

ENGR 399

- **Open the in-class quiz now**... today, quiz questions will be distributed throughout the lecture. Quiz access code = april
- Next week:
 - No class on Tuesday
 - Guest Lecture on Thursday
 - Mandatory attendance ("quiz" will just be attendance check")
 - You CANNOT have your laptop open (out of respect to the external speaker)
- In two weeks... last week of the semester!
 - Option A: Tues is the final exam... 50 multiple choice questions
 - Questions given a few days in advance (but not answer choices)
 - Option B: Wed is the ELSI Think Tank and poster presentation

Asynchronous Assignment 10 is the "Engineering Walking Tour of Lakeview Cemetery". Similar to the art museum assignment, you will document with pictures of yourself in front of each monument and answer a question about each person.

1. Lakeview Cemetery is one of the most beautiful places in Cleveland, and they encourage visitors. Their website says "**We welcome you to explore our 285 breathtaking acres of natural vistas, horticultural gems, and historical landmarks**". I confirmed with the cemetery that this assignment is ok with them. If you have concerns about this assignment, please come talk to me in my office hours.
2. If you have accessibility issues that would make this assignment difficult by walking, please contact me. I am making arrangements for a driver who will be able to assist.
3. The assignment deadline differs for different students. The deadlines are staggered from Monday Apr 21 to Sunday Apr 28. The staggered deadlines are so we don't have a huge crowd in the cemetery right before a class-wide deadline. Everyone has at least two weeks for this assignment. I HIGHLY suggest not leaving this to the last day, as you don't know what the weather will be like that day! Take advantage of a nice day!

4. The starting point for the tour is the Mayfield Road entrance to Lakeview Cemetery, located about a 20-minute walk up Mayfield Road from Euclid Ave. Once you reach the cemetery entrance, the walking tour will take 60-90 minutes to complete. In total, the round-trip from campus will take approximately 2 hours, but would be best to budget 2.5 hours just to be sure. Note also that the Blue Link Shuttle has a stop at the Lakeview Cemetery entrance.

5. VERY IMPORTANT: Be sure to follow the rules of the cemetery, given in the Visitor Guidelines. Some key points are:

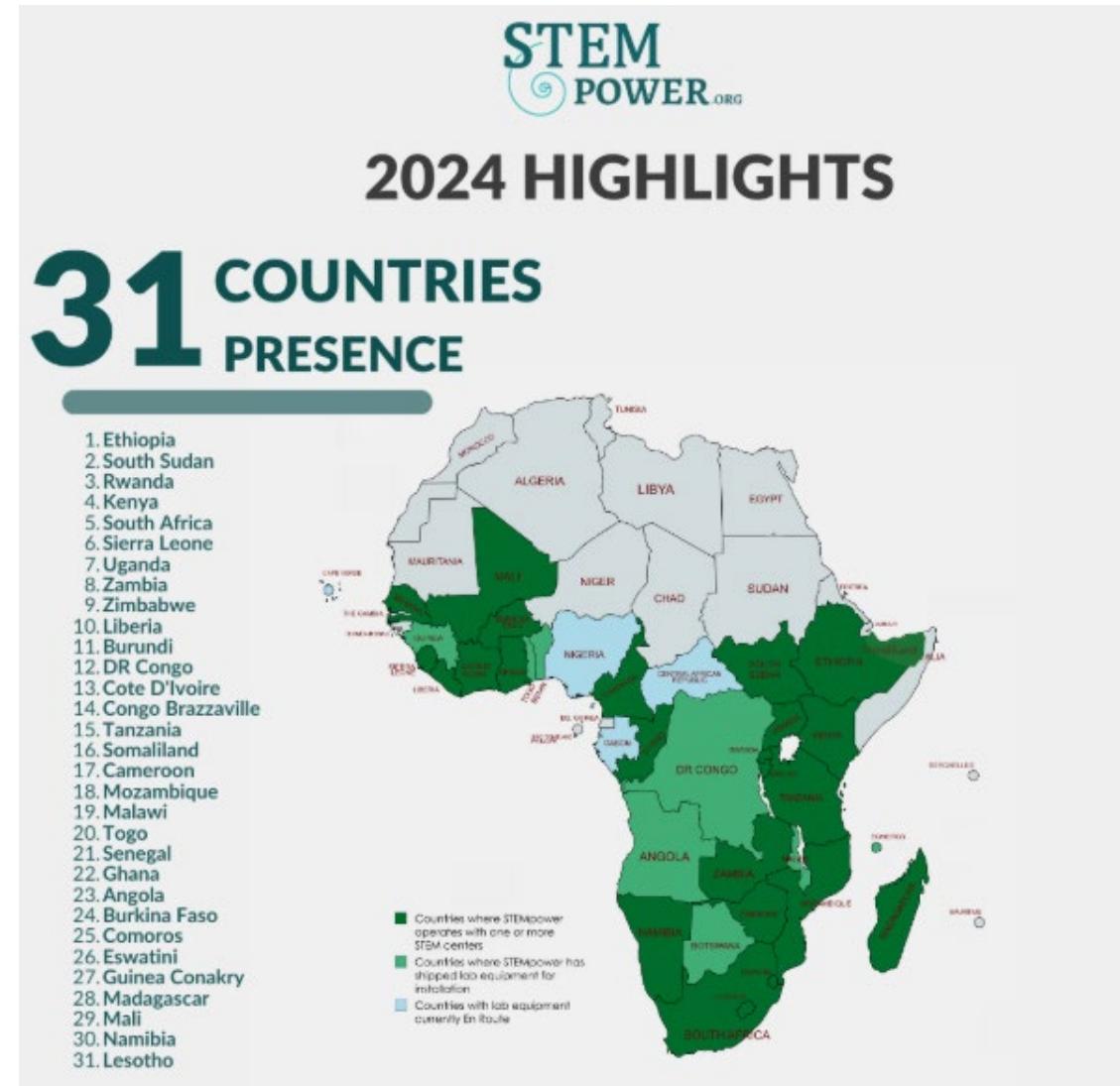
- Bicycles, motorcycles, scooters, skateboards, etc. **must be parked or walked while on the Cemetery grounds.** Bike racks are located at each entrance.
- Make sure to verify the cemetery's hours of operation. The gates are locked at night, so please allow yourself ample time to exit before they close.
- If you encounter landscapers, mourners, or a funeral procession, please be considerate and maintain a respectful distance.
- Remember, this is a cemetery, and it is important to be respectful during your visit.

6. I made a google map you can use on your phone to guide you on the tour. Also, I created a document with pictures of the monuments to help you find them.

This lecture... what we will cover

1. What is the ethical way to determine wages for work in foreign countries?
2. What are monopolies, and what antitrust lawsuits are ongoing now?
3. Standardization of technology... is this a justification for a monopoly?
4. Economy of scale... is this a justification for a monopoly?
5. AI in education... is best place not in doing assignments, but in grading them?

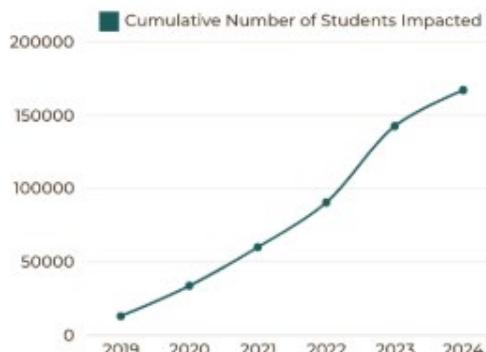
I am on the Board of Directors of STEMpower, an NGO that enables hands-on STEM activities for students in sub-Saharan Africa



1. Ethiopia
2. South Sudan
3. Rwanda
4. Kenya
5. South Africa
6. Sierra Leone
7. Uganda
8. Zambia
9. Zimbabwe
10. Liberia
11. Burundi
12. DR Congo
13. Côte D'Ivoire
14. Congo Brazzaville
15. Tanzania
16. Somaliland
17. Cameroon
18. Mozambique
19. Malawi
20. Togo
21. Senegal
22. Ghana
23. Angola
24. Burkina Faso
25. Comoros
26. Eswatini
27. Guinea Conakry
28. Madagascar
29. Mali
30. Namibia
31. Lesotho

Sub-Saharan Africa
2019-2024**Cumulative Impact: Total Students Reached Across Primary, High School, and University****167K+**

80% ↑ 2024

**CEO Letter**

STEMpower Inc. has had a transformative year in 2024, reaching new milestones, expanding its horizons, and empowering the African youth. The organization's unique outreach programs have made a significant impact across Africa, particularly in hands-on STEM education, inspiring young minds and fostering a love for STEM in communities worldwide. This year, STEMpower installed 10 new countries and set the ground for installation for almost the same number in the first quarter of 2025. A total of 21 STEM centers, was installed.

The year also saw strategic partnerships and grants, with grants from the Embassy of Finland in Addis Ababa, Australia Embassy Addis Ababa, New Zealand Embassy Addis Ababa, American Embassy Kigali, and American Embassy Yaoundé. Other grants, such as the SMARTAID grant and the Edukans grants, opened new avenues for STEMpower, which aimed to empower refugees with essential digital skills in South Sudan and Ethiopia respectively.

As we look forward to the new year, we are filled with optimism and excitement for what lies ahead. We will continue to build on our successes, embrace new challenges, and strive for excellence in all that we do. Our vision for the future is bright, and we are confident that together, we will achieve even greater heights. To our partners and collaborators, thank you for the unwavering commitment and being an integral part of the STEMpower family.

A portrait of Edwin Kumfa, CEO of STEMpower Inc. He is a Black man with a beard and glasses, wearing a white shirt and a dark vest with intricate gold embroidery. He is smiling and gesturing with his hands. The background is a brick wall.

Edwin Kumfa
CEO, STEMpower Inc

www.stempower.org

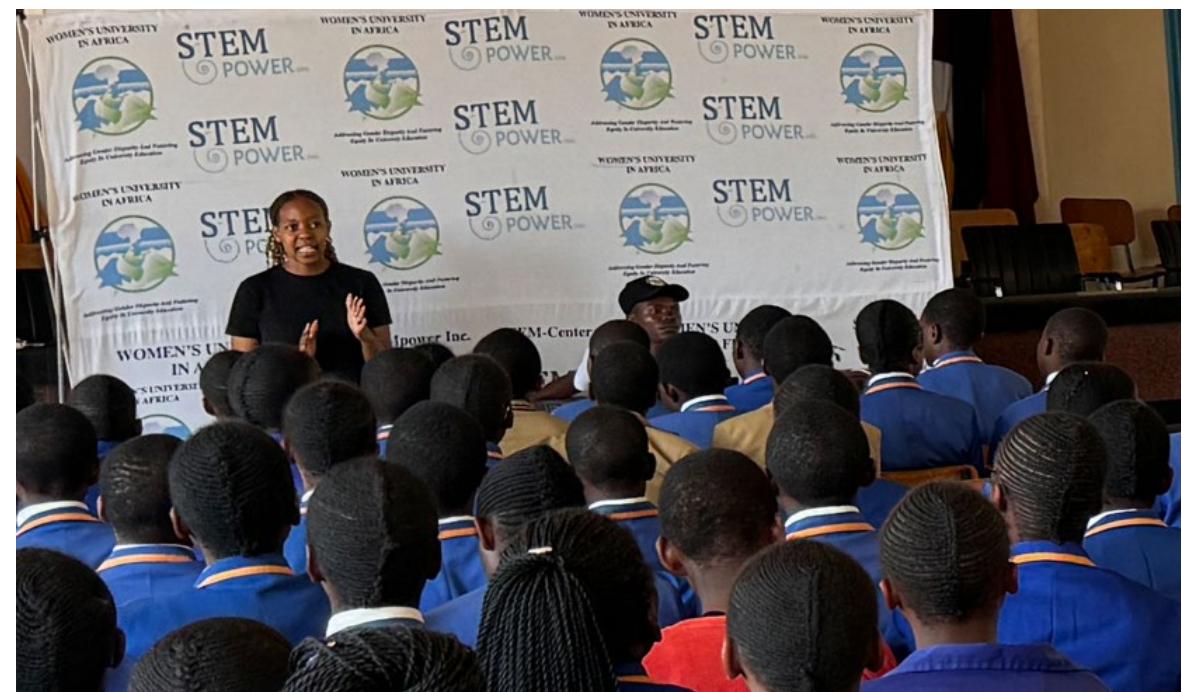
My CWRU graduate students collaborate on the project with colleagues in their home countries



Zemene from Ethiopia



Tabitha from South Sudan



Ruvarashe from Zimbabwe

INVOICE

Date: August 30, 2022

Payment to:

STEMpower, Inc.
Addis Ababa, Ethiopia

Project Title:

Integrating Chemical Microfactory Labs into the Chemistry and Physics Courses at
Delo Mena High School (Ethiopia)

Project Description:

As part of the Gelfand Global STEMpower Initiative, Chemical Microfactory labs were developed at CWRU. The labs focus on the transformation of natural resources into higher value products. These value-added fulfill specific societal needs and are what lead creation and prosperity; and, on the other hand principles of chemistry and physics and biology such as biodiesel fuel, soap and edible oil (for society. These products begin with oil seeds, which are transformed into the products through a series of chemical and physical processes, which can lead to economic development in the continent. The Chemical Microfactory labs address both the economic/societal aspects and the science/engineering aspects in an integrated approach, as would an entrepreneur or a company that aims to manufacture these products.

This stage of the project will integrate the Chemical Microfactory labs into the physics and chemistry courses at Delo Mena High School. We will work with two chemistry teachers – one from 9th and 10th the other from 11th and 12th – and one physics teacher. We will also work with the school director, Tasew Gemechu, who will manage the work

BUDGET

Payment to teachers: 3 teachers x 160 hours/teacher x \$2.50/hr

\$1200
\$640
\$160
\$1000
\$3000

BUDGET

Payment to teachers: 3 teachers x 160 hours/teacher x \$2.50/hr

Payment to school director: 160 hours x \$4/hr

Supplies

Administrative cost to STEMpower, Inc

Total

We paid the teachers \$2.50/hr??

Regarding the pay rate, my student said "I determined the \$2.5/hour rate based on local Ethiopian standards"

Q1: Was it ethical for Prof. Lacks to arrange payment for the teachers in the Ethiopian High School at a pay rate far below that for a teacher in the US (and far below even minimum wage in the US)?

More generally, should U.S. companies/organizations funding work in foreign countries set wages based on: (a) U.S. standards and minimum wage laws, (b) the local market rate, (c) or another approach?

