


# Science, Technology, and Utopia

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*Slouching Towards Utopia* presents a whirlwind history of the political economy of the world during what J. Bradford DeLong calls the “long twentieth century” from 1870 to 2010. Yet it suffers from three problems that could be addressed through a deeper engagement with science and technology studies: technological determinism, economic absolutism, and economic realism.

**Technological determinism** is the description of technological change as inevitable and proceeding according to its own logic. In *Slouching Towards Utopia*, DeLong presents technology as the primary driver of economic growth but never explores how technology itself changes. He explains that

my estimate – or my very crude personal guess – of the average worldwide pace of what is at the core of humanity’s economic growth, the proportional rate of growth of my index of the value of the stock of useful ideas about manipulating nature and organizing humans that were discovered, developed, and deployed into the world economy, shot up from about 0.45 percent per year before 1870 to 2.1 percent per year afterward, truly a watershed boundary-crossing difference (3).

This is an impressive increase in a totally made-up metric of a vague notion of “science and technology.” It suggests that science and technology advances teleologically, grows cumulatively, and straightforwardly improves the human condition. In this view, technological development is exogenous to society, accreting in the background as the primary driver of the economic growth that is DeLong’s focus. What is missing are the historical circumstances that may have caused an investment in productive technology to increase right around 1870, such as the abolition of slavery in the United States (Levy 2021).

DeLong is absolutely correct that technology has been a defining feature of the twentieth century, but its historical role has been much more complicated than he suggests. As an example, DeLong presents the development of labor-saving household technology in the mid-twentieth century as just that: something that reduced the amount of work women had to do in the home so that “a great deal of female labor that had previously been tied to full-time work within the household could now be redirected to other purposes” (328). There is no sense of the complexities of these or other technologies, or of the ways in which they created, as Ruth Schwartz Cowan (1983) put it 40 years ago, “more work for mother” because the gendered division of labor is a social phenomenon, not one determined by the availability of technology. Later in the book, DeLong presents the development of containerized shipping and information technology as two innovations that increased the pace of global economic growth in the final decades of the twentieth

century. They certainly had this effect, but, in DeLong's account, these and other technologies seem to simply arise organically and have straightforwardly positive consequences. DeLong explains that more attention to "precisely how new technologies have advanced human collective powers over nature" (469) would have required a different book, one written by an engineer, but that kind of information isn't necessary. What would improve DeLong's history is the recognition that new technologies don't simply advance "human collective powers over nature" (469). They also advance the powers of some humans over other humans, and most technologies have been specifically designed to do exactly that (e.g., Edwards 1997; Levinson 2016).

**Economic absolutism** is the presentation of economic metrics as if their meanings were transhistorical and absolute. One example in *Slouching Towards Utopia* is the measure of humanity's overall wealth. DeLong explains that global wealth is now more than eight times what it was in 1870, interpreting this metric as a measure of humanity's overall well-being. Wealth represents power that can be exchanged for goods and services, but humanity as a whole has nobody to exchange with. For that reason, a measure of humanity's wealth is not analogous to a measure of the wealth of an individual or group. What it really represents is the sum total of market exchange, and as DeLong effectively shows in the book, markets can't meet all of humanity's needs.

To be sure, for the most people in the world, the human condition is better now than it was 150 years ago. However, global wealth is not an appropriate metric for it because it doesn't account for inequality. It is undeniable that the US economy, as we measure it now, grew tremendously between 1870 and 1914. But to use this as a metric of American well-being, as DeLong does, would be to suggest that this prosperity was shared equitably. DeLong describes a world-historical shift occurring right around 1870. Prior to that, in his narrative, anyone who escaped grinding poverty did so through extraction and exploitation, holding everyone else down. Beginning around 1870, however, DeLong argues that globalization, modern corporations, and the industrial research lab produced enough economic growth that everyone could prosper, even as the population grew. What is missing from this account is the fact that many of the technologies that generated this growth were *technologies of extraction and exploitation*. For the world's industrial nations, this was the era of imperialism abroad and robber barons at home. In the United States (the primary focus of DeLong's book), railroad magnates enclosed public lands and stole public funds (White 2011), and fossil fuel executives literally had their workers slaughtered to keep labor costs down (Gitelman 1988). Any sharing of prosperity that occurred did so through organized labor, which was also facilitated by some of the same technologies (Mitchell 2011). All of this is missing from *Slouching Towards Utopia*.

The second example of economic absolutism is DeLong's metric of poverty. He explains that, until 1870, most people in the world were desperately poor, which DeLong defines as living on less than \$2 per day in inflation-adjusted terms, or as lacking access to technologies that most of us take for granted today. There is no question that many fewer people today live on less than \$2 a day in constant terms or that nobody had computers 100 years ago. But these are not historically adequate definitions of poverty. Lacking access to a technology that doesn't exist

doesn't make you poor, nor does lacking access to cash in a world where there are other ways to meet your existential needs. Adjusting for inflation doesn't change the fact that \$2 in a world where all of your needs must be met on the market is very different than \$2 in a world where there are other ways to get by. It isn't a lack of cash that makes people poor, it is the enclosure of public goods as private property (Sen 1987). This is an important point made by Karl Polanyi (1944) – a major theoretical touchstone in *Slouching Towards Utopia* – that DeLong overlooks. He describes Polanyi's stance as being that "the market was made for man, not man for the market" (13). But Polanyi argued that markets are made *by* men, and it is the enclosure by markets of the means of meeting humanity's existential needs that makes people poor.

