

## Note de recherche

### Renewable Energy Technologies in the Socialist and Communist Societies Envisioned by William Morris and August Bebel

DENNIS BARTELS

The nineteenth-century English designer, writer, and political activist, William Morris (1834–1896), saw “state socialism” as evolving after the revolutionary overthrow of capitalism. He hoped that state socialism would be followed by the sort of “higher” communist society that he sketched in his utopian novel, *News from Nowhere* ([1890] 1970). Morris’s contemporary, the German socialist leader, August Bebel (1840–1913) also envisioned a socialist society that would succeed capitalism, and outlined its major features in his influential book, *Woman in the Past, Present and Future* ([1883] 1988), abridged by Progress Publishers in Moscow (1971) under the title, *Society of the Future*. In this research note, Morris and Bebel’s views on the role of eco-friendly and renewable energy technologies in socialist and communist societies will be compared. Differences between their visions of future technology and actual technological developments in the former USSR and in contemporary capitalist society will be briefly explored.

A major theme in the political writing and lecturing of Morris was that the quest for short-term profit inevitably brings environmental degradation. In his 1878 lecture, “The Lesser Arts,” he said, “Is money to be gathered? Cut down the pleasant trees among the houses, pull down ancient and venerable buildings for the money that a few square yards of London dirt will fetch, blacken rivers, hide the sun and poison the air with smoke and worse, and it’s nobody’s business to see it or mend it — that is all that modern commerce, the counting-house, forgetful of the workshop, will do for us herein” ([1878] 1962: 102–3).

Morris also believed that, in a capitalist society, science and technology would not be used to remediate environmental degradation: “I fear that she [science] is so much in the pay of the counting-house...and the drill sergeant, that she is too busy... [to teach] Manchester how to consume its own

smoke, or Leeds how to get rid of its superfluous black dye without turning it into the river” ([1878] 1962: 85).

Morris suggested that in the phase of state socialism, working people, represented by the state, would take over “*all the means of production*: that is, credit, railways, mines, factories, shipping, land [and] machinery...” ([1887] 1910–1915: 232). He hoped that a socialist state would allocate resources for environmental restoration, and ensure that productive technology was eco-friendly. In, “A Factory As It Might Be,” published in 1884, he wrote, “...our factory must make no sordid litter, befoul no water, nor poison the air with smoke” (1884b: 2). In, “Why Not?”, Morris wrote, “It seems probable that the development of electricity as a motive power will make it easier to undo the evils brought upon us by capitalist tyranny...but even if it turns out that we must still be dependent on coal and steam for force, much could still be done toward making life pleasant if universal co-operation were to take the place of our present competitive anarchy” (1884c: 2).

Morris saw the productive technology of socialist society as a legacy of capitalism, and expected that rapid technological development in the “lower stage” of communism — that is, state socialism — would greatly shorten the work day. In, “Work In A Factory As It Might Be,” he wrote, “...machines of the most ingenious and best approved kinds will be used when necessary, but will be used simply to save human labour...it follows that much less labour will be necessary for each workman; all the more as we are going to get rid of all non-workers and busy idle people; so that the working time of each member of our factory will be very short, say, to much within the mark, four hours a day” (1884a: 2). Bebel expected that the work day might be less than three hours in a socialist society ([1883] 1988: 193).

After the development of a state socialist leisure society, Morris envisaged a spontaneous movement toward communal, physical labour that integrated the decorative arts. This transition to communism would not, however, involve a wholesale rejection of industrial technology. Even though people in Morris's utopian society, *Nowhere*, prefer to ride horses and to harvest hay with scythes, heavy loads are hauled on canals by "force barges" powered by engines which do not burn fossil fuels ([1890] 1970: 140).

Bebel's work centred on the subordination of women under capitalism, and on the expected emancipation of women under socialism. *Woman in the Past, Present and Future*, was widely influential. "It was described by one contemporary as 'the veritable Bible of young socialists.'" It was almost certainly the most popular socialist text in any language during this period. First published in 1879, with an improved edition following in 1883, it was translated into several languages in the following years, topping the socialist best-seller charts" (Donald 1988: i). After the Bolshevik Revolution, interest in Bebel's work waned among socialists, partly because Lenin criticized Bebel's view that the state in socialist society would cease to be an instrument of class rule. Rather, Lenin argued, the working class would require a strong state to protect socialism from internal and external enemies who wished to restore capitalism ([1918] 1992: 58–61). Following Lenin, some Soviet Marxist theorists suggested that Bebel had not clearly distinguished between the "lower stage" of communism — that is, state socialism — theoretically organized according to the principle, "From each according to their ability, to each according to their work," and the "higher stage" of communism, theoretically organized according to the principle, "From each according to their ability, to each according to their need" (see Oizerman 1971: 7–15). In the "higher" communist stage, the state was to wither away. Morris explicitly addressed the dissolution of the state in *News from Nowhere* ([1890] 1970: 63–67).

