD!
 For the Detection of the Perpetrator of the Maine Outrage!

The Journal Offers \$50,000 Reward for the Conviction of the Criminals Who Sent 258 American Sailors to Their Death. Naval Officers Unanimous That the Ship Was Destroyed on Purpose.

CUBA

****U.S. Occupation, 1898-1902, 1906-1909, 1912, 1917-1922;**
****Platt Amendment in effect 1901-1934;**
****U.S. lease of naval base at *Guantanamo Bay* begins**

HAITI

****U.S. control over customs collection, 1915;**
****U.S. occupation, 1915-1934.**

DOMINICAN REPUBLIC

****U.S. control over customs collection, 1905;**
****U.S. occupation, 1916-1924.**

PUERTO RICO

****U.S. acquisition from Spain, 1898;**

MEXICO

****U.S. intervention in Tampico and Veracruz, 1914;**
****General Pershing's expedition, 1915-1917.**

NICARAGUA

****U.S. control over customs collection, 1911;**
****U.S. occupation, 1909-1910; 1912-1925; 1927-1935.**

PANAMA

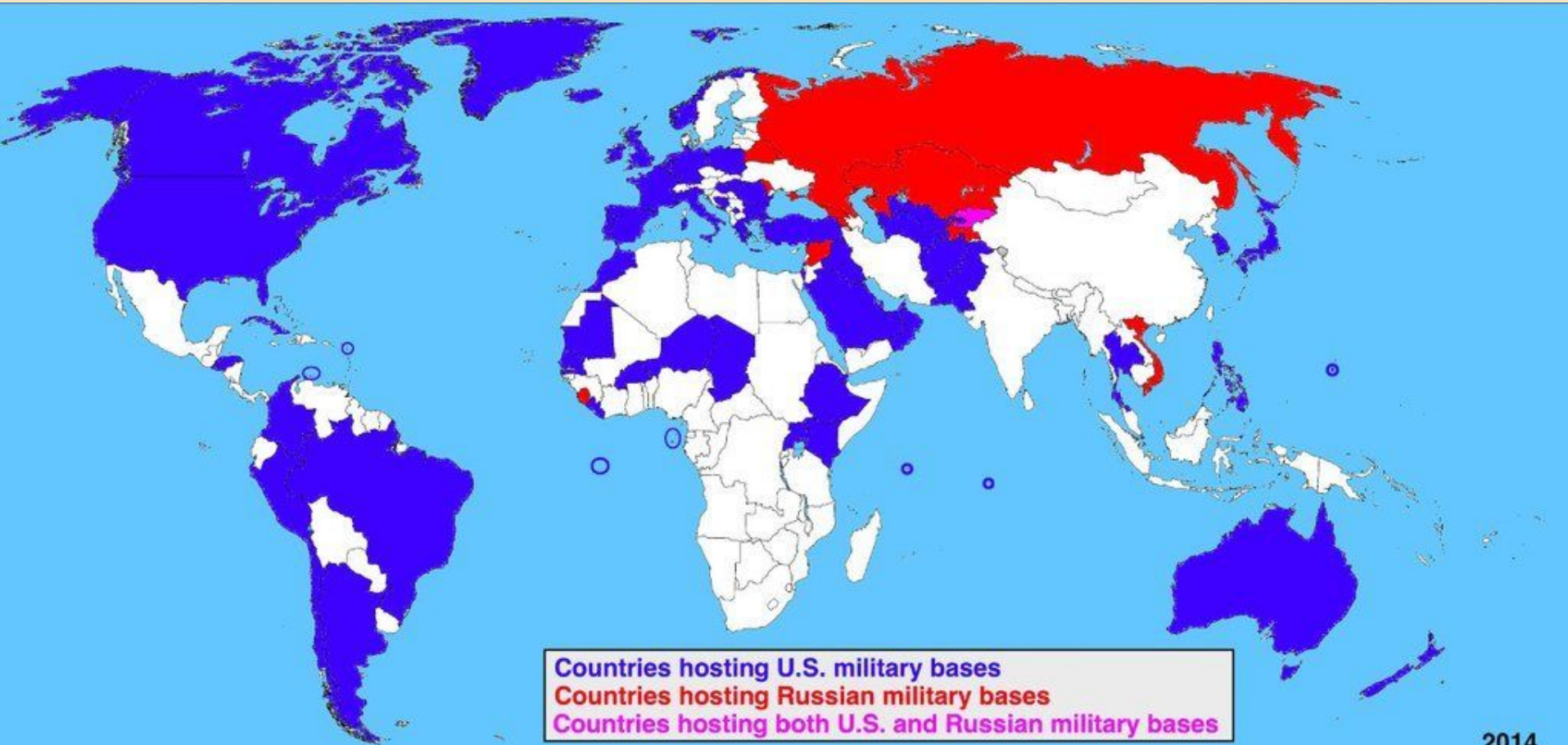
****U.S. support of Panamanian revolt and recognition of new government, 1903;**
****Hay-Bunau-Varilla Treaty (Panama Canal Zone), 1903;**

****U.S. settlement of boundary dispute between Venezuela and British Guiana, 1895-1896.**

U.S. Activities in Latin America and The Caribbean, 1895-1930's



American military presence around the World





Map 2:

US Military and CIA Interventions since World War II

■ targeted countries
  US bombings
  US government assassination plots

Source: William Blum, *Killing Hope: U.S. Military and CIA Intervention Since World War II*, 2004 and *Rogue State*, 2005. (<http://www.killinghope.org/>)

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US intervention in Iraq over the past 50 years



April 9, 2003, Firdos Square

55-year history that spans 11 presidencies

- **1958** - Iraq ruled by British-backed King Faisal, 30 million tons of oil a year, wealth was concentrated and served British interests
- **1958** - Revolution led by Abd al-Karim Qasim overthrows monarchy

US intervention in Iraq over the past 50 years



- **1963** - Violent coup led by Saddam Hussein's party. Qasim executed
- **1979** - Iranian Revolution
- **1983** - USA sends envoy to solidify relationship with Saddam Hussein



Attack helicopters sold by the USA, used in the Iraq-Iran War against Iran



Rumsfeld (future Sec. Def.) delivering gift to Saddam Hussein, 1983

US intervention in Iraq over the past 50 years

— 1990- Invasion of Kuwait → Gulf War

— 1992 - Economic Sanctions led by US through the UN and Bombing



Journalist: *"We have heard that half a million children have died. I mean, that's more children than died in Hiroshima. And, you know, is the price worth it?"*

Madeleine Albright: *"I think this is a very hard choice, but the price—we think the price is worth it."*

US intervention in Iraq over the past 50 years



Bill Kristol

John Bolton



Paul
Wolfowitz

Dick Cheney

Iraq Liberation Act

— **1998** - Iraq Liberation Act declares regime change for Iraq as the official US policy

— **2002** - Push to launch war



Robert Mueller, 2002



— **2003** - War



Bombing of Baghdad, 2003

Narratives change based on convenience

10 / INTERNATIONAL

THE INDEPENDENT

FRIDAY 4 DECEMBER 1993

The Saudi businessman who recruited mujahedin now uses them for large-scale building projects in Sudan. Robert Fisk met him in Almaty

Anti-Soviet warrior puts his army on the road to peace

OSAMA Bin Laden set his gold-plated rifle, guarded by the local Arab militia who fought along side him in Afghanistan, against a wall in Almaty — a roomy, two-story apartment — a few yards from the man who recruited them, raised them and then dispatched them to distant the front lines — they worked on building the Islamic villages of Almaty, and he is always to complete the high-rise building that he has in Khartoum for the first time in Sudan.

