

Chapter 19: Technological Advances and Economics in the Global Age Chapter Introduction  
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Printed By: James Harper (carter\_mcquaid@roundrockisd.org)  
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## Chapter Introduction

### Overarching Questions

1. How did the development of new technologies change the world from 1900 to the present? (TEC)
2. How have environmental factors affected human populations over time? (GOV)
3. What were the causes and effects of environmental changes in the period from 1900 to the present? (ENV)
4. How did the global economy change and remain the same between 1900 and the present? (ECN)

### AP® Framework Terms

nuclear power

birth control

vaccines


antibiotics

deforestation

greenhouse gases

Overarching Questions

In 1869, three Japanese businessmen—an entrepreneurial former cook, a green grocer, and a wagon builder—responded to government concerns about urban congestion and applied for a license to build a *jinriksha* (“man-power-vehicle”). They described it as “a little seat in the Western style, mounted on wheels so that it can be pulled about. It does not

shake as much as the usual cart, and it is easy to turn round. It will not hinder other traffic, and since it can be pulled by one person, it is very cheap.”  Their first vehicles, which quickly came to be called rickshaws, appeared a year later. A year after that, in 1871, Japan enacted its first patent law, and the three applied for exclusive manufacturing rights. However, so many workshops were by then turning out rickshaws that their application was denied.

An alternative claim of invention arose when an irascible American Baptist missionary named Jonathan Goble petitioned the Tokyo Metropolitan Government to grant him a share of the tax levied on the 30,000 rickshaws then officially registered. He claimed to be the inventor, and a number of Westerners living in Japan supported him, some stating that Goble had built the first rickshaw for his ailing wife, and others that he had designed it at the request of a Japanese officer for use in the “imperial pleasure gardens.” The Japanese version of the story, which was reinforced in 1900 by government cash awards to the three businessmen, is highly credible since two-wheeled carts with a similar arrangement of shafts for pulling were in use on Japanese farms and for transporting loads well before European carriages came to be known through the “opening of Japan” in the 1850s. Moreover, Japan became the export source for rickshaws throughout Asia and the Indian Ocean region. The Goble story, however, made better sense to Westerners, who had a hard time crediting non-Europeans with inventiveness. People today often look back and marvel at the incredible material changes their parents and grandparents lived through in the twentieth century. Movies, radio, television, telephones, automobiles, and airplanes all developed during the first half of the century. Norms of daily life rooted in the nineteenth century gave way to new assumptions about many aspects of human life.

Yet many of these assumptions applied more to the industrialized countries of Europe and North America than to those parts of the world that before World War II consisted mostly of imperial possessions or, in the case of Latin America, politically independent countries whose economies were dominated by European or American businesses and investors. Automobiles may have changed dating habits in the United States, but not in China or India, where few private individuals owned cars. Telephones may have put people in easy contact with family and friends in Europe, but not in Africa, where imperialist economic interests saw no profit in stringing copper wire throughout the land. Only the decolonization after World War II and the end of the Cold War in 1989 took down the barriers to transfers of technologies around the world—along with global economic infrastructures and environmental costs. However, the new global economic infrastructure also heightened the environmental costs of growth.

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