

CAUSATION – THE MODERN REVOLUTION

Purpose

This activity takes a look at a complex historical event—the Industrial Revolution. This is the most complicated event that students will analyze as part of the series on causality, and will help solidify some of the practices they can use—such as connecting cause and effect—to understand how events over time are related. As part of this activity, students categorize and examine causes that have been put forth as essential to the event. They'll then use this information to form an opinion of the analysis offered in the video *The Modern Revolution*. This is the final lesson in the series on causality, and by now your students should have a grasp of how to use cause and effect as analytical tools for understanding change over time and for creating historical narratives.

Process

Capturing Causes

Have your class rewatch *The Modern Revolution*, which you'll find a little earlier in this lesson. Tell students that while they watch the video this time, they should list 15 to 20 causes that led to the Modern Revolution.

Categorizing Causes

Ask each student to divide their causes into longer-term, intermediate-term, and shorter-term causes and place them in the corresponding boxes on the worksheet. Also, ask them to identify the triggering event with an asterisk (*).

Now, have the class look at a larger set of categories to define the event from another point of view. Invite the students to label each cause using one of the following descriptive categories. Note that a few types of causes have changed since they analyzed Alphonse – be sure to review the new categories with your students.

1. Economic (**\$**): These are causes that have to do with the exchange of goods and services.
2. Cultural (**C**): These are causes that have to do with the norms and practices within that community.
3. Psychological (**Ψ**): These are the causes that have to do with the mindset of an individual in our story.
4. Biological (**B**): These are causes that are connected with the physical condition of an individual in our story.
5. Political (**P**): These are causes emerging from a community's systems of power or governing relationships within a community.
6. Technological (**T**): These are causes emerging with types of tools or material objects people use.
7. Environmental (**E**): These are causes emerging from changes in the biosphere.
8. Ideas and Beliefs (**I**): These are causes emerging from the systems of beliefs or ideas shared by a group of people.

Now that they've done that, have them think about the significance or importance that each cause has to generating change. They should label three causes they feel are necessary and three they feel are important using these guidelines:

1. **Necessary**: *These are causes that must have happened before an event or process changed.*
2. **Important**: *These are causes you think were the most important in creating the conditions for the event or process to change.*

Once they've finished, ask students to answer the three questions at the bottom of the Causation – The Modern Revolution Worksheet.

CAUSATION – THE MODERN REVOLUTION

Directions: List your causes. Then, divide them up by short term, intermediate term, and long term and place them in the appropriate boxes. After that, use the key to help you label Role, Significance, and Type. If your teacher asks you to create a causal map, use your answers here to help construct that causal representation.

Explain the causes of: *the Modern Revolution*

Short term - From one instant to a lifetime

Europeans relied on Africa slaves to work on plantations to create more wealth (\$)
Coke is used to refine metals (T)
The steam engine is used for more purposes (T) (I)
Textile machines are invented that make use of the steam engine (T)
There was a slight tweak in the modes of production of the eighteenth century coupled with the adoption of fossil fuels (T)
British find large deposits of easy-to-mine coal (E)
New modes of communication like the telegraph and then the telephone were invented (T)
Mechanization of agricultural production was now possible (T)
Some goods that were historically seen by common people in Britain as luxuries, were suddenly viewed as necessities (\$)
A huge number of goods could be produced at low prices (\$)
Fossil fuels provide low-cost energy (T)

Intermediate term - From a few years to a few hundred years

Afro-Eurasians developed immunities to diseases (B)
The Ottoman Empire began to dominate overland trade routes (\$)
European states were smaller than the empires of Asia and needed more resources to fund wars (P)
Mathematics preserved by Hindu and Islamic scholars (P)
Europeans tried to find new sea routes to Asia and ended up reconnecting world zones (\$)
Collective learning increased when the diversity and size of networks expanded (T) (I)
Europeans began exploring outside of Afro-Eurasia (\$)
Europeans continued to explore the world (\$)
Europeans arrived in Australia in the eighteenth century (\$)
Global networks of trade increase (\$)
Goods from Asia such as gunpowder and the compass aid in European exploration (T)
The British adopted agricultural methods from Flanders (T)
Crops from the Americas change food production in Europe and Asia, which led to an increase in population (\$)
Cotton and sugar become staple crops in the Americas (\$)
Raw materials such as cotton and sugar become important to European economies (\$)
Silver from the Americas generates more wealth for Europe (\$)