With his high cheekbones, sunken eyes and long brown beard, Mr Bin Laden looks every inch the mountain warrior of mujahedin legend. Children's pictures adorned the walls, and he was busy waving for the first time through all the windows of his house. "I think said, "We would want to be given up on everybody — and then Osama Bin Laden came along."

Osama Bin Laden, Mr Bin Laden is not reported with quite such high esteem. The Nigerian press claims he brought hundreds of former Arab fighters back to Sudan from Afghanistan, while the Western media seemed to characterize his suggestion that some of the "Afghans" whom the Saudi entrepreneur flew to Sudan are now busy training for further jihad wars in Algeria, Tunisia and Egypt. Mr Bin Laden is well aware of this. "The politics of the media and the confusion," he calls it. "I am a construction engineer and an agriculturalist. I had nothing to do with jihad in Sudan. I couldn't possibly do this job."

And "this job" is certainly an ambitious one: a brand-new highway stretching all the way from Khartoum to Port Sudan, a distance of 1,200 miles (745 miles on the old road, now abandoned) to link by the new Bin Laden route that will turn the coastal road from the capital into a

short cut's journey. Into a journey that is inspired by Saudi Arabia for its support of Islamic Shariah in the Gulf was chosen as much as it is encouraged by the United States. Mr Bin Laden has brought the very same mujahedin experience that he used only two years ago to build the guerrilla state of Afghanistan.

He is a shy man. Maintaining a house in Khartoum and only a small apartment in his home city of Jeddah, he is married — with five wives — but wary of the press. His conversation with the journalist was the first he has ever given to a Western journalist, and he initially refused to talk about Afghanistan, citing privacy as a chief of the back of a makeshift tent, branding his work in the Arab Sudan with a stick of smoked wood. But he is eventually did about a war which he

Laden was leading Arab fighters — Egyptians, Algerians, Lebanese, Chechens, Turks and Indonesians — into Afghanistan. "I recruited them but eventually," he said. He reported them with surprise and his own conviction: "I brought them along with his long, elegant, Mohamed Said — who is now building the Port Sudan road — the Bin Laden house, which is visible into the East mountains of his home province for guerrilla, hospitals and some shops, there are a multitude still across the country in which it was of Kabul.

"No, I was never afraid of death as a mujahid, or before that when we did, we go to heaven. Before a battle, God with us, again, again."

"That I am only 10 miles from the Russians and they were trying the general movement as I returned to my construction in Jeddah and Jeddah. I brought back the mujahedin I had used to build the roads and roads for the mountains of Afghanistan. Yes, I helped some of my cooperation to come here to Sudan after the war."


How many? Osama Bin Laden shakes his head. "I don't want to say. But they are here now with me, they are working right here, building this road to Port Sudan." I said that the Bin Laden Islamic fighters in the Sudan were in 1,200 miles had penetrated his name to me. "I had the same about Russia," he said. "But the situation there that we provide the same experience as Afghanistan. A small number of mujahedin have gone to fight in Bosnia-Herzegovina but the U.S. army won't allow the mujahedin to go through Croatia to the Balkans, and with Afghanistan."

That did Mr Bin Laden refuse again, other while he himself refused comment on that. "Was it not a little bit of involvement for them, I asked, to fight the Russians and end up building in Sudan? "There are the work and so do I. This is a great job which we are working for the people here, it helps the Muslims and improves their lives."

Bin Laden's company — one is not confused with the large construction business run by his cousin — is paid in Sudanese currency which is then used to purchase services and other products for export; profits are clearly not Mr Bin Laden's top priority.

How did he feel about Algeria, I asked? But a man in a green suit calling himself Mohamed Mohamed — he claimed to be Nigerian although he was a Sudanese security officer — stepped in on the arm. "You have asked more than enough questions," he said. As Mr Bin Laden went off to inspect his new road.

Osama Bin Laden surveys the 500km road he is building in northern Sudan



Direct military intervention is only one tactic of imperialism

Sending “aid” money



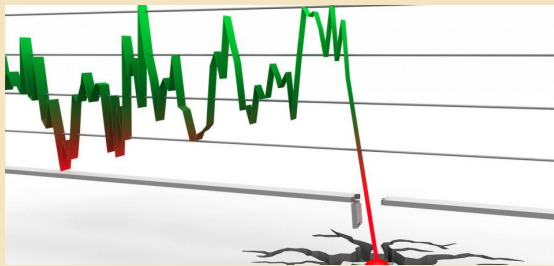
Aid for Haiti post earthquake to undermine local projects



“While humanitarian aid is distributed on the basis of need alone, transition assistance is allocated with an eye to advancing U.S. foreign policy objectives and priorities.”

Control international trade and lending

Debt crisis from int'l recession that one country has no control over



...with conditions that developing countries cannot refuse:

Structural Adjustment Program (SAP)



- Privatization of various sectors of the economy



- Opening markets to foreign investors
- Relaxing environmental regulations



IMF offers loans...

Who benefits?

- Mostly large (esp. monopoly) corporations
 - Multinationals that reap “superprofits” from foreign investments
 - Large banks and financial institutions
 - Arms manufacturers, military contractors
- US economy as a whole

ExxonMobil



Raytheon



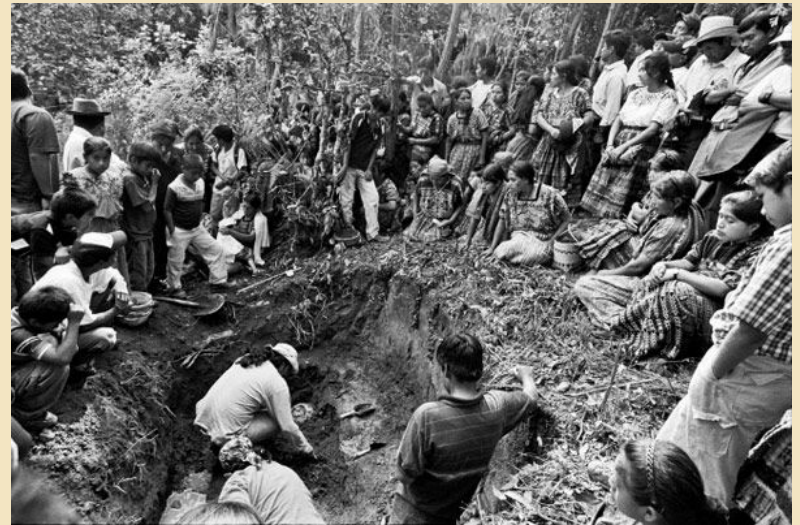
Corporate-backed regime change

- Iran, 1953: Prime Minister Mossadegh elected to nationalize Anglo-Iranian Oil Company
- Overthrown in CIA- and MI6-backed coup after doing so



Corporate-backed regime change (cont.)

- Guatemala, 1954: CIA backed coup against elected president Jacobo Arbenz whose land reforms threatened United Fruit Company profits
- Maya genocide under resulting military dictatorship



Corporate-backed regime change (cont.)

- Venezuela, 2002: US-backed attempted to depose Hugo Chávez, elected to nationalize oil industry
- Another attempt currently ongoing!