Now on to a totally different topic...



TECHNOLOGY

FTC Sues Amazon, Alleging Illegal Online-Marketplace Monopoly

High-stakes case pits the e-commerce giant against agency chair Lina Khan's aggressive antitrust stance

By [Dave Michaels](#) [Follow](#) and [Dana Mattioli](#) [Follow](#)

Updated Sept. 26, 2023 5:58 pm ET



627



Gift unlocked article



Listen (8 min)



"The Federal Trade Commission and 17 states on Tuesday sued Amazon alleging the online retailer illegally wields monopoly power that keeps prices artificially high, locks sellers into its platform and harms its rivals"



TECHNOLOGY

Google Loses Antitrust Case Over Search-Engine Dominance

Federal judge rules company acted illegally to maintain its monopoly status

By [Jan Wolfe](#) [Follow](#) and [Miles Kruppa](#) [Follow](#)

Updated Aug. 5, 2024 5:02 pm ET

"'Google is a monopolist, and it has acted as one to maintain its monopoly', [Judge] Mehta wrote in his 276-page decision released Monday..."

...Google suppressed competition by paying operators of web browsers and phone manufacturers to be their default search engine"



TECHNOLOGY

Google Faces Blockbuster Antitrust Case—Again

Weeks after a judge ruled the company stifled competition in search, another trial opens on its ad-tech practices

By [Jan Wolfe](#) [Follow](#) and [Miles Kruppa](#) [Follow](#)

Updated Sept. 9, 2024 12:37 pm ET

“It is a rare day when a company faces a federal-government lawsuit alleging it is illegally monopolizing the marketplace. Google is facing the second such case in less than a year...

...alleging Google has an unlawful grip on the market for software used to buy and sell digital ads, known as ad-tech.”



TECHNOLOGY

Breaking Up Is Hard to Do: Antitrust Officials Weigh Splitting Google, Others

Antitrust enforcers search for tough remedies to counteract alleged monopoly abuses

By [Dave Michaels](#) [Follow](#) and [Jan Wolfe](#) [Follow](#)

Updated Oct. 8, 2024 11:07 pm ET

“U.S. antitrust enforcers haven’t broken up a company in 40 years.

Several high-stakes cases, including two involving Google, could determine whether that dormant period comes to an end.”

TECH

Facebook Hit With Antitrust Lawsuits by FTC, State Attorneys General

Federal case seeks to unwind social-media giant's Instagram, WhatsApp acquisitions; other claims target company's tactics against competitors



Facebook CEO Mark Zuckerberg has personally engineered many of the actions that the antitrust lawsuits target. CHIP SOMODEVILLA/GETTY IMAGES

By Brent Kendall [Follow](#) and John D. McKinnon [Follow](#)

Updated Dec. 9, 2020 8:22 pm ET

"The FTC and 46 states sued Facebook accusing the social-media giant of buying and freezing out small startups to choke competition... seeks to force Facebook to unwind its acquisitions of WhatsApp and Instagram"

WSJ Barron's MarketWatch IBD [GET WSJ+](#)

Buy Side from WSJ

DJIA Futures 41226.00 -2.98% S&P 500 Futures 5512.00 -3.51% Nasdaq < >



THE WALL STREET JOURNAL.

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EXCLUSIVE POLICY

Zuckerberg Lobbies Trump to Avoid Meta Antitrust Trial

Meta Platforms CEO has visited the White House three times since the start of Trump's second term

By [Josh Dawsey](#) [Follow](#), [Rebecca Ballhaus](#) [Follow](#) and [Dana Mattioli](#) [Follow](#)
April 2, 2025 3:05 pm ET

Share Resize

last Wednesday!

Listen (2 min)

⋮

There are other anti-trust lawsuits going on as well...



THE WALL STREET JOURNAL.

Justice Department Sues to Block Hewlett Packard Enterprise's Bid for Juniper Networks

Antitrust enforcers say the deal would further concentrate the market for wireless networking technology

By [Dave Michaels](#) [Follow](#)

Updated Jan. 30, 2025 4:49 pm ET



THE WALL STREET JOURNAL.

BUSINESS | MEDIA

Justice Department Sues to Break Up Live Nation-Ticketmaster

Antitrust enforcers allege the nation's largest concert promotion and ticketing company abused monopoly and drove up prices for tickets

By [Dave Michaels](#) [Follow](#) and [Anne Steele](#) [Follow](#)

Updated May 23, 2024 5:03 pm ET



THE WALL STREET JOURNAL.

TECHNOLOGY

EU Pushes Ahead With Big Tech Antitrust Enforcement

Enforcement of digital antitrust rules on Apple and Alphabet's Google come amid rising trade tensions with the U.S. over treatment of American tech giants

By [Edith Hancock](#) [Follow](#)

Updated March 19, 2025 1:22 pm ET

from lecture 2 weeks ago...

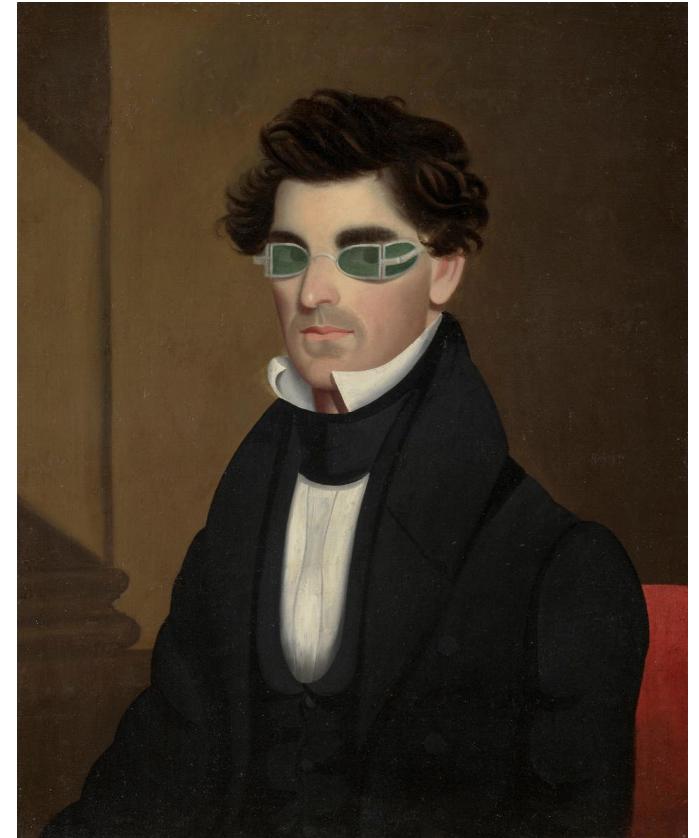
Cleveland is THE place-to-be for studying the environmental issues!

and today's lecture...

Cleveland is THE place-to-be for studying the monopolies!

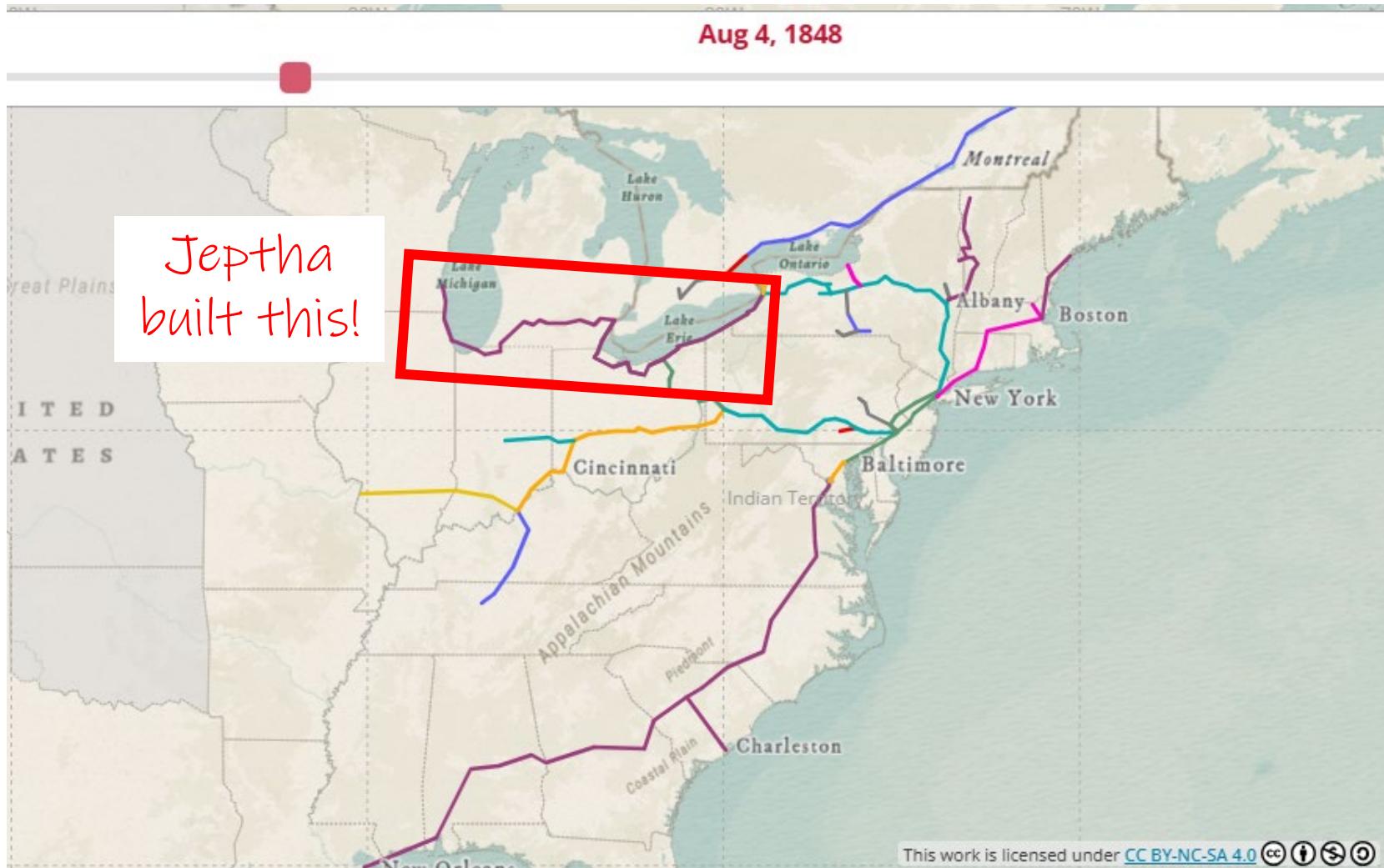
Jeptha Wade

- He was the foreperson of a door factory... but this led to health issues from the dust
- His next job was a portrait painter... but this led to health issues from being indoors all the time
- His next job was building a telegraph line
- He moved to Cleveland in 1856 (age 45)
- Wade Oval, Wade Park, Wade Commons,...



this isn't Jeptha... it's a
portrait he painted

Telegraph Lines in the US



Telegraph Lines in the US... 8 years later



"A telegram from Boston to Chicago, for example, would be copied and handed off between different regional companies at New York, Buffalo and Detroit. A response from Chicago might not arrive until the second or third day"

Companies operated on different technologies and different standards. Signals often poor quality, thus garbled messages

Real-life version of "telephone game"

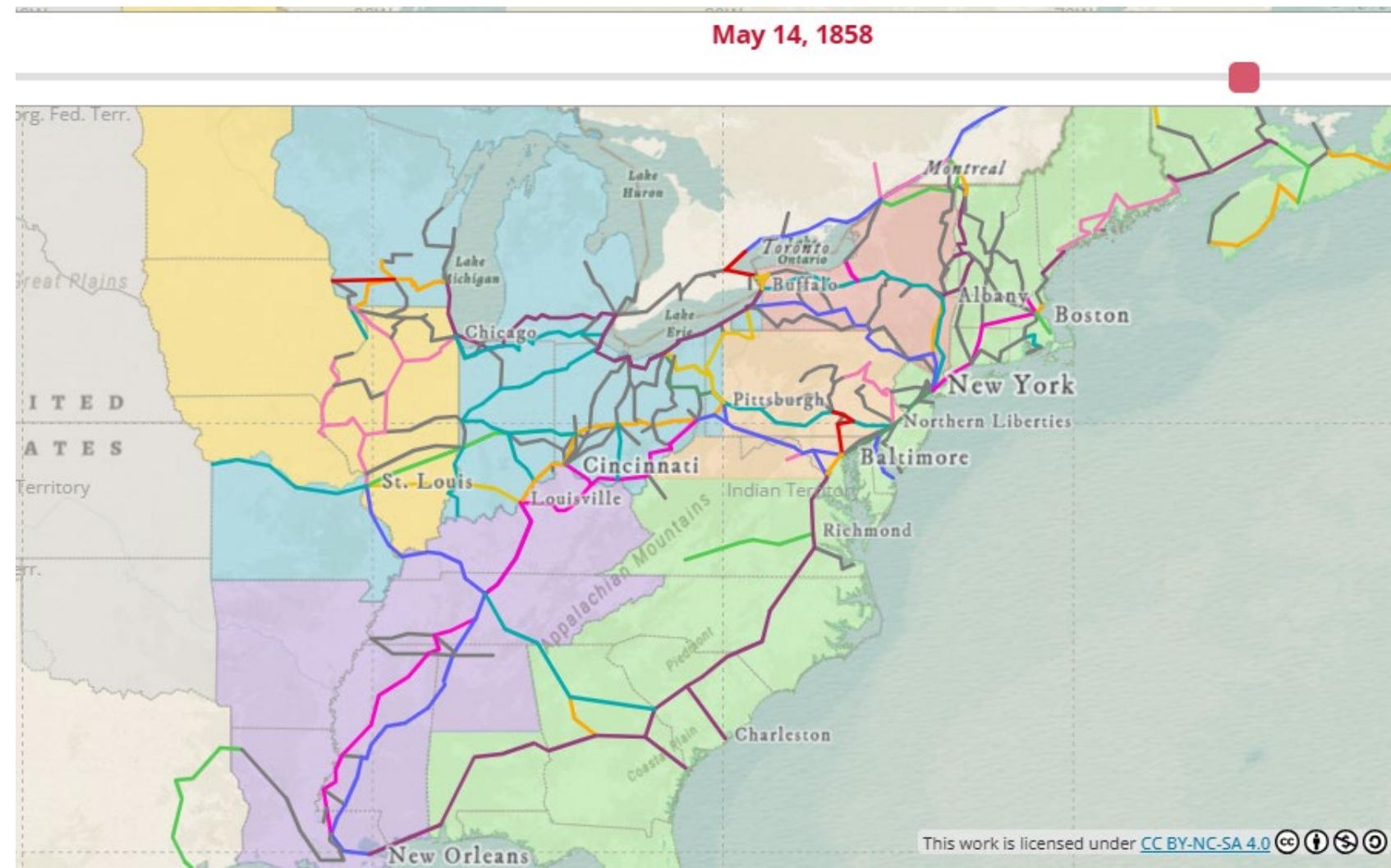
Legend

Telegraph Company when Opened

- (2) Multiple Companies
- Adams' Express Telegraph Line
- Alta California Telegraph Company
- American Telegraph Company
- Augusta, Atlanta, and Nashville Telegraph Company
- Bain Line / Merchants State Telegraph Company
- Boston, Salem, and Newburyport Magnetic Telegraph Company
- British North American Electric Association
- Buffalo and Canada Junction Company
- Buffalo and Lockport Telegraph Company
- California State Telegraph Company
- Cape Cod Magnetic Telegraph
- Cleveland, Warren, and Pittsburgh Telegraph Company
- Cuba Telegraph
- Eastern Telegraph Company
- Erie and Michigan Telegraph Company
- Hannibal and St. Joseph Railroad
- Illinois and Mississippi Telegraph Company
- Lake Erie Telegraph Company
- Lynchburg and Abingdon Telegraph Company

