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Değerlendirmeler

Simon Pirani, *Burning up: A Global History of Fossil Fuel Consumption*. Pluto Press, 2018, 272 pp.

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Simon Pirani is an energy historian at Oxford Institute for Energy Studies and an honorary professor at the School of Modern Languages and Cultures – Durham University, and known for his publications on the development of natural gas markets and changing consumption patterns in the former Soviet Union, post-Soviet Russia, and Ukraine (Pirani, 2008, 2009a, 2009b; Henderson & Pirani, 2014).

He seeks answers to the following questions in his most recent book *Burning Up* (2018) that sheds light on the global adventure of fossil fuel consumption: How did fossil fuels dominate our lives in 200 years from the industrial revolution to the Paris Climate Agreement, especially after 1950? Can we understand the consumption of unbridled fossil fuel through technological, social, and economic systems without reducing it to individual consumer responsibility? Can ethico-political questions be asked on a more egalitarian and truly sustainable model of production and consumption rather than treating projections to abandon fossil fuels as technical and market-oriented transformations?

The most important contribution of Pirani's theoretical position to energy studies is that he tries to explain fossil fuel consumption with reference to technological, social, and economic systems as opposed to culturalist and psychologist interpretations that emphasize cultural trends and psychological motivation of consumers. According to this argument, which he supports with comprehensive statistical data, fossil fuels are consumed directly by relatively few individuals and households but mostly indirectly to produce industrial and agricultural materials. When individuals consume fossil fuels directly in the form of gasoline or natural

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gas, they do so in the context of social and economic systems over which they have little control. Urban development locates homes, businesses, and shops away from each other; work patterns require individuals to make journeys. Moreover, technological systems that consume fossil fuels (e.g., electrical networks) are shaped by the social and economic systems in which they are embedded (capitalism or state socialism). Pirani says, "Fuels are consumed not by undifferentiated humanity, but by people living in, and divided by, these unequal social and economic systems" (p. 15).

Inspired by Marx, Weber, Veblen, Mumford, Galbraith, and Schnaiberg's critical approaches to consumption, Pirani embraces the argument that the desires and aspirations that are allegedly the basis of consumption have been created as a result of production, advertising, and marketing processes. While appreciating the approaches in the 1970s that emphasized consumer sovereignty (i.e., people use consumption to shape their own lives rather than being a victim of advertising) as opposed to the idea of the manipulated consumer, he criticizes that these views left the social realities surrounding consumers' agency unclear. On the contrary, he calls for understanding consumerism "as a social phenomenon used by, and reinforced by, political and corporate elites" alongside no viewing consumers either as "stupid dupes of advertising" (pp. 173–174).

Pirani focuses throughout the book on the post-war expansion of fossil fuel-dependent systems (specifically oil use) all over the world. He indicates these systems have evolved since 1950 through six social and economic processes: industrialization (especially the expansion of energy-intensive industries such as steel and cement); technological and other changes in the labor process (in the industry as well as in the domestic sphere); electrification; urbanization and motorization; and household material consumption and the growth of consumerism. In all these processes, Pirani meticulously follows the *commodification* story of energy, which has followed a similar if not an identical pattern for different countries. With the emergence of oil as the main energy source, car-centered transportation systems primarily in the US have become widespread and intensified as the car industry has expanded. Large manufacturers lobbied for the rebuilding of cities to make them suitable for cars. Ultimately, the car has become an indispensable part of rich countries' daily lives. After World War II, this trend became dominant worldwide. Pirani, meanwhile, makes an important reference to the devastating consequences the global defense industry's fossil dependence has had since 1950, linking the post-war explosion of fossil fuel consumption with the dramatic rise in armament and militarization during the war (p.33).

After the war, both heavy industrial production and everyday fuel consumption (cars and household appliances) increased tremendously. As Pirani illustrates strikingly, apart from the temporary and short-term stagnations and declines during the world wars, oil crises (1973, 1979), and economic crises (1980-82, 2008-09), the overall global consumption of fossil fuels has risen. The debate on reducing fossil fuel dependence, conserving energy, and shifting to alternative energies (nuclear or renewables) was pushed into the background after the tough times of the oil crises. The profitability crisis was answered by neoliberal policies such as the restructuring of capital and working processes, financial deregulation, and welfare spending cuts. Exporting energy-intensive industrial processes from the global North to the global South (especially Asia) was one of these responses. After the 1990s, especially in the 2000s, the share of non-OECD countries in total consumption exceeded that of OECD countries. But this, as Pirani persistently emphasizes, points to the structuring of new patterns of inequality on a global scale rather than demonstrate the diligent performance of rich countries in mitigation. This export serves both to reduce production costs and to remove responsibility for climate change from the rich North (p. 156).

