

Bicycles and Social Change: Technology's Unintended Consequences

Reviewed in this article: Sue Macy, *Wheels of Change: How Women Rode the Bicycle to Freedom (With a Few Flat Tires Along the Way)* Washington, DC: National Geographic Children's Books, 2011

Andrea S. Libresco

When I used to teach about industrialization, I vividly remember the lesson I taught on the introduction of the automobile. I gave students a diagram, a drawing of a wheel with spokes, to use during a brainstorming exercise. Students wrote, on each spoke, the name of an industry that might have greatly expanded or sprung up anew as a result of the manufacture of cars: glass manufacturing (for windshields and door windows), tire factories, gas stations, motels (“motor hotels”), oil refineries, drive-in movies, etc.

During class discussion, we also examined the political and social effects of the car, such as the development of the outer boroughs of New York (and, ultimately, the suburbs), dating practices (see Beth Bailey's book: *Front Porch to Back Seat: Courtship in Twentieth-Century America*). Students were struck by all of the offshoots—economic, technological, political, and social—of one invention. Their interest was also piqued by the notion that technology could have a profound effect on Americans' lives, an effect similar to that of the more traditionally studied historical markers (e.g., presidents, laws, and wars).

If teachers are eager for a book that will make this point, they need look no further than Sue Macy's *Wheels of Change: How Women Rode the Bicycle to Freedom (With a Few Flat Tires Along the Way)* This 2012 NCSS Notable Social Studies Trade Book has deservedly won many awards in a variety of categories: sports, photography, feminist, kids, and young adult literature. This rather small (10 × 8 × 0.5 inches), attractive book of 96 pages can be read cover-to-cover or perused in bits and pieces, depending on the interests of the reader. A veteran nonfiction writer, Macy employs primary sources in many of her books that highlight barrier-breaking women: *Basketball Belles: How Two Teams and One Scrappy Player Put Women's Hoops on the Map*; *Bull's-Eye: A Photobiography of Annie Oakley*; *Winning Ways: A Photohistory of American Women in Sports*; *A Whole New Ball Game: The Story of the All-American Girls Professional Baseball League*; and *Bylines: A Photobiography*

of *Nellie Bly*. The format of *Wheels of Change* provides much to catch any reader's eye: primary sources (advertisements, articles and editorials from newspapers and magazines, quotations, photographs, maps, poems, songs, and demographic data), artwork, and sidebars on particular women cyclists and women's rights activists.

Spin Offs

One of the sidebars, titled “Inventive Women,” describes bicycle-related inventions that women patented, including a bicycle lock (Kate Parke, 1890), a bicycle saddle to “secure “comfort and safety to the rider” (Mary F. Henderson, 1897), and a bicycle skirt-fastener “to afford a cheap, simple, and effective means for holding down the skirt of a lady's dress while riding the bicycle” (Sarah C. Clagett, 1897). (19) The actual patent application language is included in the brief descriptions of each invention, which enhances the reader's understanding of each item and the need that it was designed to fulfill.

As one would expect of a book published by National Geographic, the photographs are excellent. It seemed that each page I turned revealed a new favorite photo. Perhaps the most memorable was that of a woman and a man, riding their separate highwheel bicycles side by side. The caption draws the reader in: “Notice anything unusual about the woman's highwheel bicycle? It's a sidesaddle model, built with both pedals on the same side of the tires to make it easier for women to get off and on and to ride wearing long skirts.” (10)

As the inventions and photographs reveal, women's traditional clothing in the 1890s was a definite obstacle to riding bicycles with ease. Thus the introduction of the bicycle resulted in challenges to long skirts, petticoats, and corsets. Feminists like Amelia Bloomer, Elizabeth Cady Stanton, and Susan B. Anthony had tried wearing the bloomer costume with its loose-waisted top and pants in the middle of the 19th century, but they found the costume too often distracted their audiences

from the intended message of women's suffrage. It took the technological innovation of the bicycle to broaden the dress norms for women. Even some churches, which might not have been expected to accommodate these new dress norms, found it necessary to bend to the times. "To hang on to their flocks, clergy members invited congregants to wear cycling clothes to church and provided space to park their bikes. A few industrious ministers even tried meeting cyclists on their own turf, holding outdoor services on bicycle routes." She concludes, sardonically, "They had little success." (39)

A Liberating Machine

One of the strengths of the book is that Macy doesn't paint with broad strokes, so she doesn't overly simplify reactions to women cyclists. Thus, in addition to giving space to the welcoming reactions of some ministers, Macy shares the reaction of a village school board that prohibited female teachers from riding their bicycles to work. One of the trustees expressed the anticipated dangers in the *New York Times*,

They wear skirts, of course, but if we do not stop them now they will want to be in style with the New York women and wear bloomers. Then how would our school rooms look with the lady teachers parading about among the boys and girls wearing bloomers... We are determined to stop our teachers in time, before they go that far. (50)

"Freedom" is in the title, and freedom, then and now, is the theme running throughout the book. Macy begins with a personal anecdote about how liberating it was, as a girl in the 1960s, to be "jumping on my bike and riding to the corner candy store about half a mile away." (8) This reader identified immediately. Riding bikes to the beach, to IHOP before junior high school, to my best friend's house—all provided me the daily independence of my childhood, not to mention the daily exercise that made me a healthy and athletic girl, which, no doubt, contributed to my independence.

