

Op-Ed: Knox et al., "Evolution of the Core Regions"

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Week 4 of class consisted of a discussion and analysis of the beginnings and spread of the Industrial Revolution. The presentation and text, Chapter 5, "Evolution of the core regions," of *The Geography of the World Economy* by Paul Knox, John Agnew, and Linda McCarthy (Knox et al.), offered an in-depth exploration of the multi-faceted economic impact of the Industrial Revolution across Britain, Western Europe, and North America.

The presentation gives an overview of the 3 waves of the Industrial Revolution (1st - British wave, 2nd - Steam age, 3rd - Motor age). The 1st wave (ca. 1760-1850) encompasses the revolution's inception through the utilization of water-based energy production in canals and the beginnings of automation in the production of textiles. This 1st wave established the growing popularity of coal and iron mining through the creation of Britain's first coal fields and iron ore mining efforts within the empire (pg. 119). The 2nd wave (ca. 1850-1870) is perhaps the most impactful, with the invention of the steam age and rapidly increasing rates of coal and iron resource collection for growing railroad construction and steam engine manufacturing. This age also drew a division in ownership from corporate ownership to the formation of limited liability corporations and the formation of trusts in the US (pg. 120). Finally, the 3rd age (ca. 1870-1914) comprised the discovery of electricity and the invention of the internal combustion engine, which drew populations away from water-powered energy production and coal-centric economies (pg. 121). The further creation of the automobile and assembly line in Ford's factories led to the massive adoption of automotive travel as the primary method of transportation today (slides 6-8).

The text expands on this conversation on the Industrial Revolution by focusing on a few key aspects: spatial-economic organization/redistribution and automation. Highlighting the importance of iron and coal, Knox et al. offer an analysis of the distribution of populations around coal and iron mining cities across the European core as we see an increasing number of specialized labor cities that focus on a

variety of tasks from mining iron ore, refining coal, transport nodes, manufacturing cities, and port cities. This allocation of populations later led to the growing loci of populations into a handful of cities across the country (Britain in their example, but symmetric aspects can be seen in the US) (pg. 116,122). Additionally, the text coined the term "machinofacture" to describe the tremendous shift to machine-based production of raw resource processing and, simultaneously, the assembly of finished consumer products. Manufacturing at this scale contributed to the increasing vertical integration of trusts and economies of scale in the US and the formation of monopolies in steel (Carnegie Steel Company and later J. P. Morgan's U.S. Steel) and oil (Rockefeller's Standard Oil). The core overall incentivized economies of scale like these with practices of import substitution to increase the value of goods in domestic markets (pg. 117-118). The growth of manufacturing-based corporations also led to agglomeration economies that contributed to the spatial reorganization of labor and capital to establish large, specialized, urban cities (e.g., Pittsburgh Steel, Detroit automotive, and, tangentially, California gold rush). Advancing technology also contributed to higher wages for factory workers by implementing the Fordist workplace philosophy — establishing a large middle class — and the redistribution of wealth, creating a significant income disparity between the poor and the elitist CEOs, especially in the US (pg. 122).

In my opinion, our class's analysis of the Industrial Revolution was quite thorough but overlooked specific aspects of society and politics that enormously impacted the discussion of the effects of globalization. The exploration of the cause-and-effect relationship of the significant waves to measurable economic impacts was quite well compared to the Kondratieff long wave (slide 9). However, our discussion omitted (as the class is on geography, not politics, history, or any other field) the increasing corruption in US politics with increasing corporate lobbying and the detrimental living standards of factory workers not only from a relative CPI standpoint but also from the view of accessibility to regulated food (as admonished by Upton Sinclair's *The Jungle*). Furthermore, the growing instability for the poor and middle class due to extortive neoliberal policy borne from unregulated

and poorly enforced anti-trust law allowed for the insidious government control and the arguably delayed establishment of regulating agencies such as the FDA, EPA, and FTC that protected denizens during this period of technologically propelled economic growth. Overall, however, this period of globalization marked the acceleration in growth rates, populations, and technological advancement for decades since and centuries to come.

WC: 756