**Economic realism** is the presentation of markets and economies as natural objects with a transhistorical existence rather than as social constructs. Describing markets and economies as social constructs isn't to say they aren't real. Rather, it is to say that they exist only because they were produced through statistical and political activities that were done by particular people in particular times and places that can be and have been documented historically. DeLong argues that the long twentieth century needs to be understood through an economic lens, and he is not wrong. But the *reason* it needs to be understood through an economic lens is that the twentieth century saw the statistical and political creation of a thing called "the economy" and the rise of the expectation that governments should maximize economies (Hirschman 2016; Mitchell 2011, 2014). This history is totally missing from *Slouching Towards Utopia*. Also missing is the discipline of economics as a historical actor (e.g., Fourcade 2006; Mitchell 2005). DeLong presents the economic thought of people like Friedrich von Hayek and Milton and Rose Friedman, but he doesn't explain just how powerful their ideas were, or the material consequences of their uptake by people who had the power to implement them (e.g., Burgin 2015). Instead, DeLong presents what he calls "the neoliberal turn" as a popular backlash against the previous 30 years of social democracy, as if policy in the United States were a straightforward reflection of public opinion.


## References

- Burgin, Angus** (2015) *The Great Persuasion: Reinventing Free Markets since the Depression*. Cambridge, MA: Harvard University Press.
- Cowan, Ruth Schwartz** (1983) *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York, NY: Basic Books.
- Edwards, Paul** (1997) *The Closed World: Computers and the Politics of Discourse in Cold War America*. Cambridge, MA: MIT Press.
- Fourcade, Marion** (2006) "The construction of a global profession: The transnationalization of economics." *American Journal of Sociology* 112 (1): 145–94.
- Gitelman, H. M.** (1988) *The Legacy of the Ludlow Massacre: A Chapter in American Industrial Relations*. Philadelphia: University of Pennsylvania Press.
- Hirschman, Dan** (2016) "Inventing the economy (Or, how we learned to stop worrying and love the GDP)." Ph.D. diss., University of Michigan.
- Levinson, Marc** (2016) *The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger*, 2nd ed. Princeton, NJ: Princeton University Press.
- Levy, Jonathan** (2021) *Ages of American Capitalism: A History of the United States*. New York: Penguin Random House.

- Mitchell, Timothy** (2005) “The work of economics: How a discipline makes its world.” *European Journal of Sociology/Archives Européennes De Sociologie* 46 (2): 297–320.
- (2011) *Carbon Democracy: Political Power in the Age of Oil*. London: Verso.
- (2014) “Economentality: How the future entered government.” *Critical Inquiry* 40 (4): 479–507.
- Polanyi, Karl** (1944) *The Great Transformation*. New York: Farrar and Rinehart.
- Sen, Amartya** (1987) *The Standard of Living*. Cambridge: Cambridge University Press.
- White, Richard** (2011) *Railroaded: The Transcontinentals and the Making of Modern America*. New York: W. W. Norton.

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## Power and Organization in the Making of the Long Twentieth Century: A Response to J. Bradford DeLong’s *Slouching Towards Utopia: An Economic History of the Twentieth Century*

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Professor DeLong has clearly been thinking about the ideas in this book for a long time. Even from reading the blurbs on the back cover, there is a strong subtext of “damn, took you long enough!” that is detectable. Fortunately, it was worth the wait.

It is hard to think of a better place to discuss this book than the Palmer House Hilton. First opened in September 1870, its existence maps perfectly onto DeLong’s idea of the “long twentieth century.” It is of course located in Chicago, a city that embodies the transformations at the heart of the book.

The Palmer House is a product of the first Gilded Age when economic takeoff and technological innovations made possible a standard of living for some that was previously unthinkable. It was Chicago’s first hotel with elevators, and the first hotel with electric light bulbs and telephones in the guest rooms – products of the industrial research labs of the time. It also had ostentatious symbols of old-school opulence, like a barbershop whose floor was tiled entirely in silver dollars.

Chicago businessman Potter Palmer had the Palmer House built as a wedding gift for his young bride, Bertha Honoré. So it was a symbol of his vast personal wealth and, by extension, symbolic of the vast wealth inequality that characterized the era. It was also a symbol of the ownership structures of the time, with individual “robber barons” controlling vast holdings.

Palmer rebuilt the hotel on the same site in 1925, the heart of the Roaring Twenties, just before the Great Depression. Then, in 1945, right as the postwar