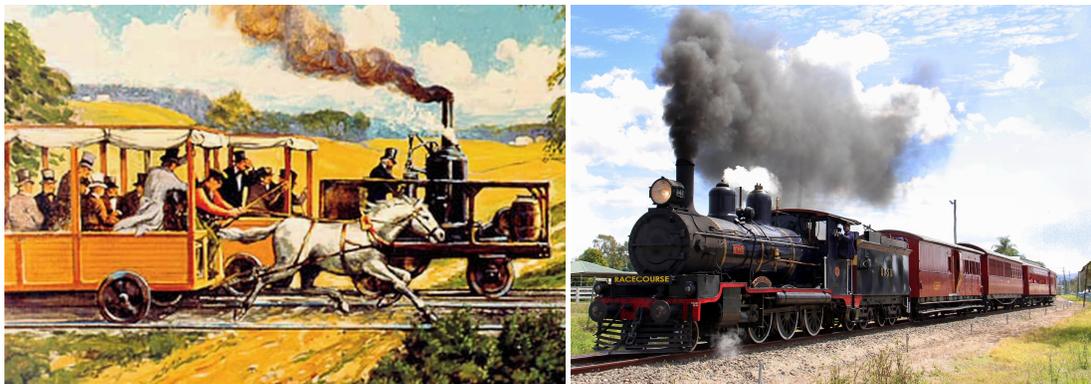


E. The “Age of Steam” or “Proto-Industrial” Phase of History (1769-1869)

1. The Watt Steam Engine is the invention that triggered the “Age of Steam.”
2. Steam engines were used to create machines like the *Spinning Jenny* (for making thread) and the *power loom* (for weaving thread into cloth), which allowed much more clothing to be made.
3. A steam engine could also be paired with a paddle wheel to make it turn and propel a vessel up stream or across oceans, such as the SS Sirius which traveled across the Atlantic ocean in just 19 days in **1837**, compared to the Mayflower, which took 63 days.
4. Soon, steam engines were paired with very basic carriages, of the same kind that were pulled by horses, and soon steam “locomotives” were operating on “railroads.”
5. Progress in this area was slow. That’s why I call it the “proto-industrial” phase of history. In the *pre-industrial* era, there was almost *no* progress. In the *proto-industrial* period, there was progress—but it was slow compared to today’s rate of change.



A factory with steam powered looms could produce thousands of times more clothing than traditional “cottage” industry with the same amount of human labor.



Early steam “locomotives” did lose the first races against horse-drawn carriages, but advancements in steam power soon proved the worth of the new technology.

6. The Age of Steam or Proto-Industrial phase of history is almost exactly **one century**. That’s handy, especially when trying to remember the dates. **C. 1769**, the Watt Steam Engine was invented, and in **1869** the greatest accomplishment of the era, the construction of the first *transcontinental* railroad was completed, linking California to the East Coast.
7. Just as steam technology was peaking, it was already becoming obsolete. In 1870, the Standard Oil company of John D. Rockefeller was formed. This company would propel a whole new industry forward by refining oil into gasoline. Rockefeller became possibly the richest man in all of history. The “*Industrial Revolution*” was truly beginning.