Pence Pledged U.S. Backing Before Venezuela Opposition Leader's Move

Trump administration's secret plan offering support for opposition leader Juan Guaidó was preconceived and tightly coordinated

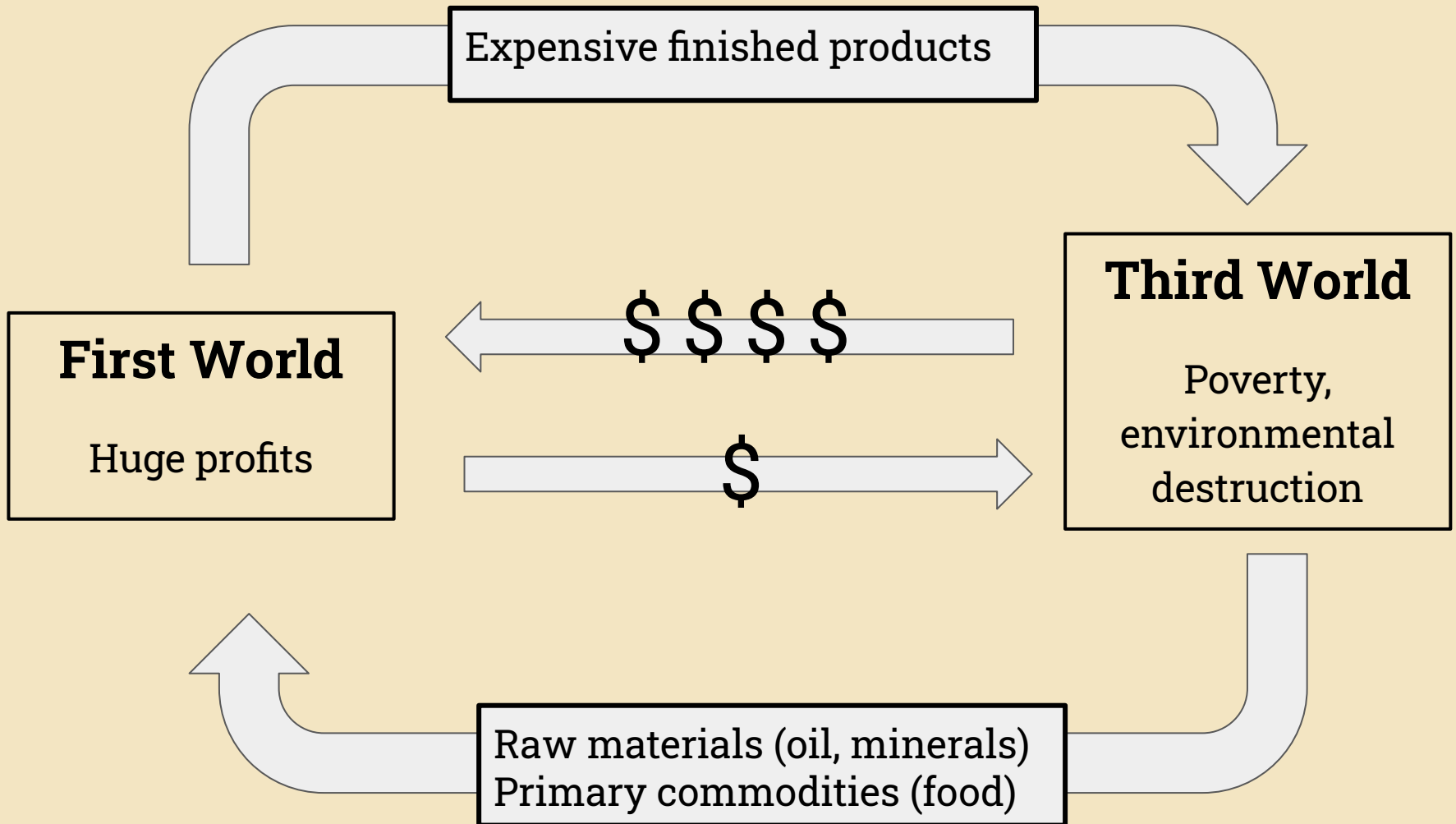


Why so lucrative?

- Global division of labor: much cheaper in Third World than First World
- **Requires** abject poverty and exploitation of workers in “developing” (really *underdeveloped*) world

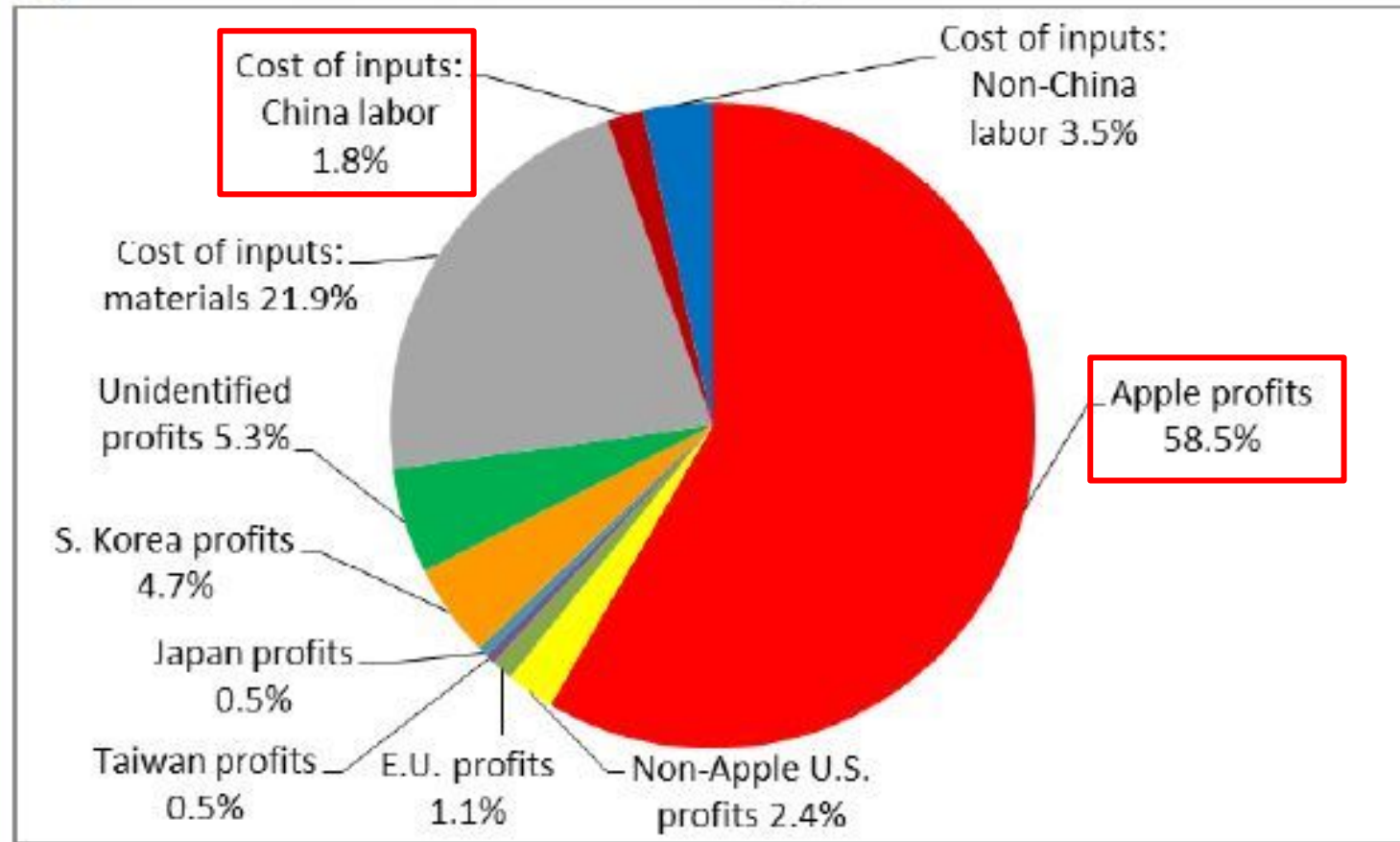


Imperialist “superprofits”