CAUSATION – THE MODERN REVOLUTION

Long term - From a hundred years to all time

Coal and oil deposits are solar energy stored up over hundreds of millions of years (E)
 The humans ability to collectively learn allows for new innovations (B)

Legend

Role: (1) Primary/Contributing (2) Secondary/Underlying (*) Triggering Event	Significance: Necessary Important	Type: (\$) Economic (Ψ) Psychological (P) Political (E) Environmental (C) Cultural (B) Biological (T) Technological (I) Ideas/Beliefs
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Once you are done categorizing and labeling causes, answer the following questions:

- What are some of the reasons the Green brothers give as explanation for why the Industrial Revolution did not occur in the Song Dynasty of China?
Sample answer: It might have been that British coal mines needed to pump out water, requiring the use of steam engines. It might have been that they had not adequately united the world zones in a network of trade and collective learning. It might have been it just didn't happen.
- What are some of the essential causes for the Industrial Revolution identified in this video? Of these, name one cause which, had it not happened, might have prevented the Industrial Revolution from taking place.
Sample answer: European exploration, low cost of energy, European reliance on African slaves, invention of textile machines.
- Do you agree with the explanation the Green brothers offer in this video? Why or why not?
Sample answer: Students can agree or disagree with the Green brothers. What's important here is the quality of their explanation.

CAUSATION – THE MODERN REVOLUTION

Purpose

This activity takes a look at a complex historical event—the Industrial Revolution. This is the most complicated event you’ll analyze as part of the series of lessons on causation, but given all your practice identifying causes and effects, you’re ready for the task. As part of this activity, you’ll categorize and examine causes that have been put forth as essential to the event. From there, you’ll use this information to form an opinion of the analysis offered in the video. This is the final lesson in the series on causation, and by now you should have a grasp on how to use cause and effect as analytical tools for understanding change over time and for creating historical narratives.

Process

Capturing Causes

Rewatch *The Modern Revolution*, which you watched a little earlier in this lesson. This time, while you’re watching, use the Causes of the Modern Revolution Worksheet to write down causes that led to the Modern Revolution. You should have at least 15 to 20 causes.

Categorizing Causes

Divide up your causes into longer-term, intermediate-term, and shorter-term causes and place them in the corresponding boxes on the worksheet. Also, identify the triggering event with an asterisk (*).

Now, let’s look at a larger set of categories to define the event from another point of view. Place each cause into one of the following descriptive categories. (Note: Some of these have changed since you analyzed Alphonse the Camel. Be sure to review them with your class.)

On your worksheet, label each of the causes you identified into one of these categories:

Categorizing Causes

1. Economic (**\$**): These are causes that have to do with the exchange of goods and services.
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Now that you’ve done that, think about the significance or importance that each cause has to generating change. Label three necessary and three important causes using these guidelines:

1. Necessary: These are causes that must have happened before an event or process changed.
2. Important: These are causes you think were the most important in creating the conditions for the event or process to change.

Once you’re finished, answer the three questions at the bottom of the Causation – The Modern Revolution Worksheet.

CAUSATION – THE MODERN REVOLUTION

Name:

Date:

Directions: List your causes. Then, divide them up by short term, intermediate term, and long term and place them in the appropriate boxes. After that, use the key to help you label Role, Significance, and Type. If your teacher asks you to create a causal map, use your answers here to help construct that causal representation.

Explain the causes of:

Short term - *From one instant to a lifetime*

Intermediate term - *From a few years to a few hundred years*

CAUSATION – THE MODERN REVOLUTION

Name: Date: Long term - *From a hundred years to all time*

Legend

Role: (1) Primary/Contributing (2) Secondary/Underlying (*) Triggering Event	Significance: <div style="text-align: center;"> Necessary Important </div>	Type: (\$) Economic (Ψ) Psychological (P) Political (E) Environmental (C) Cultural (B) Biological (T) Technological (I) Ideas/Beliefs
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Once you are done categorizing and labeling causes, answer the following questions:

1. What are some of the reasons the Green brothers give as explanation for why the Industrial Revolution did not occur in the Song Dynasty of China?

2. What are some of the essential causes for the Industrial Revolution identified in this video? Of these, name one cause which, had it not happened, might have prevented the Industrial Revolution from taking place.

3. Do you agree with the explanation the Green brothers offer in this video? Why or why not?