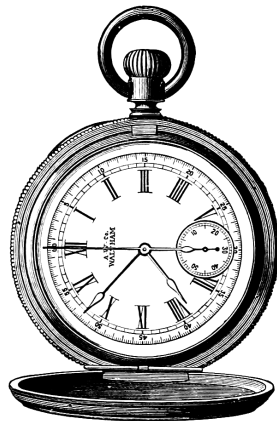


# Myths and Failures: Lessons from the History of Technology

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## Part I: History and Technology





Credit: Christy Bassman, Creative Commons <http://flickr.com/photos/sealine/329654895/>

*“Those who fail to study history  
are doomed to repeat it.”*

*“Those who cannot remember the past  
are condemned to repeat it.”*

—George Santayana



*“Beware the  
misfortunes of  
others.”*

**The Old Lion &  
The Fox**

Winter, “The Aesop for Children”, 1919

<http://read.gov/aesop/001.html>

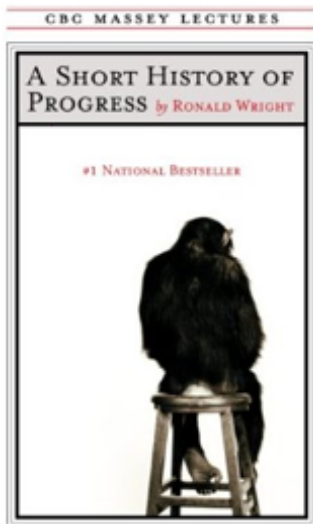
Is the past superior to the present and future?  
Is history worth our time?



Raphael, "School of Athens", c.1509-1511

*“Each time history repeats  
itself, the price goes up.”*

—Ronald Wright







Adrian van Diest, "The Battle of La Hogue"

Should we abandon history and the past to focus on the future?

No matter what use we make of the past, this lesson:

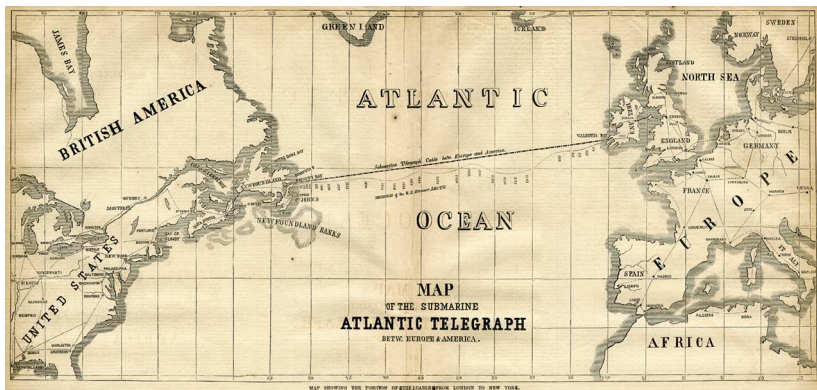
*“Those who fail to study history  
are doomed to repeat it.”*

...is lousy advice.



Heinrich Fueger, "Prometheus", 1817

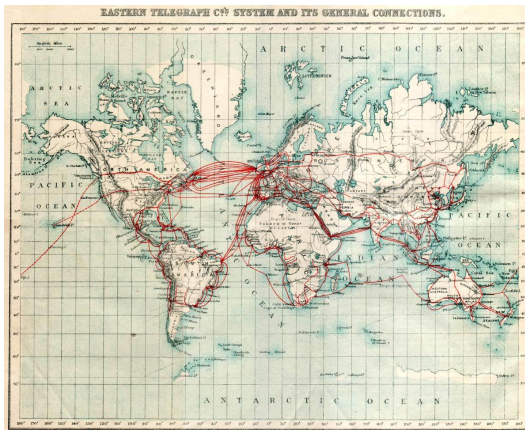
The electric fire of a modern Prometheus



Transatlantic Telegraph, c. 1858<sup>1</sup>

“Peace and good will toward all men!”

<sup>1</sup><http://atlantic-cable.com/Maps/index.htm>



Telegraph map of the world, c. 1901<sup>2</sup>

“We have nothing important to communicate”

<sup>2</sup><http://atlantic-cable.com/Maps/index.htm>

*When people get close to each other, they get more and more savage, impatient with each other... the global village is a place of arduous interfaces and abrasive situations.*

—Marshall McLuhan



Digital strengths and weaknesses

Predicting the future?

Flip a coin.



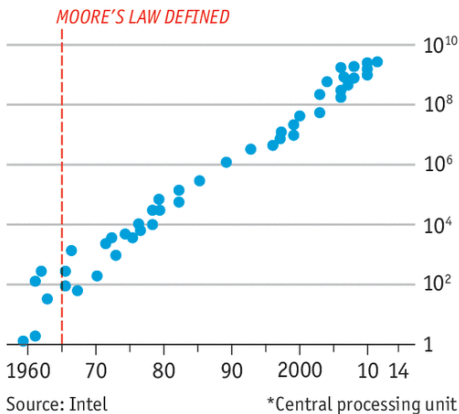
Anticipating success is *hard*. These five technologies were unrecognized as future successes when invented.