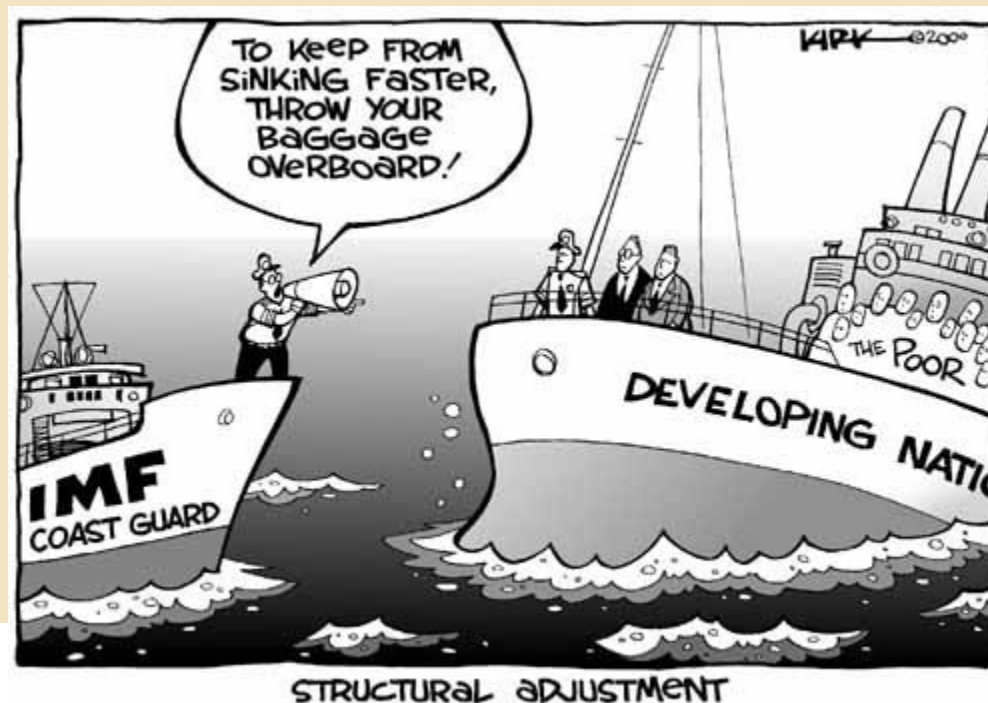
Example: iPhone value chain

Figure 1. Distribution of value for iPhone, 2010



How is this enforced?

- Global finance: Wall St banks, World Bank, IMF
- Unequal trade agreements like NAFTA and TPP
- Ultimately backed up by threat of military force



Who profits from imperialist war?

“With the scorched-earth campaign against Korea from 1950 to 1953 ...

weapons manufacturers determined that making products for the Defense Department was more profitable than entering civilian markets.”