- Macon and Western Branch Telegraph Company
- Magnetic Telegraph Company
- Maine Telegraph Company
- Milwaukee, Galena, and Chicago Telegraph Company
- Minnesota State Telegraph Company
- Mississippi Valley Printing Telegraph Company
- Montreal Telegraph Company
- Montreal and Bytown Telegraph Company
- Montreal and Troy Telegraph Company
- New Brunswick Electric Telegraph Company
- New Orleans and Ohio Telegraph Company
- New York and Boston Magnetic Telegraph Association
- New York and Erie Magnetic Telegraph Company
- New York, Albany, and Buffalo Electro-Magnetic Telegraph
- Northern California Telegraph Company
- Northwestern Telegraph Company
- Nova Scotia Electric Telegraph Company
- Nova Scotia Government Line
- Ocean, Delaware, and Philadelphia Telegraph Company
- Ohio and Mississippi Telegraph Company
- Ohio, Indiana, and Illinois Telegraph Company
- Overland Telegraph Company
- Pacific Telegraph Company
- Pacific and Atlantic Telegraph Company
- Pittsburgh, Cincinnati, and Louisville Telegraph Company
- Placerville and Humboldt Telegraph Company
- Rhode Island Telegraph Company
- Scioto Telegraph Company
- Snow's Line
- South-Western Telegraph Company
- St. Louis and Missouri River Telegraph Company
- Stebbins Line
- Susquehanna River and North and West Branch Telegraph Company
- Syracuse and Oswego Telegraph Company
- Texas and Red River Telegraph Company
- Toronto, Hamilton, Niagara & St. Catharines Electro Magnetic Telegraph Company
- Troy and Canada Junction Telegraph Company
- Tuolumne Telegraph Company
- US Government, then Magnetic Telegraph Company
- Valley Telegraph Company
- Vermont and Boston Telegraph Company
- Washington and New Orleans Telegraph Company
- Western Telegraph Company
- Wisconsin State Telegraph Company

"Of the more than thirty different companies created before 1855, only two or three were even self-sustaining. Small, poorly financed lines appeared in every town that promised any business, and though they were too weak to provide any return for their investors, they sapped business from stronger lines in competition."



"1857, the six strongest regional companies united in an anticompetitive cartel"

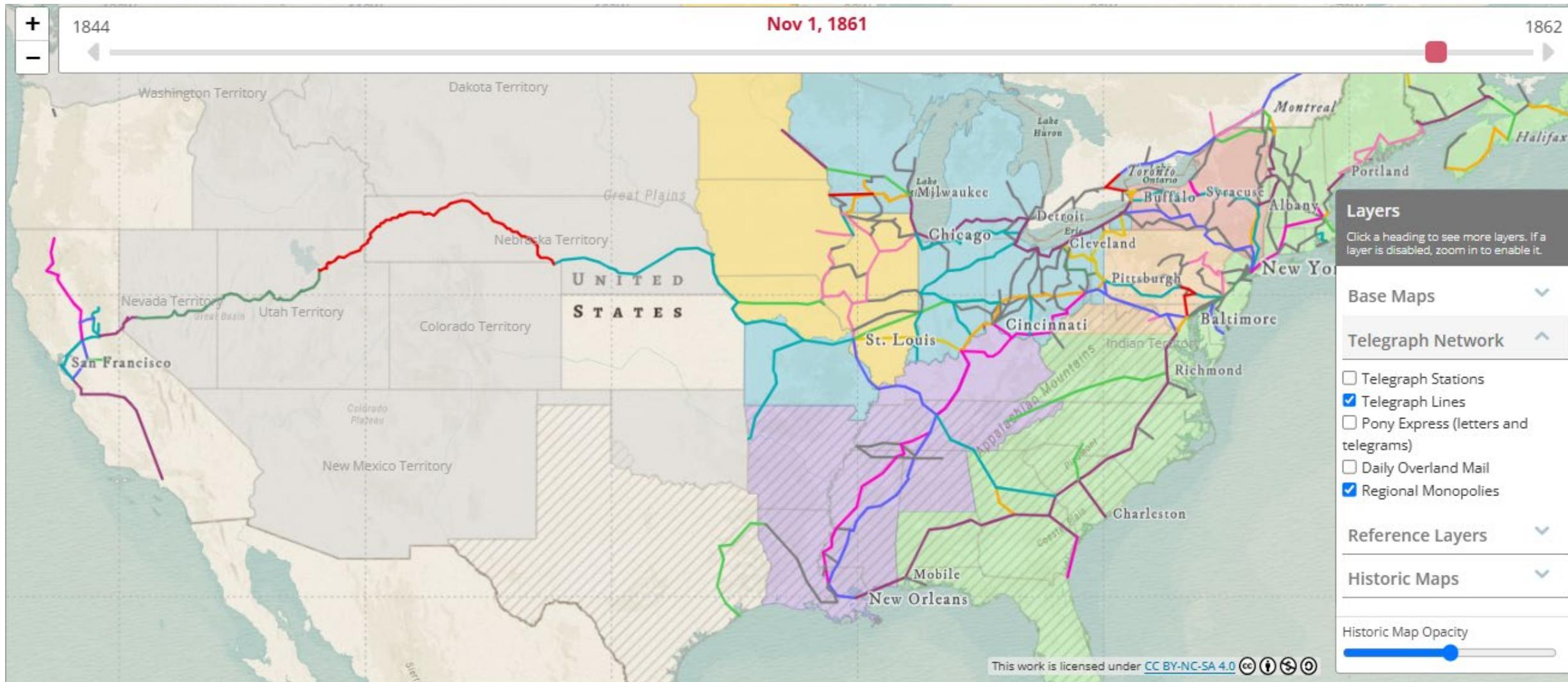
Legend

Regional Monopolies

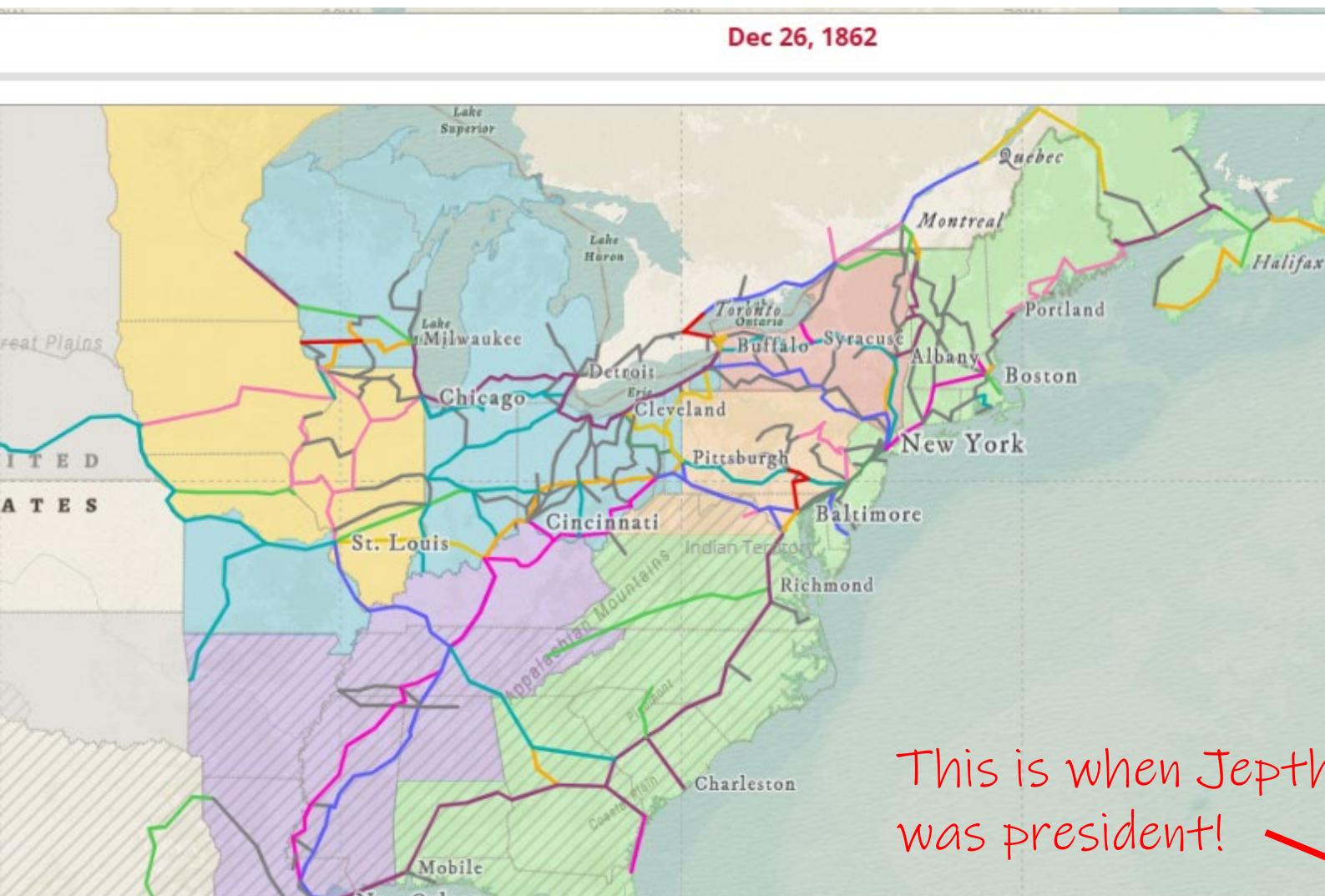
- American Telegraph Company
- Atlantic and Ohio Telegraph Company
- Illinois and Mississippi Telegraph Company
- New Orleans and Ohio Telegraph Lessees
- New York, Albany, and Buffalo Telegraph Company
- Western Union Telegraph Company

Western Union formed by merger in 1856: Wade, Ezra Cornell, and others

Western Union constructed the first intercontinental telegraph



1860's: Western Union gets it all!



Legend

Regional Monopolies

- American Telegraph Company
- Atlantic and Ohio Telegraph Company
- Illinois and Mississippi Telegraph Company
- New Orleans and Ohio Telegraph Lessees
- New York, Albany, and Buffalo Telegraph Company
- Western Union Telegraph Company

Western Union Acquires:

- 1863: NY, Albany & Buffalo
- 1864: Atlantic & Ohio

American Telegraph Acquires:

- Jan 1866: New Orleans & Ohio

Western Union Acquires:

- Jul 1866: American Telegraph
- 1867: Illinois & Mississippi

Book Review: 'Western Union and the Creation of the American Corporate Order, 1845-1893,' by Joshua D. Wolff

Western Union saw off rivals through what one executive called 'burning the district'—driving down rates and bankrupting the competition.

By Stuart Ferguson

Dec. 22, 2013 5:47 pm ET

Its defenders objected that the nature of telegraphy made Western Union a natural monopoly, since only a single company could ensure the rapid transit of information across the country."

"Critics accused the company of charging outrageous rates; limiting the availability of service; favoring high-volume, large-scale merchants and manufacturers; and stifling commerce.

Telegraph operators accused Western Union of reducing them to the status of "slaves to the monopoly," and operators' unions launched nationwide strikes against the company in 1870 and 1883.

Rivals claimed the telegraph Goliath excluded them from rights-of-way and prevented free and fair competition."

Western Union still exists today!

Send Money Online

Select receiver's country Q

Frequently selected countries

 Mexico	 Philippines
 India	 Colombia
 United States	 Dominican Republic
 Jamaica	

NEWS

Jeptah Wade's descendants appeal ruling in years-long land dispute with Cleveland Botanical Garden

Updated: Aug. 09, 2019, 11:57 a.m. | Published: Aug. 09, 2019, 5:00 a.m.

"Descendants of Wade, one of the founders of Western Union, have argued the botanical garden's fencing and its admission and parking fees violate the terms of the Wade Deed, which said the land must be 'open to the public at all times' and used 'for no other purpose than a public park.' "

Jeptah Wade is still relevant!

court decision than 3 years ago

[CNO HOME](#) | [ARCHIVE](#) | [SUBSCRIBE](#) | [IN DEPTH](#) | [WATCH](#) | [SUPREME COURT](#)

CASES

Botanical Garden's Admission and Parking Fees Do Not Violate Deed Restrictions

By Dan Trevas October 20, 2022

Cleveland Botanical Garden did not violate the restrictions of a 140-year-old deed that created Wade Park when it built an underground parking garage and started charging admission fees, the Supreme Court of Ohio ruled today.

The Supreme Court unanimously agreed the city of Cleveland, the botanical garden, and University Circle are complying with terms set by Jeptha Wade when he gifted the land to the city in 1882.

Some of Wade's heirs contested the current use of the property, claiming it is not "open at all times to the public" as required by the deed. Some of the heirs believed charging admission and restricting access to the botanical garden were actions that benefitted only the garden and were leading to the "destruction of the park."



Court finds Cleveland Botanical Garden operations did not violate deed restrictions.