Like Morris, Bebel hoped that productive technology in socialist society would be eco-friendly. He wrote, "...labour is...to be as pleasant as possible. This requires tastefully and practically equipped workshops, the utmost precautions against all danger, the removal of unpleasant odours, vapours, smoke, etc..." ([1883] 1971: 36).

Critics and historians have largely overlooked Bebel's emphasis on the central role that he hoped renewable energy technologies would play in a socialist society. Unlike Morris, Bebel focused on specific technologies and scientific discoveries,

and suggested that their development would be crucial to the establishment of a socialist utopia. He quoted F. Kohlrausch, a professor at Berlin University, and the English physicist, J. J. Thompson, about the limitless energy available from sunlight, and went on to write that solar power "...removes the fear that we shall ever run short of fuel. And since the invention of storage batteries enables us to harness large quantities of energy and to store them for utilisation at any place and any time, it will be possible to store up and utilise, in addition to the power provided by the sun and the tides, the power provided by the wind and mountain streams..." ([1883] 1971: 39–41). In a footnote, Bebel wrote, "As early as 1864 Augustin Murchot attempted to make direct use of the heat of the sun for industrial purposes and designed a heliomotor, which was improved by Pifre. The biggest heliomotor is installed in California and is used to pump up water from a well at a speed of 11,000 liters a minute" ([1883] 1971: 40).

Bebel also wrote about contemporary Fauré Batteries: "...it has already been proved that great quantities of force, which, unlike the tides, wind, and mountain streams are only at our disposal periodically, can be bound and applied at any given place or at any given time. But all these discoveries and incentives are still in embryos, whose full-grown shape we can surmise but not wholly foresee" ([1883] 1988: 189).

According to the Europulse Web site on battery history,

*Around 1880 Emile Alphonse Fauré developed a process for covering both sides of a lead plate with a paste of lead powder and sulfuric acid. This meant that the plates could achieve a particularly high capacity with the first charge, the so-called "formation"...plans were made for large electricity stores in the electric power supply. For example, William Thompson [later Lord Kelvin] drew up a plan to supply the city of Buffalo with electricity from Niagara Falls. It was to be generated at 80,000 volts and supplied to Buffalo via a battery with 40,000 cells...*

*However, the Fauré cells, in which positive and negative electrodes were wound spirally, proved not to be very durable and failed after only a few charge/discharge cycles. ([www.europulse.com/battery\\_history](http://www.europulse.com/battery_history), April, 2002)*

Bebel also envisaged the widespread use of geothermal power. He wrote, "Man should turn his thoughts to the utilisation of *solar heat* and *heat from the earth's interior*. There is reason to hope

that both sources will be used boundlessly. To bore a well of 3 000 to 4 000 metres is not beyond the powers of present-day engineers, let alone those of the future..." ([1883] 1971: 46).

It is interesting to speculate about whether Bebel's views on eco-friendly technology influenced Morris, or vice versa. Bebel was a founder of the German Social Democratic Party, and regularly corresponded during the 1880s with Marx and Engels in London. Morris also lived in London at that time and was one of the founders of the Socialist League, which included Marx's daughter, Eleanor, and her husband, Edward Aveling. Morris and the Socialist League are mentioned by Engels in letters posted to Bebel in Germany (Lindsay 1975: 303–304). Major biographies of Morris by E. P. Thompson (1977), and Fiona MacCarthy (1994), however, do not mention possible mutual influences between Bebel and Morris.

Both Morris and Bebel expected that the socialist societies would inherit highly-productive technologies from capitalism, which could be quickly adapted to be eco-friendly. But the technology of the West, let alone that of the Czarist Empire at the time of the Bolshevik Revolution of 1917, was nowhere near the level of development which Bebel and Morris hoped would be achieved under socialism. Nor were eco-friendly technologies under development in Britain in 1952, the year in which British capitalism is overthrown by socialist revolution in *News from Nowhere*. Instead, fossil fuel and related industries burgeoned both in the USSR and in the capitalist world during the 1950s. Unfortunately, Morris's timetables for capitalist and state socialist technological development did not match reality.