The gap in fossil fuel consumption between the global North and South is one of the main focuses of the book. In Chapter 7, Pirani focuses on electrification experiences around the world and compares consumption in the US, Canada, and Western European countries to those in Asia and Africa, arriving at striking results. A similar trend, albeit at varying levels, is observed with the Soviets and in China, India, Nigeria, and South Africa: electrification strategies give the industry privileges over populations/households and cities over rural areas (except, to some extent, in the case of China), so the differences between average citizens in rich countries and the poorest citizens of the poor countries would probably show more dramatic results than national/per capita comparisons. Moreover, who would be held responsible for the enormous export of fossil fuel consumption in Asia after 1990 is a matter of controversy. Pirani says that if we count the emissions from the South in the production of exported goods consumed in the North as the North's fossil fuel consumption, the historical trend in energy consumption can be seen to continue in favor of the North (pp. 59–62, 160).

With regard to the South, Pirani's critique of the so-called correlation between population growth and fossil fuel consumption is worth mentioning as it provides the reader with a sharp glimpse of the global inequalities mentioned above. Against the widespread approach wherein population growth around the world is seen

as the main driver of fossil fuel consumption (and indeed consumption and ecological destruction in general), Pirani argues that the relationship between the two is complex and largely mediated by systems. Situations exist in which an indirect relationship can be mentioned, but a direct causal relationship cannot be established at all. This is evidenced by the low share poor countries have in global carbon emissions while having a population growth rate much higher than in rich countries (pp. 56–59). Thus, when the issue is reduced to a population debate isolated from political-economic processes, global patterns of inequality become invisible. Pirani skillfully uncovers this neo-Malthusian misrepresentation.

Chapter 12, in which Pirani documents the story of the global failure to have reduced greenhouse gas emissions from the 1992 Rio Conference to the 2015 Paris agreement, highlights the alternative political-ecological challenges facing the current political imagination that is trapped between science denial and in-market solutions (carbon markets, clean development mechanisms, etc.) as ecological economics, eco-socialism, de-growth, and other radical approaches aimed at a strong social change. Pirani argues that renouncing fossil fuels is a matter of transforming the social and economic systems that underpin the technological systems rather than a matter of technocracy. This is what he understands by socialism: "We can envisage forms of social organization that supersede corporate and state control of the economy, advance collective and community control, and, crucially, in which employed labor is superseded by more meaningful types of human activity" (p. 186).

Finally, a few criticisms for the contribution: Pirani's detailed work provides a comprehensive picture of the history of energy, but at the cost of writing a global history, examples outside the rich world remain limited. The major fossil fuel actors like China, India, and the Soviet Union are justifiably prioritized, but not much is said about the role of major actors in the Middle East and South America in the history of consumption aside from the oil crises.

The second critique is about the organization of the book. I did not find placing the theoretical discussion on consumption at the end of the book to be meaningful. The most important arguments of the book are based on this theoretical background. Had the author put forward his theoretical position first and provided a narrative consistent with this theoretical promise throughout the book, this would have facilitated the reader's ability to follow the study (which already contains very intense historical and statistical data). Moreover, some places are found where Pi-

rani falls into repetition. For example, the first and second parts could be combined more succinctly. Interruptions that occurr within and between different sections, although rare, also make reading difficult from time to time.

My last criticism is about the agency problem. Having a structural/systemic position, Pirani partially undervalues individual consumers' and civil society's past and future responsibilities, misdemeanors, and change-making potential. Throughout the book, we see great actors: states, companies, and international organizations. In my opinion, the potentials social movements have (p. 187) deserve more emphasis throughout the book.

To speak of the book's place in the literature, one can consider it as part of an increasing trend of scholarship on environmental and energy history. Over the last decade, the fields of history and historical sociology have witnessed an increase in academic interest in the history of fossil-based energy. Beyond the total historical narratives positioning energy in the context of the history of civilization (Penna, 2020; Rhodes, 2018; Smil, 2017), critical historical sociological studies have been conducted that examine the role of energy flows in the emergence of industrial capitalism and the contribution of the transition to fossil fuels in establishing the capitalist labor regime (Daggett, 2019; Malm, 2016; Wrigley, 2010). Examining the tense role of fossil fuels between the democratization processes in the global North and imperial aspirations toward the global South, Timothy Mitchell's study (2013) continues to be a guide for historical political ecology studies. Brian C. Black's work on the world history of oil (2012) also points to the limits and crises of today's fossil fuel regime. But these studies do not specifically focus on the global consumption of fossil fuels, which is what differentiates Pirani's work. The author stands close to studies focusing on the social and cultural history of energy (Huber, 2013; Nye, 1999) and locates the study within a consumption debate. Three distinctive concerns stand out: 1) making sense of fossil fuel consumption through systems rather than individual-based, 2) revealing global inequality patterns in fossil fuel consumption, and 3) discussing the possibilities of transition to a fossil-fuel-free system. Many of the studies listed above have speculated about the transition to more sustainable energy systems, as Pirani does, but not all of them have a considerable anticapitalist apprehension. As such, while Pirani does not provide much original data or questions in *Burning Up*, he places already-known facts within a context of theoretical, moral, and political debate, thus making the book, beyond historiography, a robust call for an egalitarian future in which fossil fuels are abandoned.

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