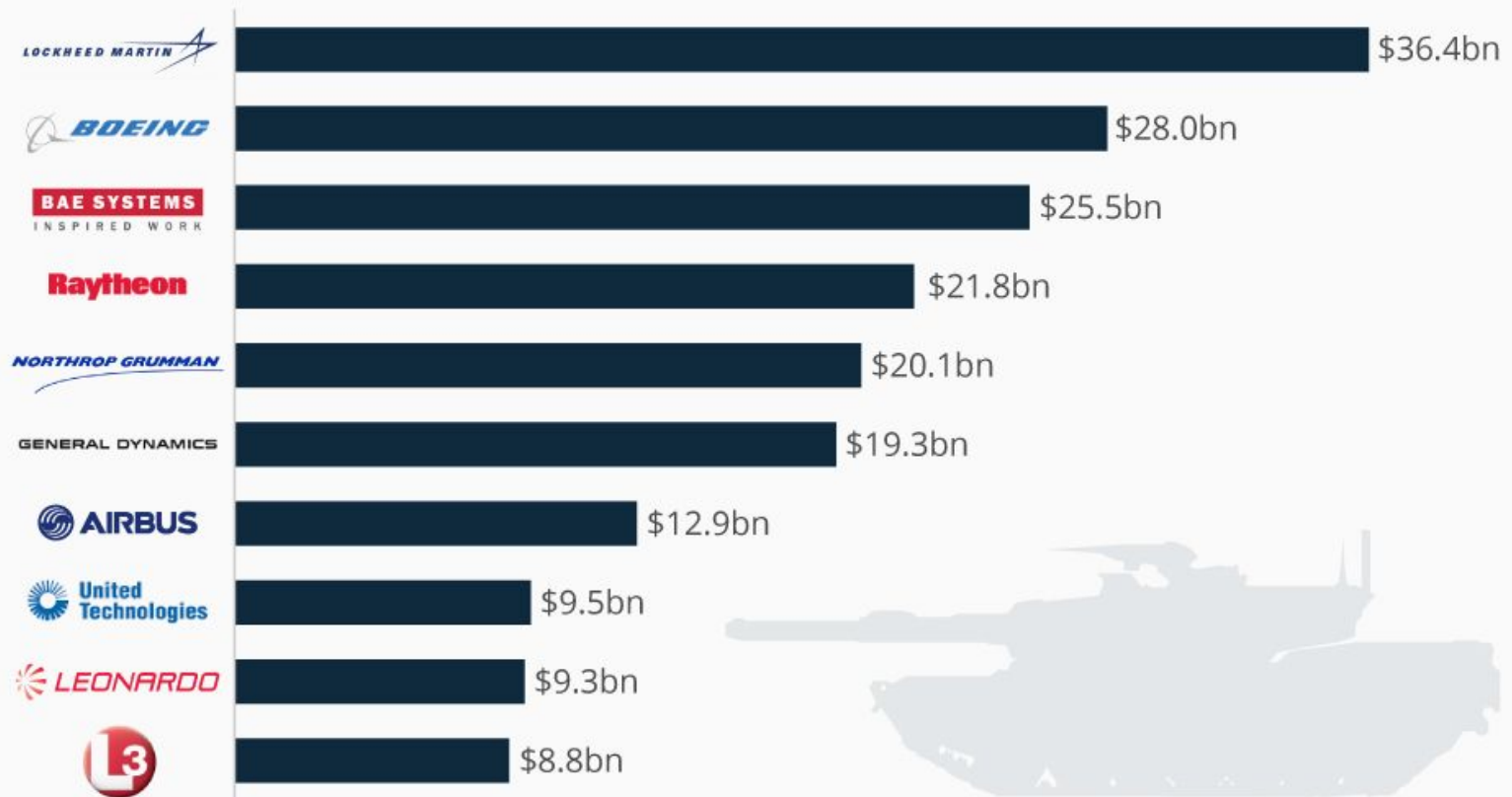
- Patrick Higgins



US dominates global arms sales

U.S. Companies Dominate The Global Arms Trade

Top arms-producing and military services companies in 2015*

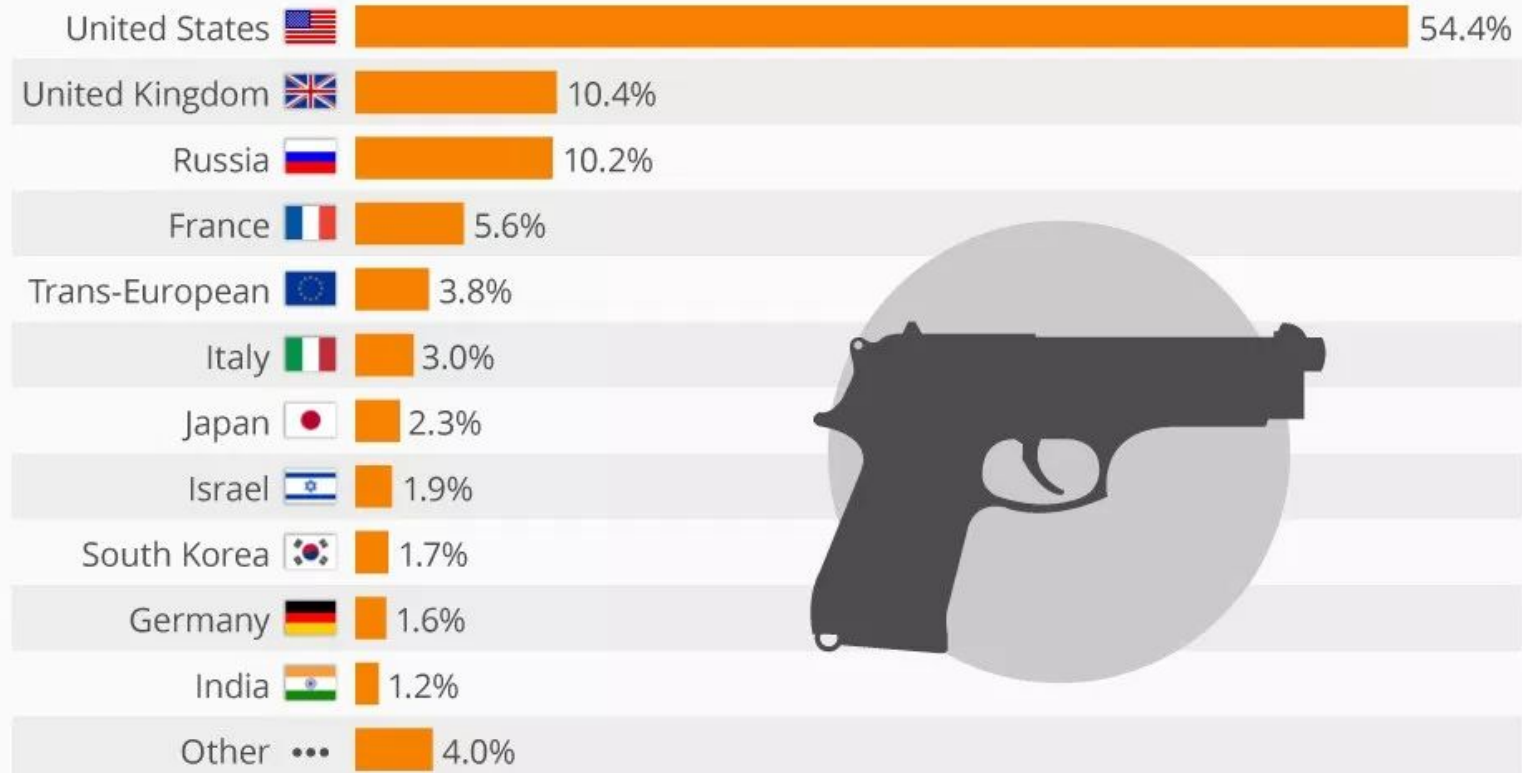


@StatistaCharts Source: Sipri

US dominates global arms sales

The West Dominates Global Arms Sales

Global share of arms sales of companies by country in 2014



@StatistaCharts Source: SIPRI

Private military contractors

War destroys previously existing, often socialized infrastructure

Must be rebuilt to get production up and running again ... at a profit!

Examples: Halliburton, Bechtel in Iraq

Top 10 U.S. Contractors in Iraq and Afghanistan



Note: Numbers rounded to nearest million.

Source: Based on contracting data obtained from the Pentagon, USAID and other sources.

What about everyone else?

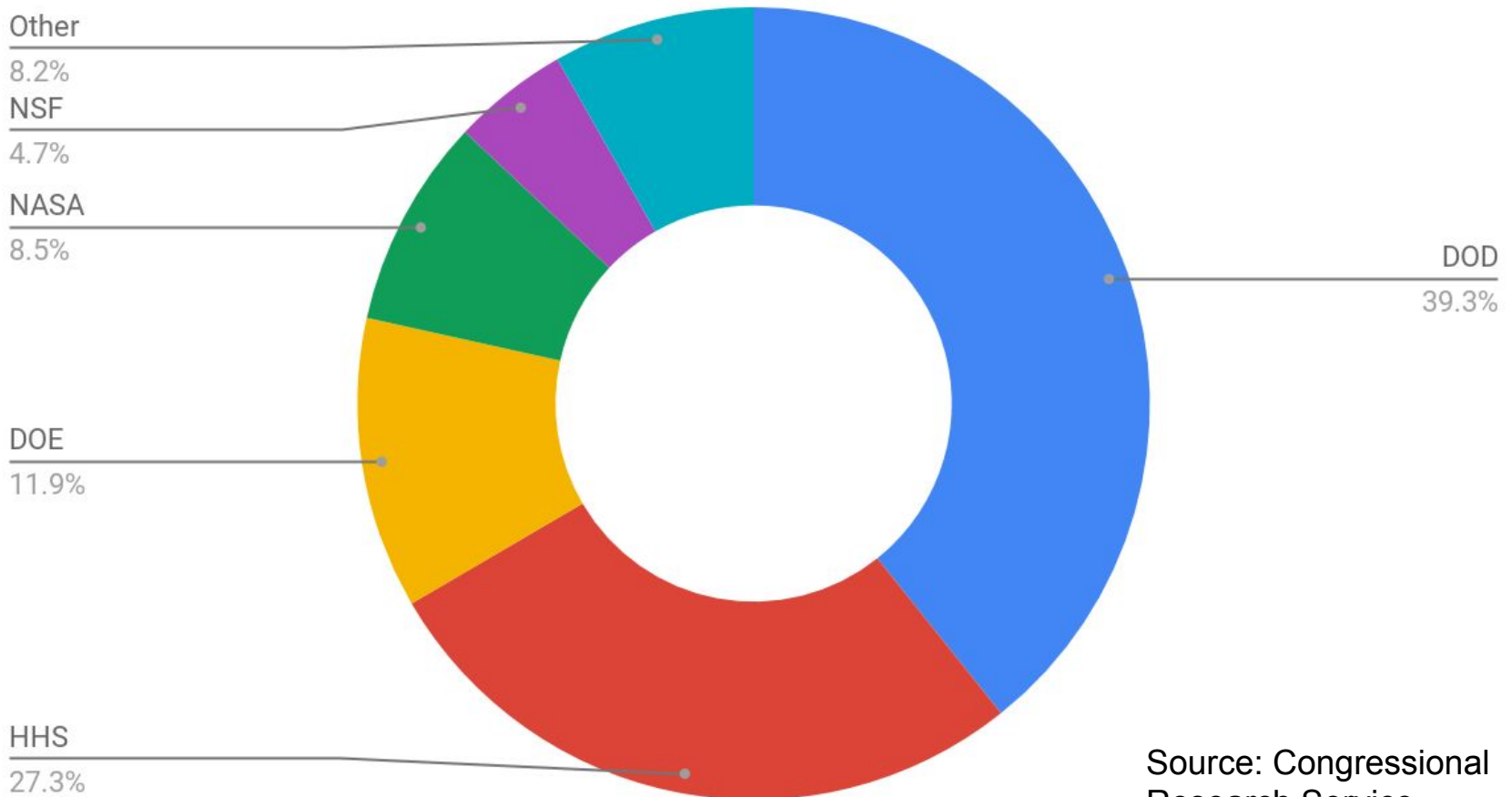
- Vast majority of the appropriated wealth stays in the hands of a few
- Some of it passes on to workers via wages and social spending: just enough to keep most complacent and pro-empire
- **“The Empire, as I have always said, is a bread and butter question. If you want to avoid civil war, you must become imperialists.” - Cecil Rhodes**

How does empire shape science?