The contradictions which Marx, Engels, Morris, and Bebel saw as undermining capitalism are still at work. The quest for short-term profits has brought environmental degradation that threatens not only

capitalism, but the entire human species. It seems increasingly clear that capitalism is incapable of recognizing what Marx referred to as the necessity of bequeathing the earth in an improved state for successive generations ([1894] 1976: 911; see Foster 2000: 175). More specifically, greenhouse gas emissions caused by combustion of fossil fuels are changing the earth's climate and bringing an increasing frequency of extreme weather events that are beginning to undermine the process of capital accumulation (see Leggett 1999). This has compelled development of "clean" energy technologies, even though their propagation is now impeded by the political allies of fossil fuel and related industries in the George W. Bush administration. It seems unlikely, however, that segments of capitalist classes will be able to indefinitely block working people's access to technologies based on wind, tidal, geothermal, and other sources of energy reminiscent of the force barges in *News from Nowhere*, or the "clean" power sources in Bebel's utopia.

While eco-friendly and renewable energy technologies were not widely produced and propagated in the former USSR, socialist Cuba has made notable advances in reduction of greenhouse gas emissions. Automobiles have been largely replaced by bicycles in Havana, and large-scale use of pesticides and chemical fertilizers has been replaced by organic farming and biological pest controls throughout Cuba (see *Velorution* 1996; Warwick 1999). This surely would have pleased both Morris and Bebel.

The threat of anthropogenic environmental catastrophe has posed the question of how eco-friendly technologies might be widely and rapidly produced and propagated. Morris and Bebel believed that this could only occur within socialist relations of production. Whether or not they were correct may turn out to be directly relevant to the survival of humanity.

#### REFERENCES

- Bebel, August. [1883] 1988. *Woman, Past, Present and Future*. London: Zwan Publications.
- . [1883] 1971. *Society of the Future*. Moscow: Progress Publishers.
- Donald, Moira. 1988. "Introduction" to Bebel, *Woman, Past, Present and Future*.
- Foster, John Bellamy. 2000. *Marx's Ecology*. New York: Monthly Review Press.
- Leggett, Jeremy. 1999. *The Carbon War*. London: Allen Lane – Penguin.
- Lenin, V. I. [1918] 1992. *State and Revolution*. London: Penguin.
- Lindsay, Jack. 1975. *William Morris: His Life and Work*. New York: Taplinger Publishing Co.
- MacCarthy, Fiona. 1994. *William Morris: A Life For Our Time*. London: Faber and Faber.
- Marx, Karl. [1894] 1976. *Capital*, vol. III. New York: Vintage.
- Morris, William. [1890] 1970. *News from Nowhere*. London: Routledge and Kegan Paul.

- 1887. "True and False Society." In *The Collected Works of William Morris, Signs of Change, Lectures on Socialism*, vol. 23, edited by May Morris (London: Longman's 1910–1915): 232.
- 1884a. "Work In A Factory As It Might Be." *Justice* 1, no. 20 (31 May). In *Political Writings* [of William Morris], edited and introduced by Nicholas Salmon, a selection of Morris's contributions to *Justice* and *The Commonwealth 1883–1890*. Bristol: Thoemmes Press, 1994: 39–46.
- 1884b. "A Factory As It Might Be." *Justice* 1, no. 18 (17 May). In *Political Writings* [of William Morris], edited and introduced by Nicholas Salmon, a selection of Morris's contributions to *Justice* and *The Commonwealth 1883–1890*. Bristol: Thoemmes Press, 1994: 32–35.
- 1884c. "Why Not?" *Justice* 1, no. 13 (12 April). In *Political Writings* [of William Morris], edited and introduced by Nicholas Salmon, a selection of Morris's contributions to *Justice* and *The Commonwealth 1883–1890*. Bristol: Thoemmes Press, 1994: 24–27.
- 1878. "The Lesser Arts." In *News from Nowhere and Selected Writings* [by William Morris], edited by Asa Briggs. London: Penguin Books, 1962: 84–104.
- Oizerman, T. 1971. "Preface" to August Bebel, *Society of the Future*. Moscow: Progress Publishers, 1971.
- Thompson, E. P. 1977. *William Morris, Romantic to Revolutionary*. New York: Pantheon Books.
- Velorution*. Information about this video recording can be obtained from Bicycles Crossing Borders, 685 Queen St West, Toronto, Ontario, M6J 1S4, [www.web.net/detour/cbn](http://www.web.net/detour/cbn).
- Warwick, Hugh. 1999. "Cuba's Organic Revolution." *The Ecologist* 29, no. 8: 457–460.