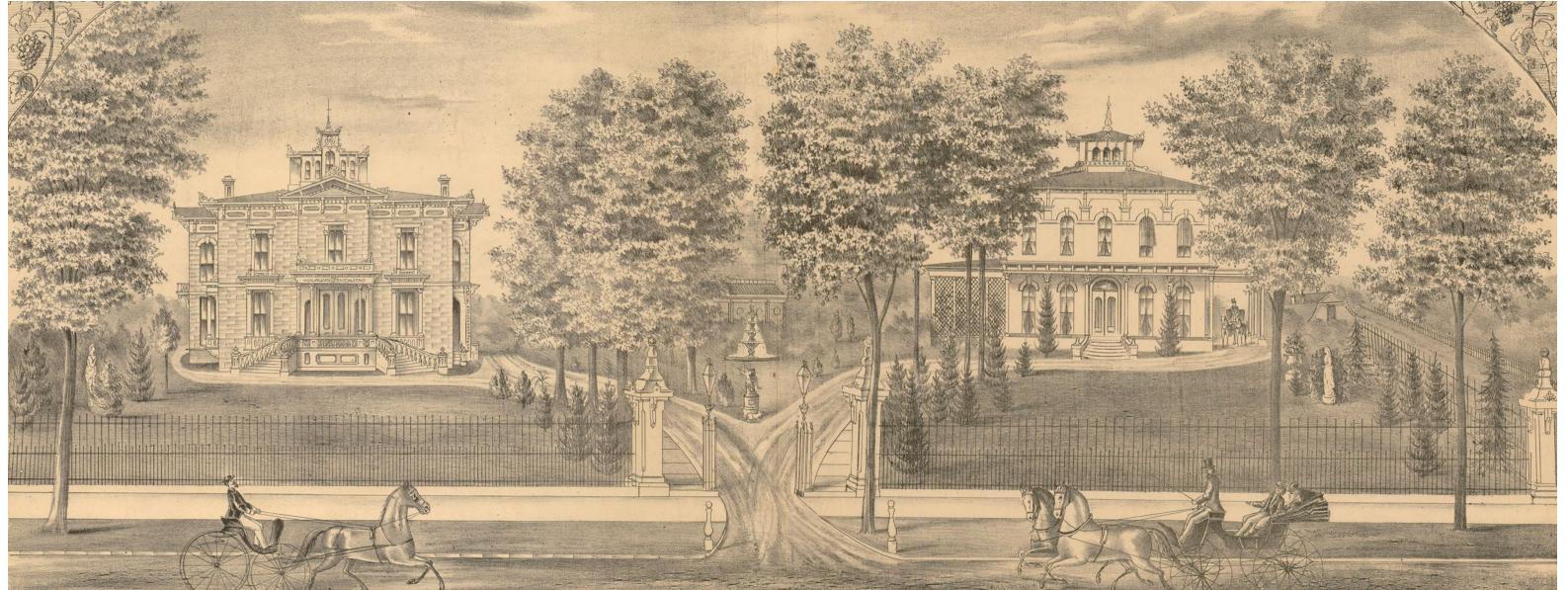
"The [Ohio] Supreme Court unanimously agreed the city of Cleveland, the botanical garden, and University Circle are complying with the terms set by Jeptha Wade when he gifted the land to the city in 1882"

Q2:

What was Western Union's main argument for justifying a monopoly in the telegraph industry?

Do you think this argument is relevant for any of the current anti-trust lawsuits (Google, Facebook, Amazon, etc.)?

Jeptha's mansion (right)
and his son's mansion
(left)



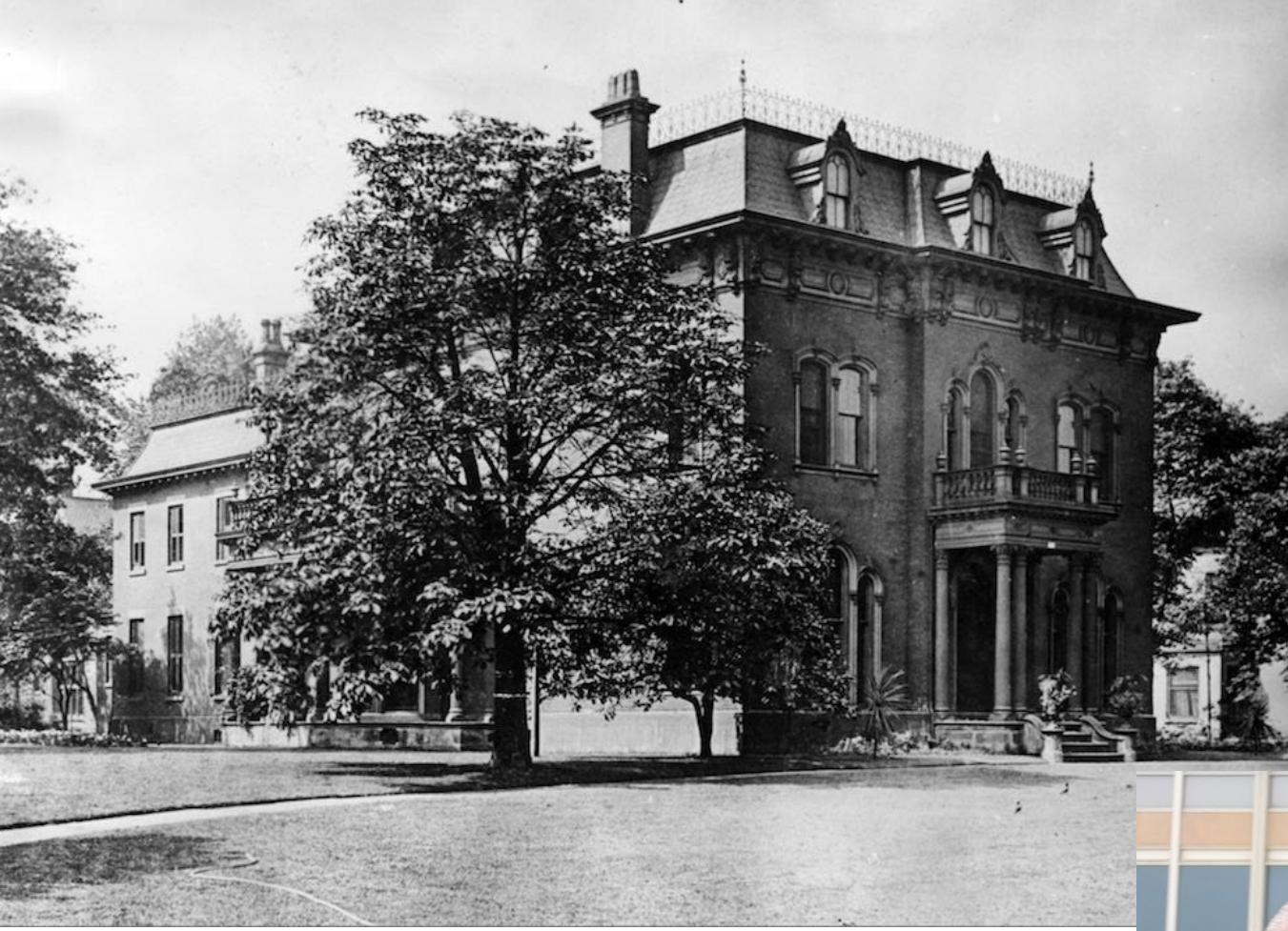
I stopped by last weekend
(NW corner of Euclid and East 40th St)



The next person in our lecture lived across the street from Jeptah...

... and this person was inspired by Jeptah as he built his own monopoly

"As his own inspiration, Rockefeller cited Western Union, then busily buying up small telegraph lines"



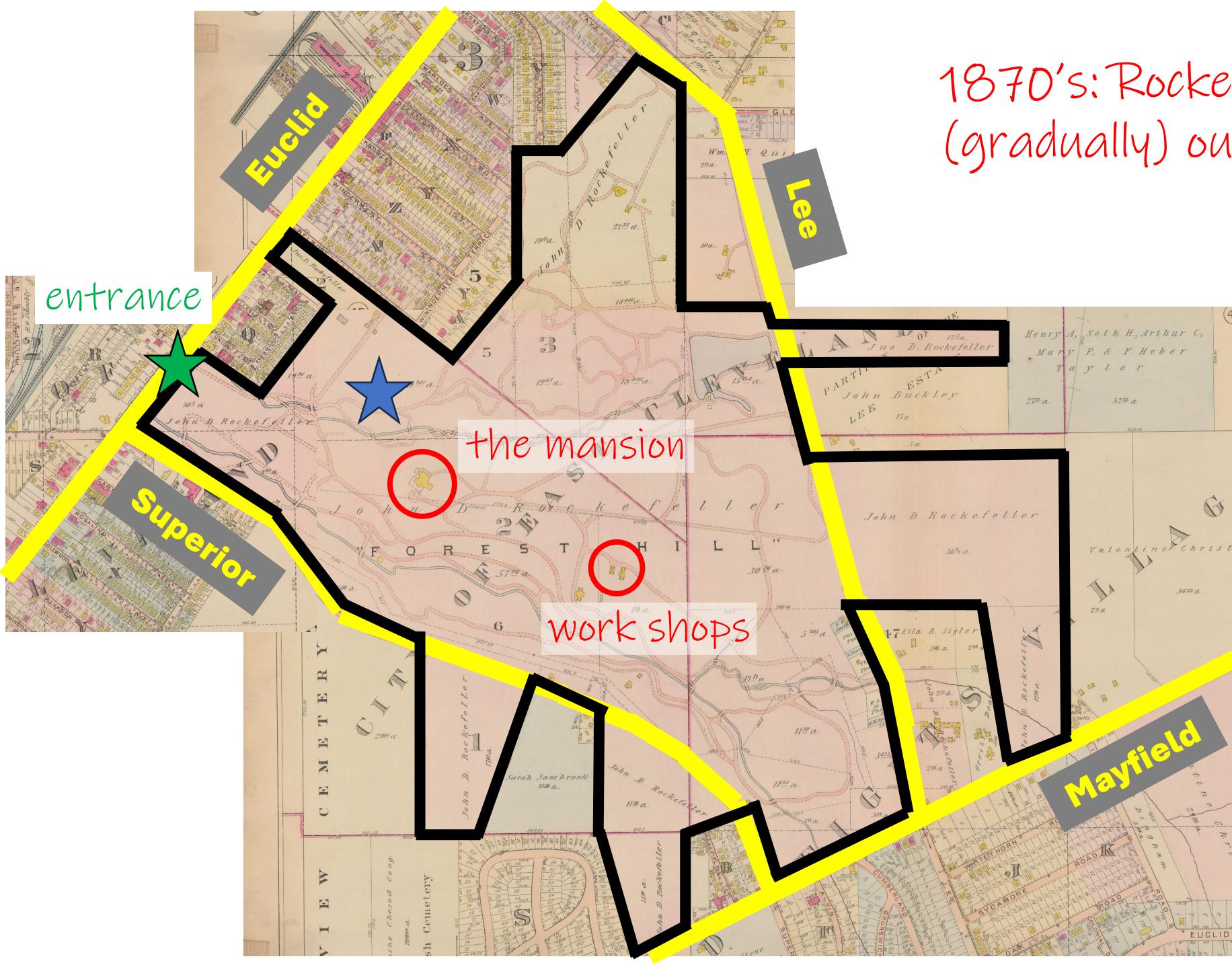
John D. Rockefeller's
mansion on Euclid

my visit last weekend
(SW corner of Euclid and East 40th St)



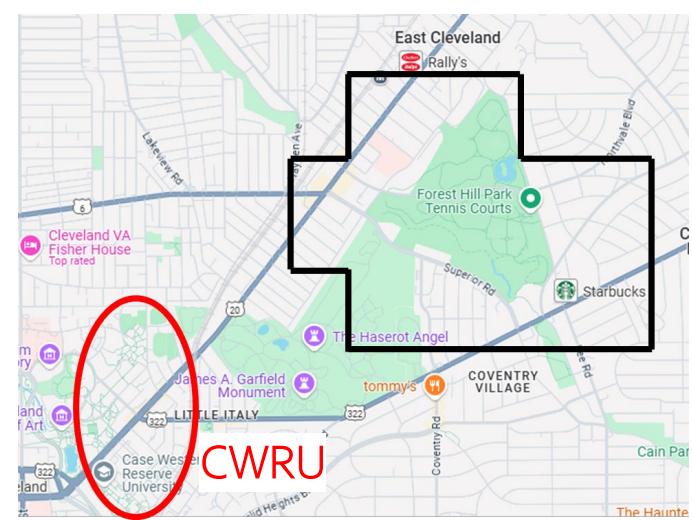
As an aside, there is only one mansion left standing in Jeptha's and John's neighborhood...





1870's: Rockefellers move
(gradually) out to East Cleveland

Why the funny shape?