- I. How is science funded?
- II. What fields and goals are prioritized? What questions are asked?
- III. How is the international scientific community impacted?
- IV. How do scientists directly take part in imperialism?

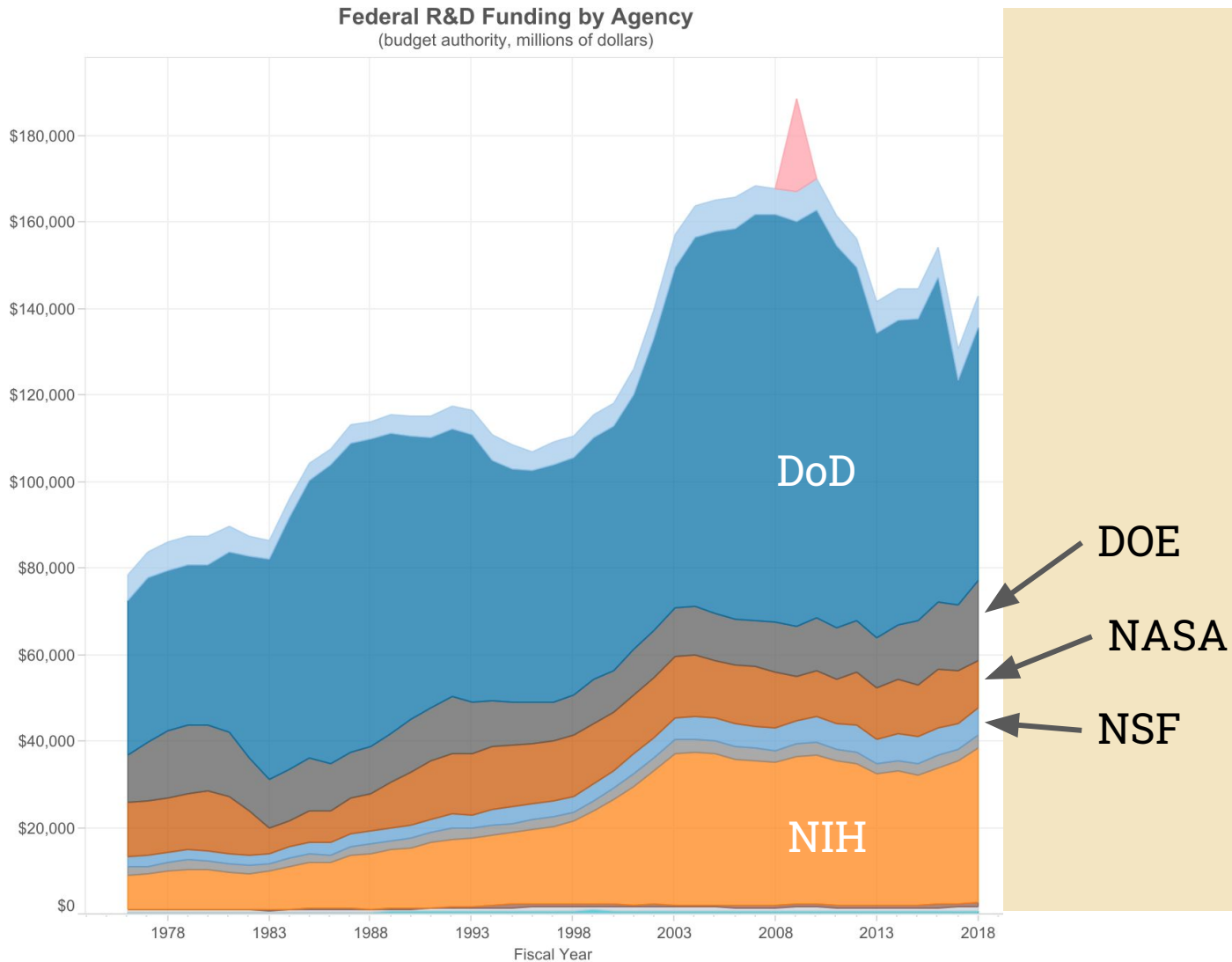
Empire requires scientific funding

Federal Research and Development Funding by Agency, FY2017



Source: Congressional Research Service

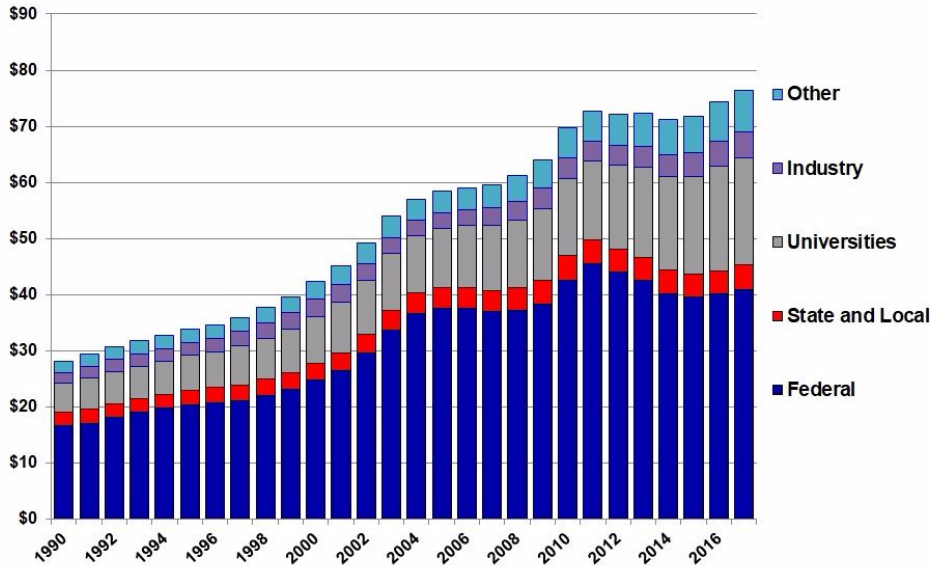
Empire requires scientific funding



Empire requires scientific funding

University R&D Funding by Source

expenditures in billions, FY 2018 dollars



Source: NSF, National Center for Science and Engineering Statistics, *Higher Education R&D* series, based on national survey data. Includes Recovery Act funding. © 2018 AAAS

