Inventing American Broadcasting 1899-1922 by Susan J. Douglas. Baltimore: Johns Hopkins University Press, 1987. 363 pp. Illustrated.

Inventing American Broadcasting is an exhaustive, well-written, and admittedly revisionist account of the pre-history of radio broadcasting, beginning with the American unveiling of wireless in 1899 and culminating in the "radio boom" of 1921-22. The book traces the "social construction" of radio-how individuals and institutions shaped the applications of broadcasting, and how these applications were legitimated in American culture. The author, Susan J. Douglas, is a professor at Hampshire College and media critic for In These Times. Her work focuses on the public significance of inventions/ technology: How machines develop meaning. To Douglas, technology develops through multiple actions and reactions, rather than linearly. She carefully explains how radio was ultimately transformed from private, or coded, directional medium to a public, omnidirectional medium as business, technology, and press wrested the medium from individual to institutional control. Douglas views the history of radio through a hegemonic lens, in which the media trumpet the "superiority of capitalism" while denigrating alternative views. According to Douglas, cultural hegemony of the medium was complete with the arrival of commercial broadcasting in the early 1920s: Amateur activists were replaced by programmers, passivity was promoted as empowerment.

The figure of Guglielmo Marconi dominates the first half of the book. Although other inventors independently realized successful wireless radio transmission within a short time of each other, Marconi was the entrepreneur who bridged science, commerce, and popular imagination. Marconi perfectly fit the heroic archetype of the self-effacing inventor/entrepreneur, as opposed to "eccentric" scientists Reginald Fessenden of boisterous hustlers like Lee DeForest, his two main competitors. Marconi's entrepreneurial acumen was displayed

when he allegedly transmitted across the Atlantic in 1901. Although no reporters were actually present, they were so in thrall of Marconi that they unhesitatingly reported the event. In Douglas's phrase, Marconi "had managed to shout and whisper at the same time" (58). Douglas repeatedly contrasts Marconi's beneficent public image with his privately stated desire to create a corporate monopoly. He concentrated on selling to major commercial customers, rather than hobbyists, and quickly established a monopoly on the sale and service of wireless equipment. His successful attempts at privatizing the air created one of the basic issues in American broadcasting—battles over airspace. Douglas credits Lee DeForest with conceiving radio broadcasting as an educational and entertainment medium and finds him the most fascinating of the wireless pioneers, in that he most clearly embodies the contradictions of dreamer and huckster so often found in inventor/entrepreneurs. In light of his trials for stock fraud, one could scarcely call DeForest an altruist, yet he ceaselessly pushed his concept of music broadcasting. He "dreamed of bringing music, especially opera, into the houses of those unable to attend in person" (193).

The mass media played a major role in the evolution of wireless, and Douglas repeatedly frames broadcasting developments in terms of press response. According to Douglas, "[press] coverage was hardly neutral or objective; it legitimated certain uses of the invention while condemning others, and it formed a narrow, romantic technical journalism" (xvii). These romantic tendencies were displayed in dewy-eyed editorials speculating on the potential of wireless to establish a permanent world peace, most frequently in press accounts of amateur wireless operators. These operators, or "boys," were praised in the press for their pluck and resourcefulness; technical mastery replaced physical robustness as the test of manhood in urban society. Douglas is particularly effective when she describes how inventors, institutions, the press, and the public all interacted to spin a fabric of meanings around the medium. The media contextualized technical change in the form of familiar characters, as it does today in descriptions of teenage computer wizards. Press coverage of wireless provided a balm for Americans ambivalent about technology. The "robber barons" had earlier personified the fear of an unrestrained technics running amok in society, but the "hero/inventor" resolved the contradictions of tradition (individualism, self-denial) and change (technics)—taming natural forces and humanized technology (and, correspondingly, industrialism).

The second half of *Inventing American Broadcasting* shifts from entrepreneurial to institutional concerns—specifically, the increasing

regulation of wireless in the aftermath of the sinking of the *Titanic* in 1912. With the Radio Act of 1912, amateurs were exiled to the shortwave end of the spectrum, while military and commercial interests (most notably, the Marconi Company) were awarded the choice frequencies. Broadcasting had become a privilege, not a right. According to Douglas, World War One hastened military and corporate control of wireless, in addition to eliminating dissident elements: "... the subculture of American men and boys who had previously fought with the Navy over who owned the ether now supplied the armed forces with thousands of wiling, cooperative recruits. They were no longer outside the system, they were part of it" (298). The Navy's desire to deal with American suppliers, rather than the British-based Marconi Company led to the creation of the Radio Corporation of America (RCA) through the merger of General Electric and the American Marconi subsidiary.

According to the author, "technically, economically, legislatively and ideologically, the elements of America's broadcasting system were, thus, in place by 1922" (317). Douglas claims that the "radio trust" was able to "advance values consonant with consumer capitalism" (320), a critical point in the corporate shaping of consumer culture. To Douglas, the early history of radio broadcasting symbolized corporate hegemony's myth of consumer choice and ensuing corporate domination of mass communication. The insights she presents in *Inventing American Broadcasting* have implications relevant to the nature of today's communications industry. Douglas's media criticism in the popular press is frequently rabid, but *Inventing American Broadcasting* is devoid of such bluster. Her careful scholarship constructs a persuasive argument of how the mass media, abetted by corporate and military interests, effectively discourage pluralism in American society.