Entrance to
Rockefeller's Estate



I stopped by last
weekend



the mansion...



same view today
(my tour guide, EEPS Prof. Jim Van Orman)

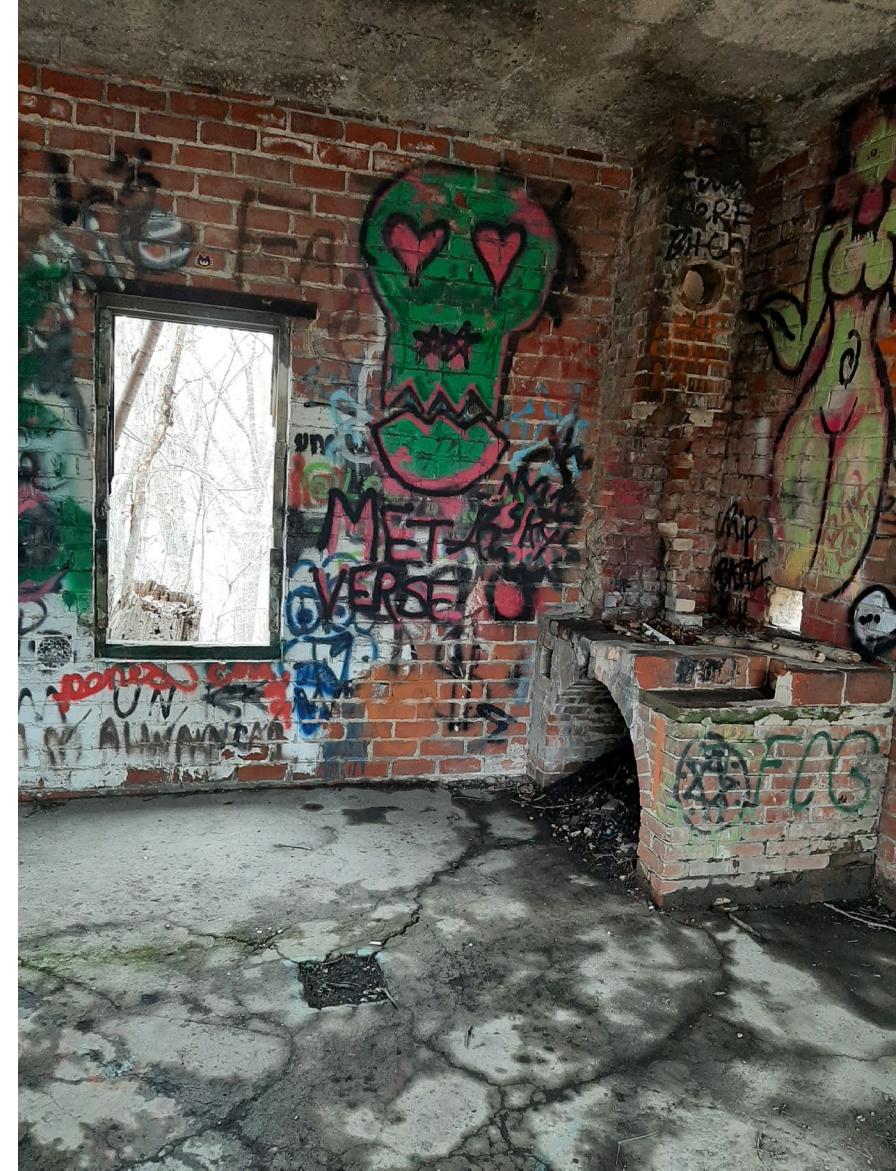




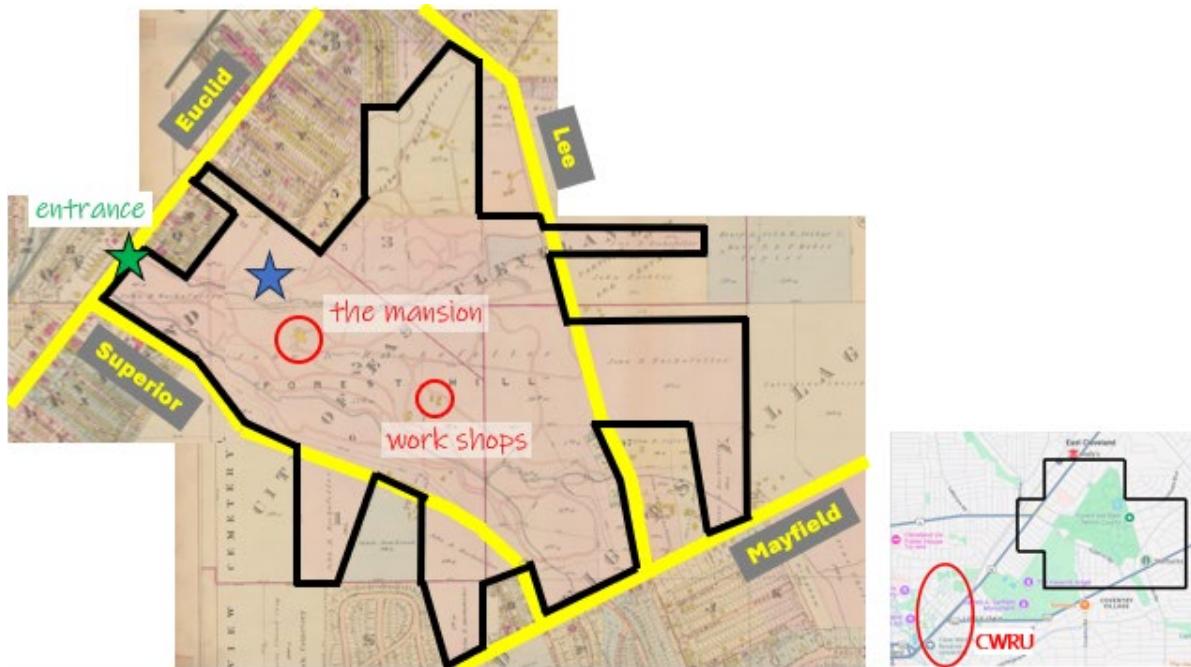
"Serving as his own engineer and following the natural grades, Rockefeller laid out twenty miles of roadway for horse and buggy rides through stands of aspen, beech, oak, and maple trees.

Supervising fifty or sixty workmen, he developed a limestone quarry on the property to service his grandiose projects and adorned the roads with picturesque bridges over streams"

Rockefeller's blacksmith shop is still there...



What does it look like now
at the blue star?



And where was
Rockefeller's office?

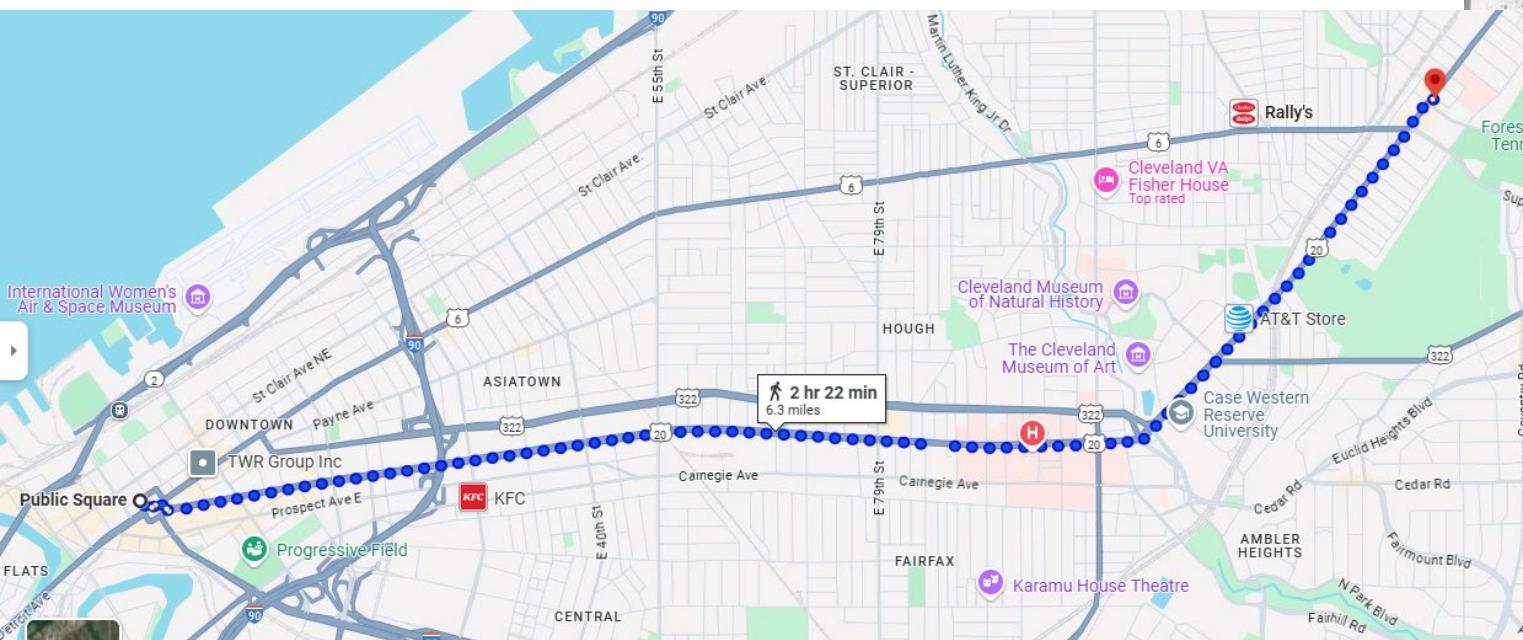
Rockefeller's office was at
Public Square, where this
building now stands



This neighboring building from
Rockefeller's time has survived

Rockefeller's commute to work

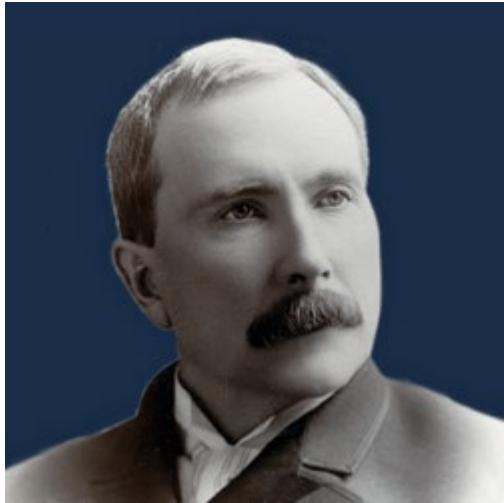
"Rockefeller, clad in goggles and duster, drove downtown each morning from Forest Hill, seated in a little two-seat surrey behind a pair of fast-trotting horses"



Copyright # 1904
By NEARNEST ENTERPRISE ASSOCIATION.

Rockefeller's commute to work took him right thru our campus!

John D. Rockefeller



- Born in 1839, in upstate New York
- Moved to Cleveland when he was at age 4, and lived in Cleveland until he was age 45
- At age 16, he got his first job, as a bookkeeper with the vegetable wholesale company Hewitt and Tuttle (located in the Flats)
- At age 20, started his own vegetable wholesale company, Rockefeller and Clark, with business partner Maurice Clark

So, what was Rockefeller like as a teenager?

"All the News That's Fit to Print."

The New York Times.

VOL. LXXII... No. 23,622.

NEW YORK, WEDNESDAY, SEPTEMBER 27, 1922.

THE WEATHER

Fair today and Thursday; moderate temperature, with southwest winds.
Temperature Yesterday—Max. 48; Min. 46.
For weather report see next to last page.

TWO CENTS In Greater New York | THREE CENTS Within 200 Miles | FOUR CENTS Elsewhere

Rockefeller Celebrates Anniversary of Getting His First Job in 1855; Motors and Wins at Golf

Special to The New York Times.

TARRYTOWN, N. Y., Sept. 26.—John D. Rockefeller celebrated yesterday his most joyful holiday of the year, the anniversary of the day he got his first job. The flag was waving high on the pole beside his home at Pocantico Hills in honor of the day, sixty-seven years ago, when after long search he at last found work. He spent the day as usual, answering letters, considering details of the benevolent work in which he is interested and enjoying a game of golf and an automobile ride.

The golf game was a foursome of nine holes. He could have played eighteen just as easily, but that would have been contrary to his rule of never trying to do everything in one day. His first drive sailed gaily down the fairway half the distance to the green. Now and then when he made a particularly skillful shot he waved his club and chuckled. "Oh, any old thing will do for us!" His side won three up and two to play.

Mr. Rockefeller entertained a few

friends at luncheon and told some of the incidents of the memorable day he had finished his studies in the Cleveland High School at the end of June, 1855. He spent all the next month and a half studying bookkeeping, completing a course that usually required three months.

Then he set out to look for work, beginning at 8 o'clock every morning, stopping at noon for dinner and searching again from 1 o'clock in the afternoon till 5.

Just sixty-seven years before he addressed his ball on the sixth tee this morning, John D. Rockefeller met a man in a wholesale produce commission house who told him he might come back after dinner. The commission merchant then marched him up to a tall desk and put him to work on the books. On New Year's eve, after working three months four days and a half, he drew his pay in full, \$50.

Front page story in the NY Times:
Rockefeller Celebrates Anniversary of
Getting his First Job in 1855
"his most joyful holiday of the year"

"Ledger A"

Nov 1855 – Apr 1856 (from when Rockefeller was 16 yrs old)

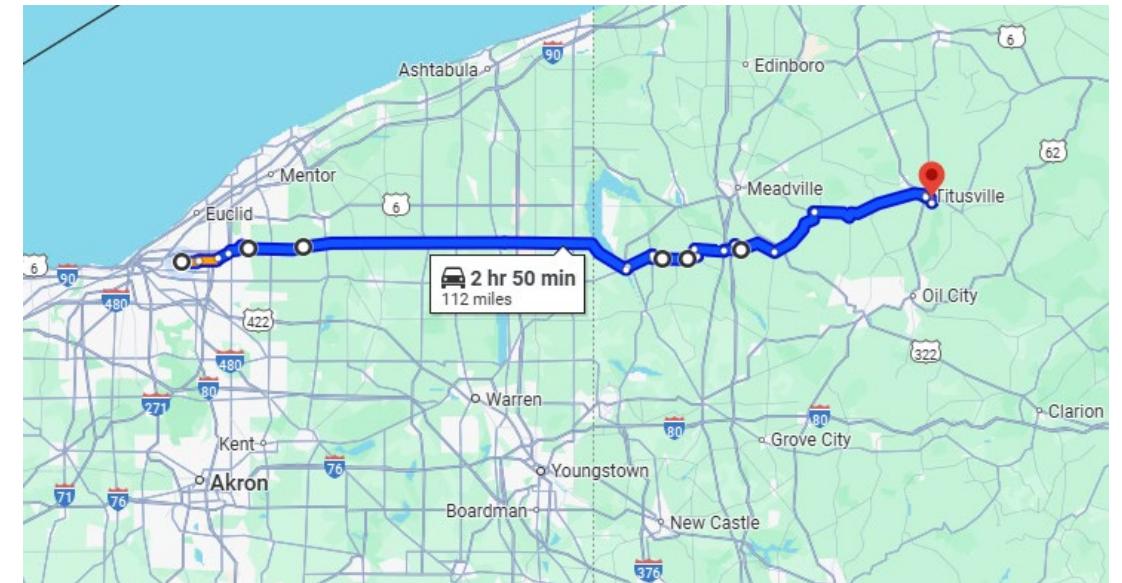
1855	<u>Sunday Expenses</u>	
Dec 1	Bottle Indelible Ink.	25
" 12	Repairing 1 Boot	12
" 13	" 1 pint of Burning fluid	11
" 19	" 1 Foot Brash	18
" 24	" 1 watch guard	06
" 27	" Cutting Hair & Shaving	19
" 30	Stage fare Home	50
Jan 5	" Cleaning my watch &c	150
" 8	" Sustorter (23mnd)	2 —

"he once told his Sunday School-school class, holding up Ledger A: 'It almost brings tears to my eyes when I read over this little book, and it fills me with a sense of gratitude I cannot express"

1859: Oil boom starts with Drake well in Western PA



What was oil used for?
Kerosene for lamps!