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Source: Caltech

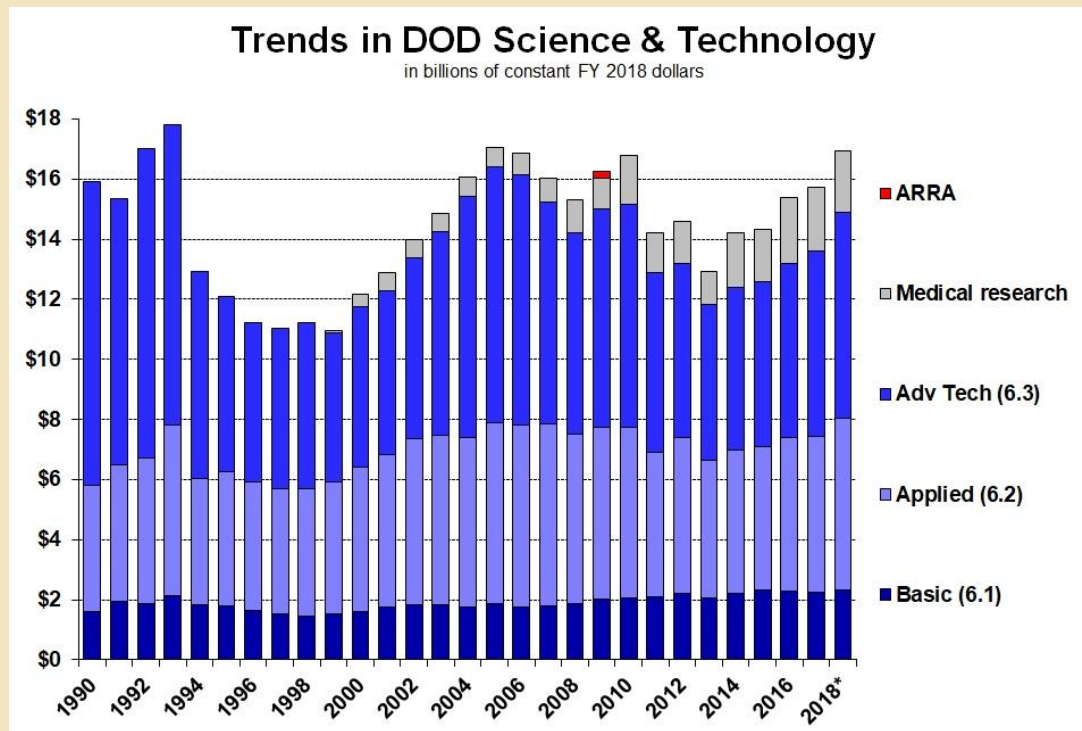
Funding leads to influence

- Science must demonstrate its usefulness to US empire

“Discuss the mission impact to the Service, DoD, and the warfighter.”

Funding leads to influence

- Science that fulfills the needs of empire is prioritized. Other science receives less support.



*Note: FY 2018 figures are omnibus-enacted appropriations.

Source: AAAS analyses of DOD budget documentation, and appropriations bills and reports. Medical Research is appropriated outside RDT&E funding title; appropriated as applied research pre-1999. © 2018 AAAS

Science as a weapon

- The withholding of information, collaboration, and other resources is used as a weapon against those who pose a threat to US domination.

US scientists boycott Nasa conference over China ban

Nasa facing backlash from US researchers due to rejection of Chinese nationals from conference



▲ A law passed in March prohibits anyone from China from setting foot in a Nasa building. Photograph: Pablo Martinez Monsivais/AP

Source: The Guardian

Sec. 539. <<NOTE: China.>> (a) None of the funds made available by this Act may be used for the National Aeronautics and Space Administration (NASA) or the Office of Science and Technology Policy (OSTP) to develop, design, plan, promulgate, implement, or execute a bilateral policy, program, order, or contract of any kind to participate, collaborate, or coordinate bilaterally in any way with China or any Chinese-owned company unless such activities are specifically authorized by a law enacted after the date of enactment of this Act.

From the “CONSOLIDATED AND FURTHER CONTINUING APPROPRIATIONS ACT, 2012”

Science as a weapon

- Due to sanctions and draconian immigration policy, it is increasingly difficult for Iranian citizens to participate in the scientific community.

UMass Amherst Tells Iranian Students They Need Not Apply To Certain Programs

Source: Huffington Post

Iranian students blocked from UK Stem courses due to US sanctions

US-owned education firm Kaplan says residents of Iran cannot study science, technology, engineering and maths in Britain

Source: The Guardian

Scientists take part directly

“Making smart investments in autonomy is an imperative for the aerospace and defense industry,’ said Dr. Taylor W. Lawrence, a Raytheon Company vice president and president of its Missile Systems business.”

Source: Raytheon

RAYTHEON SPONSORS FUTURISTIC RESEARCH CENTER NEW CALTECH LAB WILL BUILD NEXT-GEN AUTONOMOUS SYSTEMS



The California Institute of Technology has opened the Center for Autonomous Systems and Technology in Pasadena, California. Raytheon is lead sponsor the new center that will advance research on drones, robots and machine learning.

Scientists take part directly



Scientists take part directly



Science and technology enable US Imperialism

AIDED BY PALANTIR, THE LAPD USES PREDICTIVE POLICING TO MONITOR SPECIFIC PEOPLE AND NEIGHBORHOODS

Raytheon's profits boom alongside civilian deaths in Yemen

Company's stock soars as bystanders are killed by Raytheon rockets



U.S. Immigration and Customs Enforcement

Google Is Helping the Pentagon Build AI for Drones

Amazon Teams Up With Government to Deploy Dangerous New Facial Recognition Technology



Microsoft Employees Question C.E.O. Over Company's Contract With ICE

Science and technology enable US imperialism

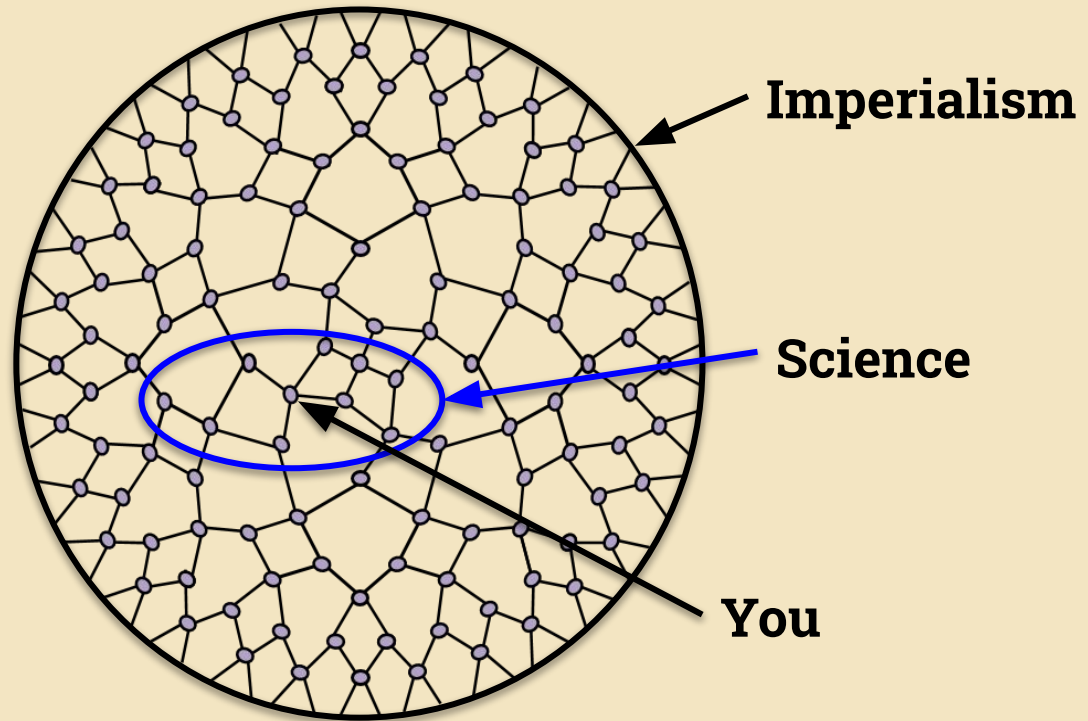
The first step: interrogating our role

- Now that we have a better understanding of the larger system, it's helpful to see how we fit into it as individuals.
- We should continue to be critical of our actions and take some time to think about how they might contribute to US imperialism.