- ▶ Telegraph
- ▶ Telephone
- ▶ Phonograph
- ▶ Radio
- ▶ Personal Computers

## A persevering prediction

Number of transistors in CPU\*

Log scale



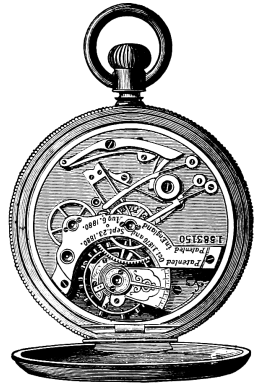
Economist.com

# Prediction or self-fulfilling prophecy?

*“History is a lantern at the stern of a ship, revealing only where it has been.”*

– Coleridge

## Part II: Change and progress





Great Basin Bristlecone Pine, Wikimedia<sup>3</sup>

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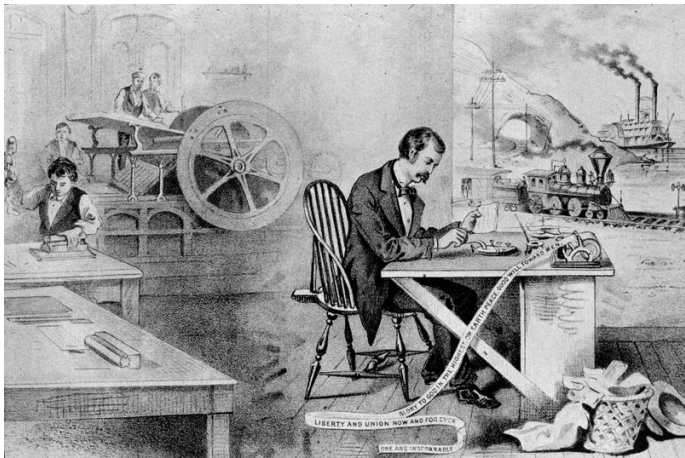
<sup>3</sup>[https://en.wikipedia.org/wiki/File:  
Big\\_bristlecone\\_pine\\_Pinus\\_longaeva.jpg](https://en.wikipedia.org/wiki/File:Big_bristlecone_pine_Pinus_longaeva.jpg)

Is a grocery story a useful “object” measure of wealth?



Wright, "The Orrery", c. 1766

Enlightenment linked technology and society



Currier and Ives, *Progress of the Century*, 1876<sup>4</sup>

Technological progress was worth celebrating

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<sup>4</sup><https://www.loc.gov/resource/ppmsca.17563/>





Gast, *American Progress*, 1872<sup>5</sup>

Technological progress could be very literal

<sup>5</sup>[https://en.wikipedia.org/wiki/American\\_Progress](https://en.wikipedia.org/wiki/American_Progress)

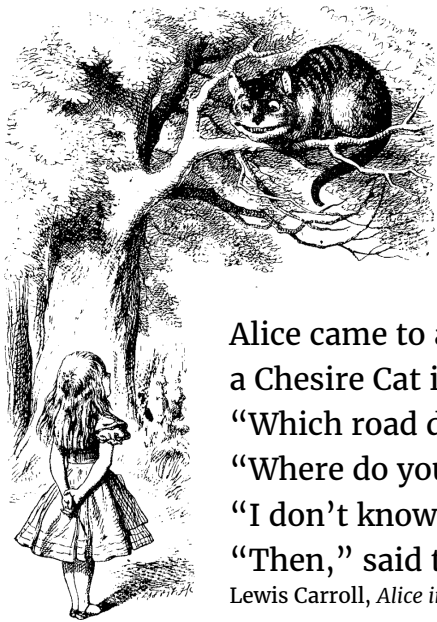
Progress has two definitions:

**1** *Advancement towards a higher state*

**2** *Advancement towards a goal*

Is a history gauge a good progress gauge?





Alice came to a fork in the road and saw a Cheshire Cat in a tree.

“Which road do I take?” she asked.

“Where do you want to go?” said the Cat.

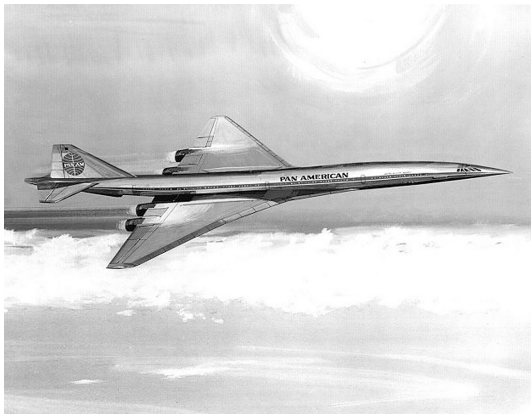
“I don’t know,” Alice answered.

“Then,” said the Cat, “it doesn’t matter.”

Lewis Carroll, *Alice in Wonderland*, 1865.

But if technological progress is inevitable...

...this destroys our duty to question it.



Boeing 2707, CC BY-NC-SA 2.0<sup>7</sup>

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<sup>7</sup>[https://www.flickr.com/photos/x-ray\\_delta\\_one/4049858959/](https://www.flickr.com/photos/x-ray_delta_one/4049858959/)



“The Fall of Icarus”, 17th century<sup>8</sup>

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<sup>8</sup>[https://en.wikipedia.org/wiki/File:%27The\\_Fall\\_of\\_Icarus%27,\\_17th\\_century,\\_Mus%C3%A9\\_Antoine\\_Vivenel.JPG](https://en.wikipedia.org/wiki/File:%27The_Fall_of_Icarus%27,_17th_century,_Mus%C3%A9_Antoine_Vivenel.JPG)

*When you realize nobody can predict the future, you are no longer constrained by the past.*