Samuel Andrews

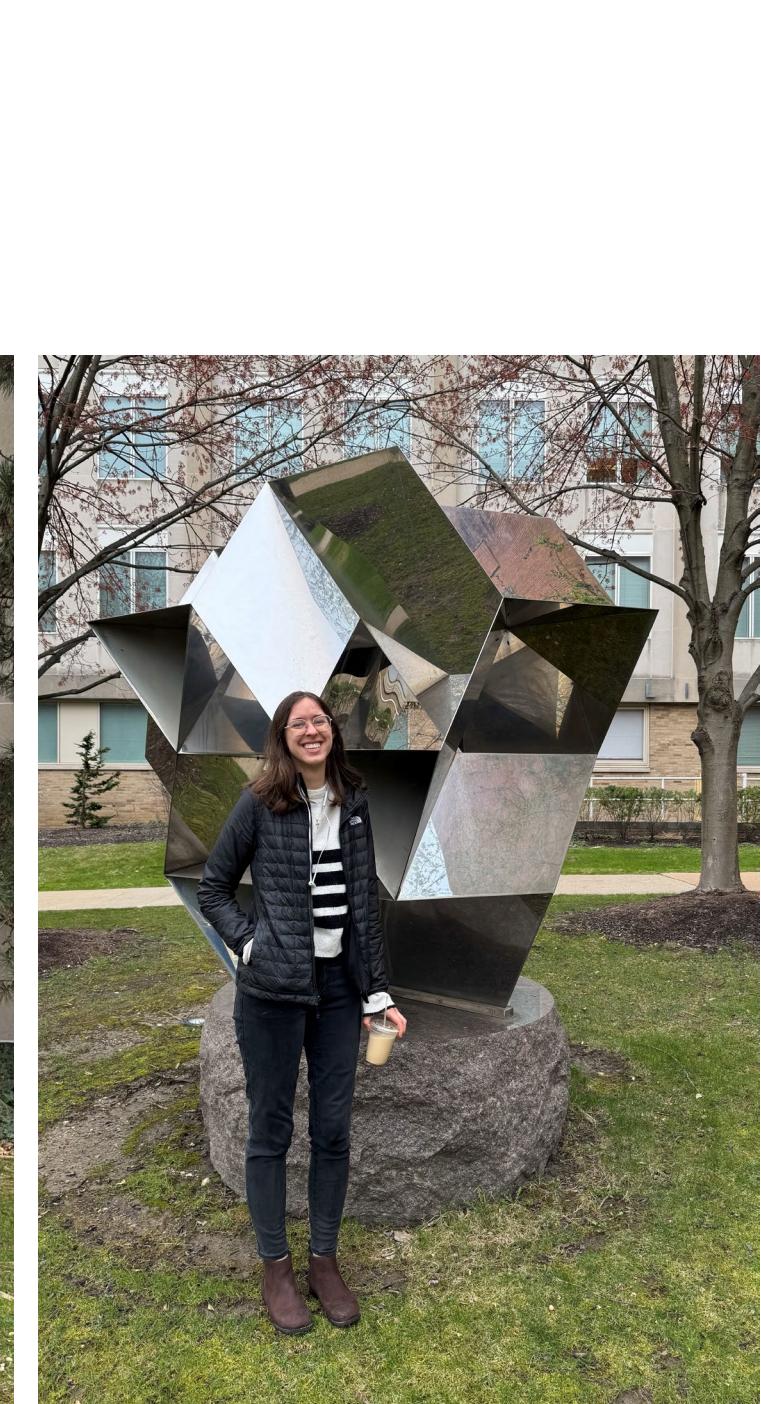
- 1860: "Chemical engineer" Samuel Andrews is first person in Cleveland to produce kerosene by distilling crude oil
- 1863: Andrews convinces Rockefeller and Clark to team up in oil refining business, and they open their refinery on the Cuyahoga
- 1865: They ditch Clark, and the new company is Rockefeller and Andrews



Samuel Andrews' legacy (for us)...

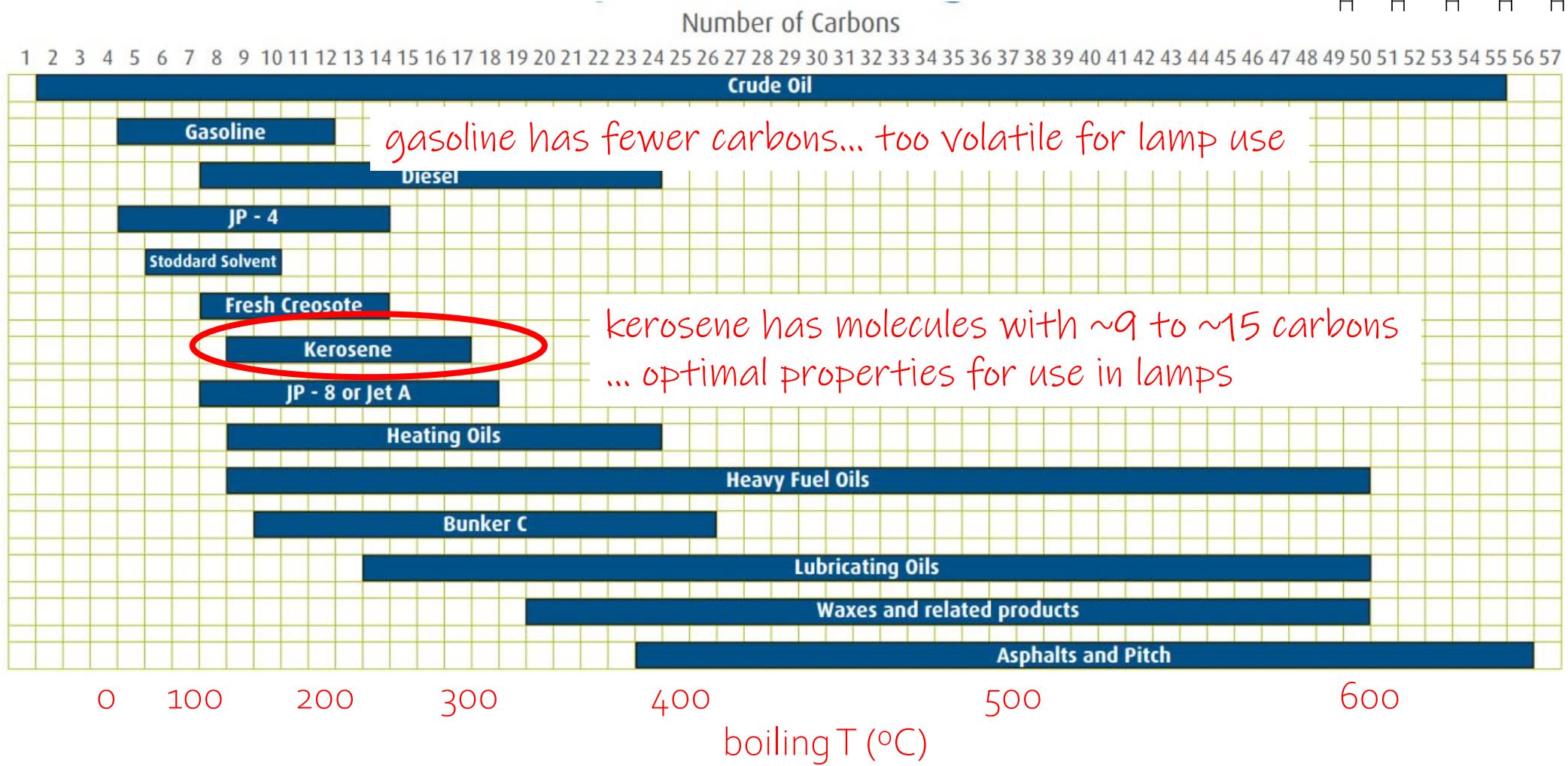
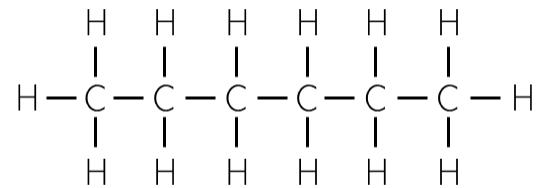
His granddaughter endowed the public art at CWRU!







What is kerosene? What is distillation?



Distillation is separating by boiling point

Late 1860's

Rockefeller felt there was too much competition and overproduction, and everyone was losing... he estimated 90 % of refineries were in the red



1870

- Rockefeller needed more money: to create economies of scale, increase efficiency, build cash reserves
- ... and more money to buy the other refineries
- 1870: The corporation Standard Oil was created, and three more shareholders were brought in
- Standard Oil set out to own as large a portion of the industry as possible... “we had to do it in self-defense”

"Rockefeller started at the top, believing that if he could crack his strongest competitor first, it would have a tremendous psychological impact. His major rival was Clark, Payne and Company."

Clark, Payne and Company sold the refinery to Standard Oil ... and Oliver Payne came onboard as one of the key leaders of Standard Oil

Why is this important for CWRU?



**CASE WESTERN RESERVE
UNIVERSITY**
Frances Payne Bolton
School of Nursing

Frances Payne Bolton was Oliver Payne's niece... this is how she got the money to endow our nursing school!



and FPB was
also a US
congresswoman!

THE ROCKEFELLERS | ARTICLE

The Cleveland Massacre

Share:    

The so-called Cleveland Massacre was the beginning of John D. Rockefeller's drive toward an oil monopoly, and it is considered one of his shrewdest operations. The fact that he carried out this campaign in the midst of the most unfortunate episode of his business career (the demise of the infamous South Improvement Company) truly shows just how focused and ruthless Rockefeller could be.

**The "Cleveland Massacre":
In Feb-Mar 1872,
Standard Oil acquired 21
of the 26 refineries in
Cleveland**

Rockefeller's Negotiation Style

After Hewitt came to Rockefeller's Euclid Avenue home to plead for mercy, they strolled down Euclid Avenue together, and Rockefeller told him his firm would never survive if it didn't sell out to Standard Oil.

He made a cryptic statement to Hewitt that entered into Rockefeller folklore: "I have ways of making money you know nothing about."

Disconcerted by such assertions, Hewitt and his partners finally sold out for \$65,000, though they believed their business was worth \$150,000.

Rockefeller's Negotiation Style, another example

When Robert Hanna, the uncle of Marcus Hanna, was summoned to Standard Oil's offices, he bluntly told Rockefeller that he wouldn't sell.

In response, Rockefeller sighed and wearily shrugged his shoulders, as if expressing regret that this benighted sinner hadn't seen the light.

"You will stand alone," he warned Hanna. 'Your firm can never make any more money in Cleveland. No use trying to do business in competition with the Standard Oil Company. If you do it will end in your being wiped out.'

In the end, Hanna accepted \$45,000 for a refinery that he believed was worth \$75,000."

Ida Tarbell

Share:



Ida Tarbell. 1905. Library of Congress

By the early 1900s, John D. Rockefeller, Sr. had finished building his oil empire. For over 30 years, he had applied his uncanny shrewdness, thorough intelligence, and patient vision to the creation of an industrial organization without parallel in the world. The new century found him facing his most formidable rival ever -- not another businessman, but a 45-year-old woman determined to prove that Standard Oil had never played fair. The result, Ida Tarbell's magazine series "The History of the Standard Oil Company," would not only change the history of journalism, but also the fate of Rockefeller's empire, shaken by the powerful pen of its most implacable observer.

"his most formidable rival ever – not another businessman, but a 45-year-old woman determined to prove that Standard Oil had never played fair"

Tarbell: Rockefeller even did this to vulnerable widows!

(quote from Mrs. Backus): "My husband having contracted a debt not long prior to his death for the first time in his life, I, for the interest of my fatherless children, as well as myself, thought it my duty to endeavour to continue the business,"

"It is undoubtedly true, as Mr. Rockefeller avers, that Mrs B-- was not obliged to sell out, but the fate of those who in this period of absorption refused to sell was before her eyes.

She had seen the twenty Cleveland refineries fall into Mr. Rockefeller's hands in 1872.

She had watched the steady collapse of the independents in all the refining centres.

She had seen every effort to preserve an individual business thwarted.

Rightly or wrongly she had come to believe that a refusal to sell meant a fight with Mr. Rockefeller, that a fight meant ultimately defeat, and she gave up her business to avoid ruin."

How did Rockefeller win the game?

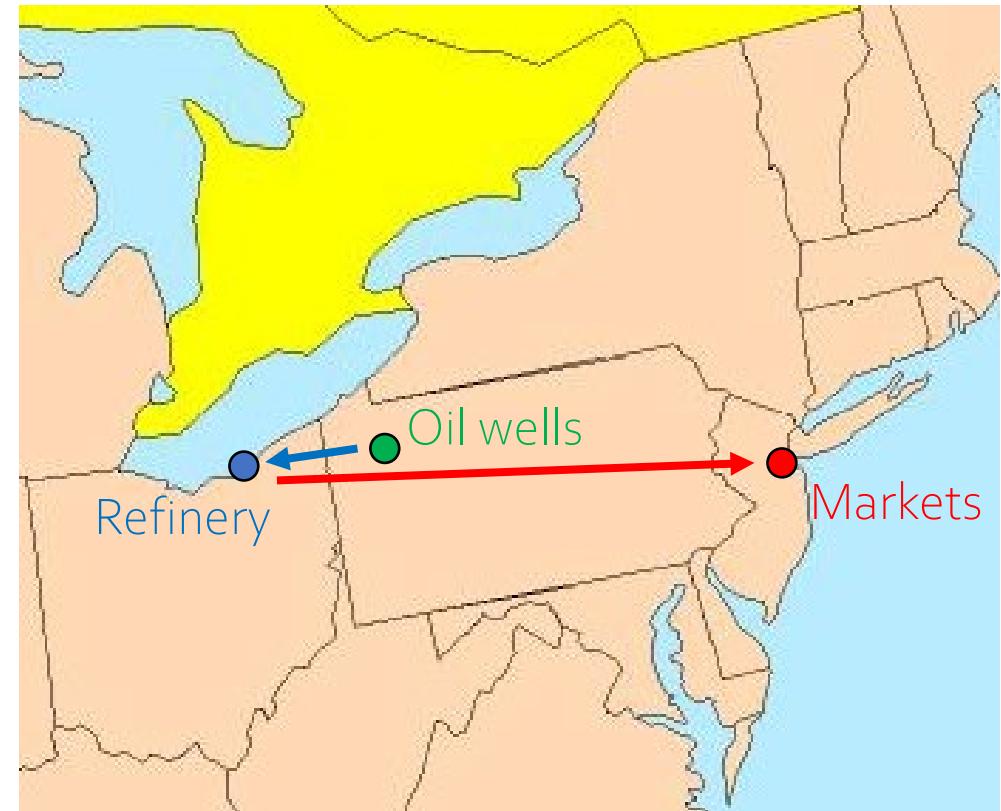
What was the key cost driver for oil refiners?