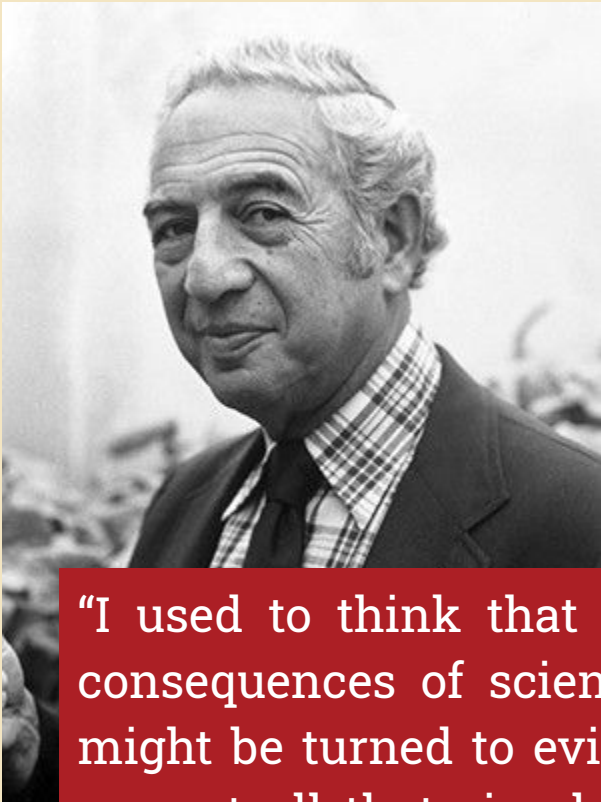


Scientists are Entangled in Imperialism

It's practically impossible to not be complicit in this system, especially at a place like Caltech. Nonetheless, we are not powerless.



Empire takes advantage of indifference



- This guy is **Arthur Galston**
- Worked at Caltech!
- Researched triiodobenzoic acid to encourage soybean flowering
- Biowarfare scientists used his work to develop Agent Orange

“I used to think that one could avoid involvement in the antisocial consequences of science simply by not working on any project that might be turned to evil or destructive ends. I have learned that things are not all that simple, and that almost any scientific finding can be perverted or twisted under appropriate societal pressures.”

Individualism is insufficient

- Of course you should practice what you preach...
- But don't miss the root cause of the problem
- Systemic problems require systemic solutions



There is power in collective action

If there is something you want, you must identify and obtain the power necessary to achieve it



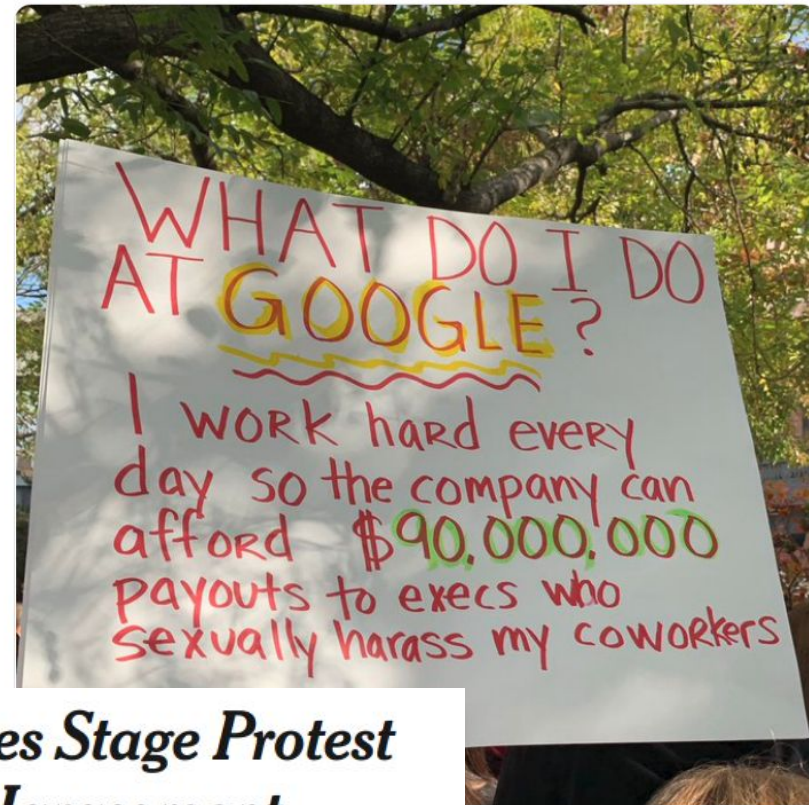
Google Walkout: Employees Stage Protest Over Handling of Sexual Harassment



Briana Wallace
@BrianaWallace

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Time is up @googlewalkout #GoogleWalkout



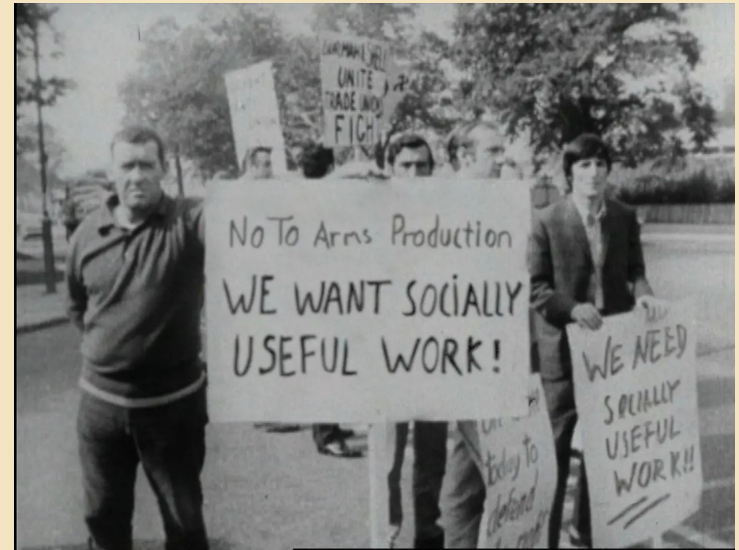
Stopping Sentinel



- In the late 1960s, the US proposed a ballistic missile defense system known as Sentinel.
- Many scientists around the US protested with various position papers as well as a one day strike.
- The activities of the scientists generated public outcry, leading to the eventual rejection of the proposal.

The Lucas Plan

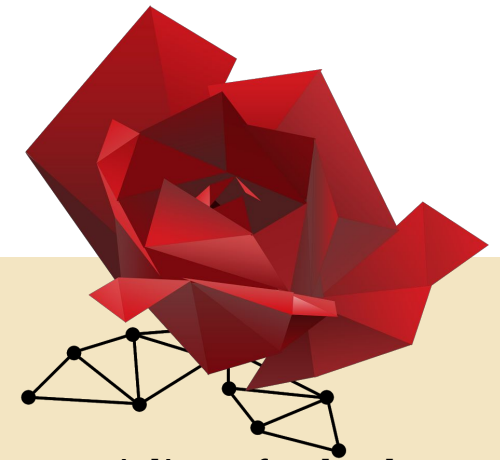
- Most workers about to be laid off. Originally 50% of company contracts were for military
- Consulted among themselves
- Drafted alternative plan for their skills and labor: “wind turbines, energy-efficient heat pumps and hybrid power packs for cars” in 1970s!!



“Technology is political, yet its design is ultimately in the hands of capitalist firms. The Lucas Plan shows that workers... have the skills and resources to design alternative technologies to those proposed by shareholders and management.”

Our responsibility

- Recognizing our role and social prestige
- Science is a social endeavor and is subject to social (imperial) forces
- We have a responsibility to organize our work
- **A better science is possible but we must work for it.**



Socialists of Caltech



TECH WORKERS COALITION