Macy devotes space to the perceived health benefits of cycling, noting that scientific studies in the late 1800s attributed declines in unhealthy behavior and disease (drops in cigar sales, the use of morphine, and incidences of tuberculosis) to the advent of the bicycle. She also chronicles the growth of bicycle racing for women and the consciousness that female racers had of themselves as role models. Elsa von Blumen, an American racer, said, "In presenting myself to the public in my bicycle exercises, I feel I... am demonstrating the great need of American young ladies, especially of physical culture and bodily exercise. Success in life depends as much upon a vigorous and healthy body as upon a clear and active mind." (61) Macy also presents the counter-arguments of the time; including the fear that cycling could do damage to women's most important role of childbearing.

The independence that bicycles afforded women permeates photos, text, and sidebars of this book. One sidebar spotlights Alice Austen, a prolific photographer (known as "the female Mathew Brady"), who often rode to her assignments in New York on her bicycle, "loaded down with 50 pounds of camera equipment." (20) Another special section examines, with short bios and photographs, celebrity cyclists, women already associated with some level of freedom, including Marie Curie with her husband cycling on their honeymoon, Katherine Wright (younger sister to the Wright brothers) riding with friends at Oberlin College, and Annie Oakley, who was "as equally fond of [my wheel] as my horse." (27)

Library of Congress



"A June Afternoon," illustration by A. B. Frost in *Scribner's magazine*, May 1898.

Risks and Rewards of Change

The freedom that bicycles provided women was a double-edged sword. In 1896, Charlotte Smith of the Women's National Industrial League warned, "Many a girl has come to her ruin through a spin on a country road" (28). The opinion reminded me of a fear that arose, two decades later, about cars, which could aid and abet young men to carry young women away from the protection of their parents. No wonder an Indiana judge called the car, "a house of prostitution on wheels."¹ Smith

referred to the bicycle as “the devil’s advance agent” (28), again anticipating the car’s sobriquet, “the devil’s wagon.”

The inclusion of Charlotte Smith (who also gets her own sidebar) is commendable because she’s a wonderful example of the complexity and messiness of history. Smith was a feminist who fought for the rights of women workers, yet she sought to protect women from the bicycle on the ground that “it has a tendency to lure your girls into paths that lead directly to sin.” (32)

Women’s rights activists understood the power that bicycles had to change women’s lives. Macy quotes Susan B. Anthony, “Let me tell you what I think of bicycling. I think it has done more to emancipate women than anything else in the world. I

linked in that period, as many women did often suffer abuse from drunken husbands. In this book, first published in 1895, Willard perceived a connection between temperance and cycling:

The reason our young men fall into evil ways is largely because we have not had the wit and wisdom to provide them with amusements suited to their joyous youth, by means of which they could invest their superabundant animal spirits in ways that should harm no one and help themselves to the best development and the cleanest ways of living. So as a temperance reformer, I always felt a strong attraction to the bicycle, because it is the vehicle of so much harmless pleasure, and because the skill required in handling it obliges those who mount to keep clear heads and steady hands. (12–13)²

Generally Accepted

It was not only women’s rights activists who understood the power of the new technology on women’s lives. In 1896, *Munsey’s Magazine* explained the difference as to the bicycle’s impact on men and women: “To men, the bicycle in the beginning was merely a new toy, another machine added to the long list of devices they knew in their work and play. To women, it was a steed upon which they rode into a new world.” (9) Clearly, the image of a woman on a bicycle became associated with efforts to win more rights for women. Macy points out, “When Cambridge University in England decided to offer female students full admission in 1897, the male students protested by hanging a figure of a woman on a bicycle in effigy.” (83)

And the League of American Wheelmen got it right as well, acknowledging that, sometimes, it’s not the overt struggles for rights that deliver the most profound change. Sometimes, technology turns out to have at least as great a liberating effect: “The bicycle has brought to women a healthful, wholesome means of securing a degree of freedom and independence that no amount of discussion regarding ‘women’s right’ would ever have produced.” (81) 🌟

Notes

1. John Ehrenreich, *The Altruistic Imagination: A History of Social Work and Social Policy in the United States* (Ithaca, NY: Cornell University Press, 1985), 50.
2. Frances E. Willard, *Wheel Within a Wheel* (Bedford, MA: Applewood Books, 1895/1997).

ANDREA S. LIBRESCO is a professor of teaching, literacy, and leadership at Hofstra University, and co-editor with Jeannette Balantic of *Social Studies and the Young Learner*



A woman wears comfortable riding pants, and the bicycle has a lowered or “safety” cross bar for easier (and more modest) swing-of-the-leg dismounting, ca. 1897.

stand and rejoice every time I see a woman ride by on a wheel.” (77) Elizabeth Cady Stanton wrote, “The bicycle will inspire women with more courage, self-respect and self reliance and make the next generation more vigorous of mind and of body; for feeble mothers do not produce great statesmen, scientists and scholars.” (78)

Macy also quotes Frances Willard’s insight from learning to ride a bicycle at age 53, “I began to feel that myself plus the bicycle equaled myself plus the world, upon whose spinning wheel we must all learn to ride.” I found this image so compelling that I sought out Willard’s book, *A Wheel Within a Wheel: A Woman’s Quest for Freedom*.

Willard was a suffragist—and also founder of the Women’s Christian Temperance Union. The two reforms were closely