Transportation costs!

- crude oil from well to refinery
- kerosene from refinery to markets

How Rockefeller won the game:

- Bulk shipping deals with railroads: he guaranteed regular, huge, shipments in return for reduced shipping fees
- Capital investment in railroad infrastructure (warehouses, loading platforms, tank cars) also lowered Standard Oil's operating costs for transporting
- Smaller refineries had higher transportation costs and for this reason could not compete with Standard Oil



Was this ethical?

Rockefeller:

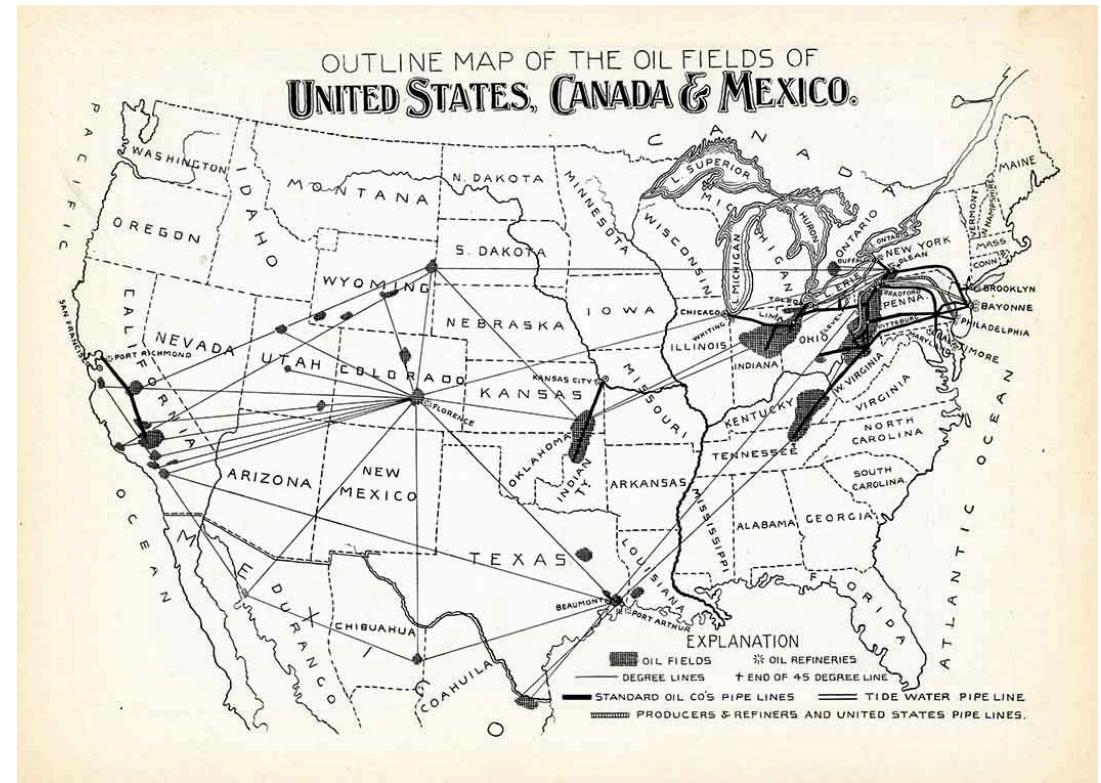
- "Who can buy beef the cheapest – a family, or an army? Who is entitled to better rebates from a railroad, those who give it 5000 barrels a day, or those who give it 500 barrels—or 50 barrels?"
- "I deny that it was regarded as a dishonorable practice for a merchant or manufacturer to obtain the best rates possible for their goods"

Tarbell:

- "Of course the rate was secret, and Mr. Rockefeller probably understood now how essential it was that he keep it secret."
- "the railroad is a public servant, bound to treat everybody alike"
- "he realized that the rebate was the means by which he could gain control of the oil industry ... indifferent to the ethical quality of the act"

1880's: Standard Oil developed operations all over the US

- By 1880, Standard Oil controlled 90% of oil refining in the US
- Until mid 1880's, oil only from Pennsylvania... but now oil found in Indiana, Oklahoma, Texas... Standard Oil developed operations in many states
- Also owned pipelines throughout much of the US
- Corporations could only own property in one state... so they created separate Standard Oil companies in different states... overseen by a "trust"
- 1883: Rockefeller moved to NYC, but would return every year to spend summers at Forest Hill



(1905 map)

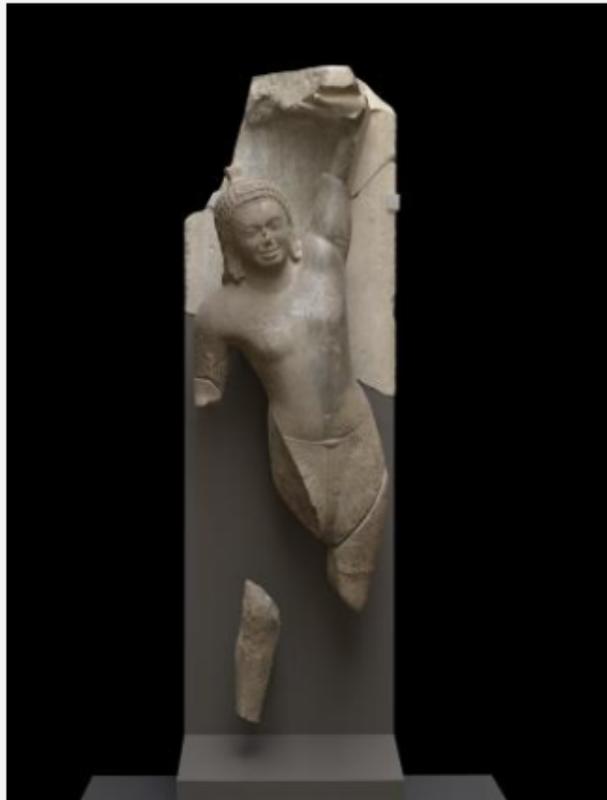
An aside: Who was Standard Oil's Treasurer during this time?



Severance Hall

Louis Severance: Treasurer, Standard Oil, 1876-1894

His son, John L. Severance became "Cleveland's most lavish patron of the arts"

[Home](#) / [Art](#) > Collection Search

Krishna Lifting Mount Govardhan

c. 600

[Part of a set, view all set records !\[\]\(1d8b0174afe07920f82346db4c14f1bb_img.jpg\)](#)

Southern Cambodia, Takeo Province, Phnom Da

Sandstone

Overall: 203.1 x 68 x 55.5 cm (79 15/16 x 26 3/4 x 21 7/8 in.)

John L. Severance Fund 1973.106Location: 243 Indian and Southeast AsianYou can copy, modify, and distribute this work, all without asking permission. Learn more about [CMA's Open Access Initiative](#).

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[Download !\[\]\(dbfcc85ec666e12604e5e471762ece16_img.jpg\)](#)[Print !\[\]\(5ff4ea9c64cc387139f32ea641841aef_img.jpg\)](#)[Share !\[\]\(0e495573040824bbae09fded39c1bcc9_img.jpg\)](#)[ArtLens App !\[\]\(162f0854f205ececb9185eb768f9b322_img.jpg\)](#)

X



"YES, WILLIE, THIS IS A RUBBER TOY TO AMUSE YOU AND TEDDY. IT REPRESENTS THE WORKING CLASSES. SEE HOW PAPA PULLS ITS LEG."

San Francisco Examiner, 1900

Marcus Hanna, who was kicked out of CWRU for a prank!

"On July 2, 1890, President Harrison signed the Sherman Antitrust Act, which outlawed trusts and combinations in restraint of trade

To its proponents, the law proved a severe disappointment... the Standard Oil juggernaut was not deflected by this nuisance. For many years, the Sherman Act was a dead letter, and big business happily went on as usual."

Chernow, *Titan: The Life of John D. Rockefeller, Sr.*

"All the News That's
Fit to Print."

The New York Times.

THE WEATHER

Fair today; probably fair to-morrow; moderate west winds.
For full weather report see Page 12.

VOL. LX...NO. 19,470. ***

NEW YORK, TUESDAY, MAY 16, 1911.—TWENTY-TWO PAGES.

ONE CENT In Greater New York, Elizabeth,
Jersey City, and Newark. TWO CENTS

DIAZ NOW READY TO QUIT AT ONCE

Is Believed to Have Informed
Madero That He and Corral
Are Prepared to Resign.

WANTS TO NAME 4 MINISTERS

While Madero's New Demands
Include Resignation of Diaz
and the Entire Cabinet.

FEDERALS ABANDON SONORA

Troops Concentrating in Mexico City—
Hermosillo Evacuated—Rebels Get
Another Border Town.

BY STEPHEN BONSAL.
Special Correspondent of The New York Times.

Copyright, 1911, by The New York Times Co.
MEXICO CITY, May 15.—The statement
from an insurgent leader to this

THE FIRST AERO-TAXI.

Will Carry Passengers from Lucerne
at a Fixed Rate a Kilometer.
Special Cable to THE NEW YORK TIMES.
PARIS, May 15.—According to the
Telegraph, the first aero-taxi will be put
into service in a few days at Lucerne.

The innovation is due to the enter-
prise of the Compagnie Trans-Aérienne,
which has just sent to Lucerne a bi-
plane fitted with a taximeter. The
aeroplane will be piloted by the aviator
Erbster, and will carry passengers on
cross-country flights at so much per
kilometer registered on the dial.

It is calculated that the aero-taxi will
ultimately become a far cheaper con-
veyance than the streets taxicabs, owing
to the bee-line route it will be able to
follow in the air, where, furthermore,
trouble owing to congested traffic is
non-existent.

SHACKLETON NOT A RIVAL.

Not Going to Crocker Land—Glad to
Hear of American Expedition.
Special Cable to THE NEW YORK TIMES.
LONDON, May 15.—Sir Ernest
Shackleton has no intention of leading
an expedition to Crocker Land and can-
not understand how his name came to
be connected with such a report. When
THE NEW YORK TIMES correspondent
questioned him concerning it, he said:

"I cannot understand who originated
the story. I expect some private con-
versation has been retailed for public
consumption. I have discussed private
conversations with the man who made

COUNTERFEIT PLANT TAKEN IN A RAID

Four Men and a Woman Cap-
tured on Charges of Making
Bogus Indian-Head Bills.

ALL READY TO LEAVE TOWN

Band Said to Have Made Plans to
Flood Alaska with the Bad
Five-Dollar Bills.

Through the arrest yesterday of four
men and a woman, the seizure of a lithographic stone, upon which had been
engraved a fair simile of the Indian head
five-dollar bill, many engraving tools
and printing apparatus, the Secret Service
men believe they have ended a plot
which had for its object the flooding of
Alaska with counterfeit money.

For weeks the Government sleuths have
been watching the band, and they
swooped down upon them yesterday when
the experimental printing plant had been
closed, the apparatus packed ready for
shipment and those charged with being
interested in the making of bad money
had their tickets already purchased for
Chicago.

The prisoners are James Glenard, his
wife and Marko Fagovich, of 216 East

HALL CAINE ON THE GREAT AMERICAN NOVEL

Our writers, he says, have only
been pioneering so far, and
have a big field to draw from.
Read it in

Next Sunday's Times

MRS. TAFT BETTER; NO ALARM FELT NOW

President Returns to Washing-
ton, Gets Reassuring Telegram,
and Goes to Theatre.

WIFE LEAVES THURSDAY

Daughter Will Act in Her Place at
White House Social Events
for a Time.

Mrs. Taft, whose illness caused the Pres-
ident to return to New York Sunday night
to see her at his brother's house, 36 West

Forty-eighth Street, was so much im-

STANDARD OIL COMPANY MUST DISSOLVE IN 6 MONTHS; ONLY UNREASONABLE RESTRAINT OF TRADE FORBIDDEN

And of Such Unreasonable Re-
straint the Supreme Court Finds
the Standard Guilty.

DECISION PLEASES TAFT

Decision Reads "Unreasonable"
Into Law and Is What Trusts
Wanted, Says La Follette.

LOWER DECISION MODIFIED

More Time Given and Injunction
Against Doing Business Mean-
while Is Removed.

JUSTICE HARLAN DISSENTS

Objects to Limiting the Sherman

President Taft himself, in messages to
Congress and in public speeches, has de-
clared himself earnestly in favor of re-
taining the economy and efficiency of
combinations and of destroying merely
those practices which unduly restrained
inter-State commerce and stifled competition.
There was a time when the Pres-
ident was in favor of some amendment to
the Sherman law in the effort to reach
this situation. But he finally came to the
conclusion that it was impracticable to
write the word "unreasonable" into the
law, and pointed out that more and more
the Supreme Court was tending toward the
point where its decisions in trust
cases would be based on that construction
of the statute.

Way Out for Corporations.

Now it seems to have been done, and
the forceful personality of Chief Justice
White has so impressed itself upon the
court that he has carried seven of the
other Justices with him. Representatives
of "big business" who heard him this
afternoon did not hesitate to declare em-
phatically that the decision was all that
the big corporations could ask. They re-
garded with especial favor the establish-
ment of the proposition that a combina-
tion must be in "unreasonable" restraint
of commerce to be unlawful.

This they believe points out the way
by which the big corporations in the coun-

OPINIONS ON THE DECISION.
Attorney General Wickham:
"Substantially every proposition
contended for by the Government
is affirmed."

Frank B. Kellogg, counsel for
Government: "It is a complete
victory for the Government."

Senator Kenyon, formerly Assis-
tant Attorney General: "I think
the court has amended the anti-
trust law, and it will lead to
trouble."

Senator La Follette: "I fear that
the court has done what the trusts
wanted it to do, and what Congress
has steadily refused to do."

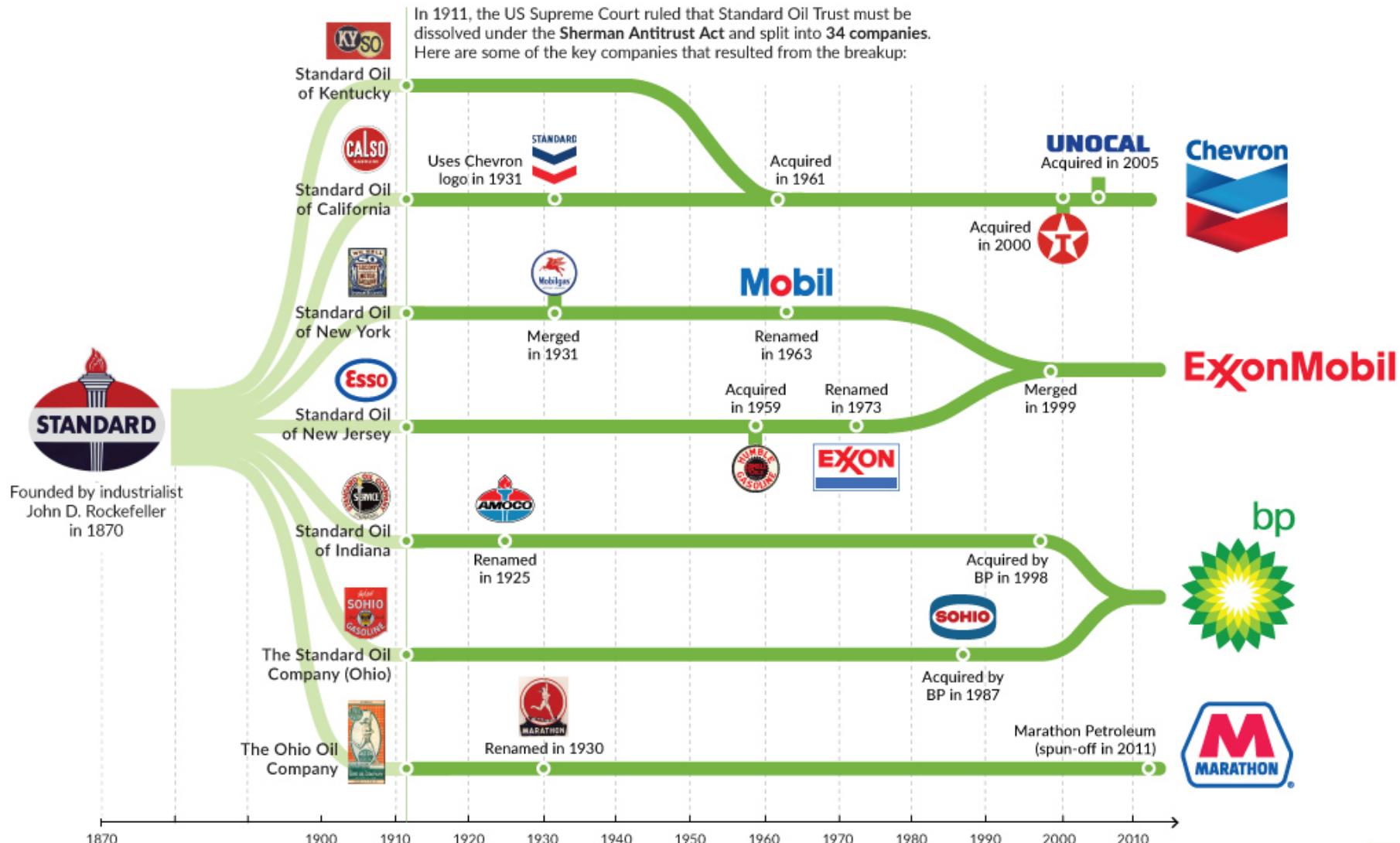
Alfred D. Eddy, Standard Oil
counsel in Chicago: "The business
of the Standard Oil Company will
go on as usual, although changes
will be made."

affirmed by the Supreme Court. In the
reasoning by which the Chief Justice
reaches the conclusion in which the whole
court concurs he expresses the view that

1911: US Supreme Court gives final word...
Standard Oil must dissolve

THE EVOLUTION OF STANDARD OIL

Following the remnants of John D. Rockefeller's oil juggernaut



Rockefeller would return to Cleveland to spend his summers at the Forest Hill estate

- In 1913, Rockefeller's wife became very ill during their summer stay at Forest Hill, and doctors said she was too frail to travel
- So, the Rockefellers stayed at Forest Hill through the fall and winter



TAX JOHN D. \$12,000,000.

East Cleveland Claims Him as Resident and Orders Him to Pay.
Special to The New York Times.

CLEVELAND, Ohio, Feb. 3.—John D. Rockefeller, because of his prolonged stay at Forest Hill, ought to pay taxes aggregating \$12,000,000, according to the figuring of Tax Commissioners John J. Fackler and William Agnew.

The Commissioners called on Mr. Rockefeller this morning and left a notice stating that he is considered a legal resident of East Cleveland under the new Warnes tax law, and has five days in which to pay taxes on his personal property, including stocks and bonds in foreign corporations and other securities, valuables, and moneys.

The Tax Commissioners figure that his personal property valuation will total \$900,000,000. They declare they have reliable information concerning the details of his holdings. They also declare that if the tax is not paid within the stipulated five days, as allowed by law, a penalty of 50 per cent. will go into effect.

The Warnes law provides that a person who remains in the county for the greater part of the year preceding the annual tax levy, shall be considered a legal resident of the county.

Virgil P. Kline, Mr. Rockefeller's at-

"John D. Rockefeller, because of his prolonged stay at Forest Hill, ought to pay taxes aggregating \$12,000,000..."

... a person who remains in the county for a greater part of the year shall be considered a legal resident of the county...

... Residents of East Cleveland have visions of great public improvements and the lowering of their personal taxes almost to nothing"

ROCKEFELLER OHIO TAX

**Based on Assessment of \$311,226,-
347 Would Be \$1,556,131.**

COLUMBUS, Ohio, May 26.—John D. Rockefeller's personal property, which will be assessed for taxation in Ohio is worth \$311,226,347, according to announcement made here today by the State Tax Commission after hearing from District Assessors William Agnew and John D. Fackler of Cuyahoga County over long distance telephone. Of

ROCKEFELLER v. O'BRIEN, County Treasurer.

(District Court, N. D. Ohio, E. D. May 13, 1915.)

No. 274.

"Mr. Rockefeller, all of the time he was in Ohio in the years 1913 and 1914, was a citizen of the state of New York; that he was a voter of that state; that he was taxed there; that he had his permanent home there..."

... it cannot be doubted on the testimony introduced on this trial that he came to Ohio in June 1913, as he had often done before, simply for a summer visit, which was continued longer than usual because of illness of members of his family

... this court is quite aware that such a decision as rendered will be the subject of criticism, but a judiciary which has not independence sufficient to protect the rights of rich men, when they are believed to be unjustly assailed, cannot be trusted to justly protect either the personal or property rights of the well-to-do or poor"

The end of the story

- Rockefeller's wife died in March 1915
- But this was before the court decision about his taxes. He couldn't return to Cleveland to bury her, as he'd be subpoenaed for the tax issue. His wife's body was interred in New York.
- After tax issue resolved, Rockefeller came to Cleveland to bury her in Lakeview Cemetery
- He never returned to Cleveland after the burial
- Forest Hill mansion burned down in 1917
- Rockefeller died in 1937, at age 97. He is buried in Lakeview Cemetery



Q3:

What was Rockefeller's main argument as to why he thought it was ethical for Standard Oil to receive the railroad rebates?

Do you think this rationale is relevant for any of the current anti-trust lawsuits (Google, Facebook, Amazon, etc.)?

Now on to a totally different topic...

Heringer Estates Winery Life

2023

MEDAL WINNING WINES



California
STATE★FAIR





CASTLE ROCK
W I N E R Y

HOME

WINERY

OUR SHOP

TRADE

NEWS & PRESS



CONTACT

Archives

February 2025

December 2024

November 2024

September 2024

July 2024

June 2024

May 2024

The image features a blue banner with the text "California STATE★FAIR" in large, bold letters. Below the banner, two wine bottles are displayed. The bottle on the left is a 2022 Pinot Noir from California Cuvée, and the bottle on the right is a 2023 Rosé of Pinot Noir from Monterey County. Each bottle has a gold medal ribbon with "GOLD" and "95 Points" or "96 Points" written on it.

CASTLE ROCK 2022 Pinot Noir CALIFORNIA CUVÉE

CASTLE ROCK 2023 Rosé of Pinot Noir MONTEREY COUNTY



LA MESA WINS "BEST OF CALIFORNIA" PRIZE AT 2024 STATE FAIR





2019 California State Fair Best of Class

by Dre Vader

We're so pleased to have received two Best of Class of Region awards in this years California State Fair. Everyone had so much fun. We hope you'll join us next year.

- 2016 Phoenix – Gold, Best of Class of Region | 95
- 2016 Grenache – Gold, Best of Class of Region | 96
- 2016 Syrah – Silver | 88
- 2016 Pinot Noir – Silver | 88
- 2016 Cabernet Sauvignon – Bronze | 87



These wineries are very proud of how well they did at the California State Fair wine competition!

But were they just lucky?

An Examination of Judge Reliability at a major U.S. Wine Competition*

Robert T. Hodgson^a

“Why is it that a particular wine wins a Gold medal at one competition and fails to win any award at another?”

“four triplicate samples served to 16 panels of judges. A typical flight consists of 30 wines. When possible, triplicate samples of all four wines were served in the second flight of the day randomly interspersed among the 30 wines. A typical day’s work involves four to six flights, about 150 wines. Each triplicate was poured from the same bottle and served on the same flight.”

Table 1
Example of Recorded Data for Panel Q (2006)

		<i>Original Score</i>			
		J1	J2	J3	J4
Wine 1	{	84	90	80	80
		84	88	94	82
		80	80	82	86
Wine 2	{	80	80	84	84
		90	90	80	82
		96	80	80	82
Wine 3	{	80	80	80	80
		80	80	80	80
		80	80	80	80
Wine 4	{	88	96	80	80
		90	96	82	88
		96	90	80	84

Judge 3 graded the same wine 94 and a 80

Judge 1 graded the same wine 96 and 80

Very consistent results for bad wine!!!

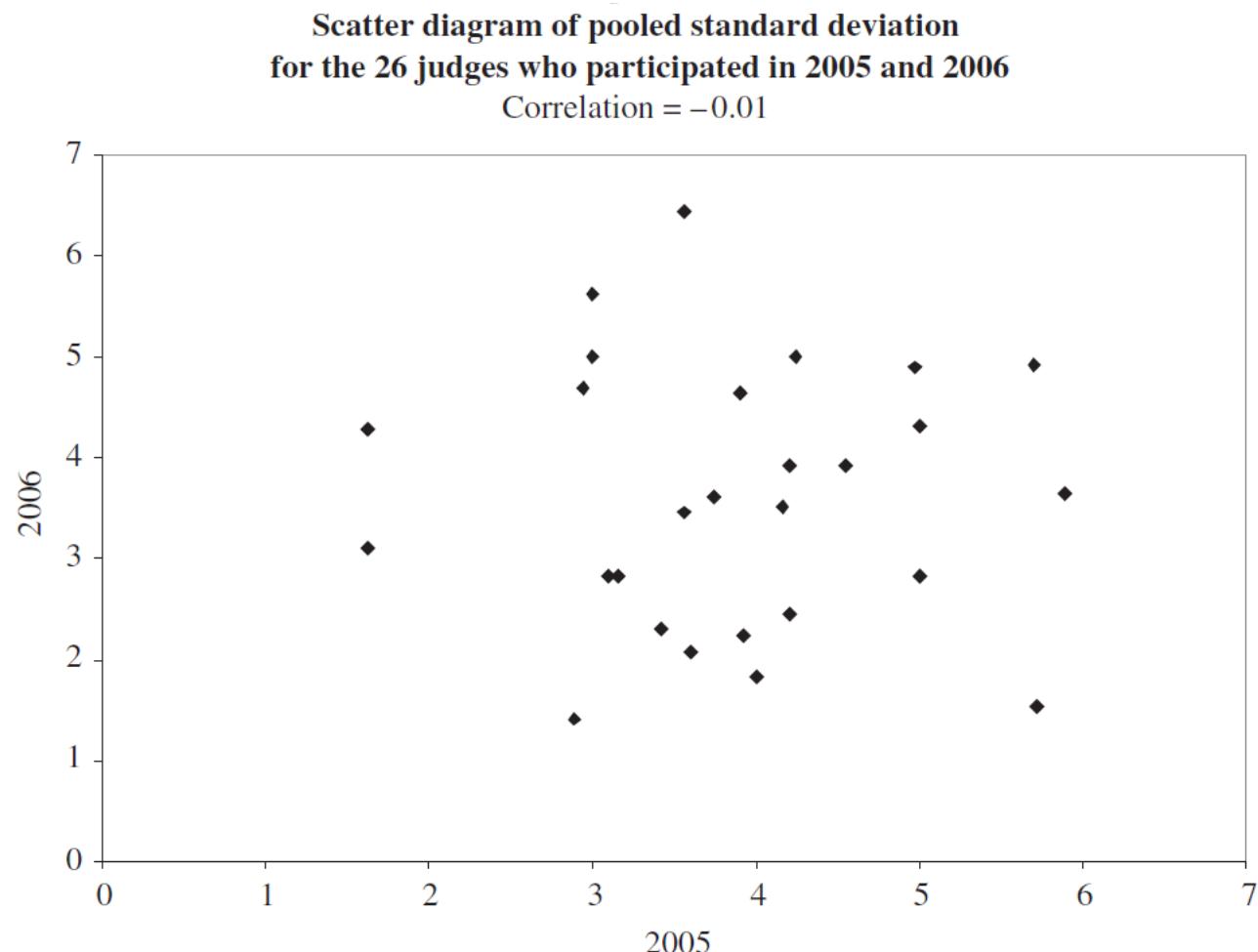
Judge 2: this wine highest score of all!

Judge 3: this wine nearly lowest score of all!

But some judges were more reproducible in scoring the same wine...
are these judges better than the others?

No! They were just lucky!

There was no correlation
in judging effectiveness
from one year to the next



I think the same issues occur with grading essays

Q4:

- Why was the wine competition discussed in the lecture?
- Based on the wine competition study, do you think AI grading of your work would be better than a professor/TA grading it?