THESES OF DOCTORAL (PH.D.) DISSERTATION

**THE DOUBLE-EDGED SWORD:
THE TECHNOLOGICAL SUBLIME IN
AMERICAN NOVELS BETWEEN 1900 AND 1940**

by

Zoltán Simon

University of Debrecen

2003

I

SUBJECT MATTER, THEORETICAL AND HISTORICAL CONTEXT

The English-language dissertation was submitted and accepted in 2001 at Texas Christian University in fulfillment of the requirements for the degree of Doctor of Philosophy. It examines the phenomenon of the "technological sublime," a simultaneous awe and fear of the machine in the wider cultural context of the United States between 1900 and 1940, and specifically, the manifestation of this notion in representatively selected literary texts of the same period.

Discussions of the sublime as an aesthetic category go back to at least the eighteenth century when it was commonly applied to natural objects reflecting the grandeur of creation. The chief theoreticians of the sublime included Shaftesbury, Addison, and especially Burke, author of *Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1756), who emphasized an important new element in his definition of the sublime, namely terror and fear. In his *Critique of Judgement* (1790), Immanuel Kant argued that the sublime could not be an opposite of the beautiful, since it induced both pleasure and pain. In Kant's system, then, the beautiful is a function of aesthetic quality, while the sublime is derivable from quantity alone. Such a definition of the sublime, immensely influential in the nineteenth century, is much more easily applicable to the aesthetics of technology than Burke's. Indeed, the natural world plays a decreasing role in subsequent definitions of the sublime after Kant.

The definition of the technological sublime used in this study relies on David E. Nye's notion[1] of the sublime as a feeling "aroused by the confrontation with impressive objects" (xiii), such as natural sites, architectural forms, or technological achievements. It could be best approached as a prevailingly ambivalent attitude of simultaneous awe and fear of technology, emblematic of the transition between a by-and-large unified vision of technological utopianism and republicanism of an optimistically positivist nineteenth century and the increasingly pessimistic and dystopian, fragmented vision of the post-World War One era.

The dissertation is intended as a survey, on the one hand, of the intellectual climate in the first four decades of the twentieth century in the United States and the role of sublime technology as a formative influence on human consciousness and, on the other hand, the manifestation of the technological sublime in American fiction produced in this period. Technology, an integral facet of our modern existence and an important part of the modernist

experience, is an omnipresent entity in the American fiction produced between 1900 and 1940. Consequently, the study of the trajectory of the technological sublime seems to be a rewarding approach to a better understanding of the literature of this period; and conversely, literature may help illustrate and illuminate this chapter in the history of technological development so important in the shaping of our current material and intellectual culture.

Following the accelerated industrial growth of the late nineteenth century, the first decades of the twentieth century could generally be characterized as a period of coming to terms with technology by the wider population of the United States. The earlier sporadic encounters with technology that were thrilling, awe-inspiring, or frightening a generation or two before were gradually becoming a part of everyday reality for the average American. This assimilation of the machine into the modern American psyche and existence that was taking place during the first third of the twentieth century had by and large eradicated any remaining traces of the Victorian attitudes to technology and had made such technological epiphanies as Henry Adams's encounter with the dynamo in 1900 obsolete for some time in the United States: "to Adams the dynamo became a symbol of infinity. [. . .] he began to feel the forty-foot dynamo as a moral force, much as the early Christians felt the Cross."[2] An almost unconditional trust in technology's positive impact on the progress of the nation, or more generally, humankind, was especially prevalent in the early twentieth century. This was the era of scientific management, heightened efficiency, a rational and systematic approach not only in manufacturing, but also in virtually all areas of life.

In this respect, World War One was a watershed event changing a whole generation's and their posterity's assessment of technology. Part of the postwar disillusionment (frequently referred to under the label "Lost Generation") reflected in the fiction produced in the post-war period was a realization of humankind's potential for mass (and on a human scale also self-) destruction made possible in no small part by technology. This experience prepared the way for a different vision of technology, as foreshadowed by John Dos Passos in his earliest novels, which use the trope of the military machine extensively. The Twenties, then, inseparably allied technological development and business interests. It would appear that the processes of industrialization, mechanization, urbanization, and standardization that had been emerging for several decades culminated in the decade following World War One, finally to reach a stage where quantitative changes turned into qualitative ones. Never before were such wide layers of American society immediately affected in their lifestyles and general standards

---

[1] Nye, David E. *American Technological Sublime*. Cambridge, MA: MIT, 1994.
[2] Adams, Henry. *The Education of Henry Adams*. Boston: Houghton, 1918.

of living by technology as in this decade of widespread assimilation of technology into American culture.

The period following the Twenties saw the beginning of a backlash in society's generally positive attitude toward technology. With the onset of the greatest economic depression to plague the United States ever, science and technology were frequently blamed for economic overproduction, as well as generating a high rate of unemployment by replacing human workers with machines. Commonly considered as scapegoats for hardships, science and technology were harshly criticized, and there were even voices demanding a moratorium of further research and development. The social responsibility of engineers in the age they helped create was mentioned more and more frequently.

World War Two brought about a further resurgence in technological development. This was a phase of intensified cooperation between the government, scientists, industrial engineers, corporations, and the military in the development of such new technologies like nuclear energy, radar, computer technologies, jet propulsion, and rocketry. In the period after World War Two, the United States reinforced its world leading position in technological research and development. Although Americans have lived in a high-tech society at least since the post-World War Two decades, but arguably several decades before that, the general attitude toward this technological age is ambiguous at best. On the one hand, technology is very much taken for granted and assimilated into the fabric of society and modern existence. On the other hand, however, a large number of critics now raise their voices against the social, environmental, and human costs of technology, and there is a growing public awareness of these issues in the general population. Tragic milestone events (Hiroshima, Three Mile Island, Chernobyl, or the Challenger and the recent Columbia space shuttle disasters, to mention just a few) have largely contributed to this awareness and made many people realize the repercussions of allowing technological development to go awry.

The concept of the technological sublime provides a convenient framework in which these changes can be observed and described. It can be useful in understanding the often conflicted and ambivalent reactions of enthusiasm and anxiety, exaltation and depression associated with the patterns of development experienced in the United States in this transitory period. The first four decades of the twentieth century saw the culmination of the technological sublime in America: the loss of the by and large innocently one-sided enthusiasm and technological republicanism of the nineteenth century to a fragmented, often paranoiac, and largely pessimistic vision of technology that became a trademark of the literature after World War One.

II

EARLIER SCHOLARSHIP, OBJECTIVES, AND METHODS USED

The invention of the concept of the technological sublime is commonly attributed to the late Perry Miller, who voiced concerns of the Janus-faced nature of technology, thus going against the mainstream conception of technology as inseparably tied up with the progress of the nation, and indeed, of humankind. In *The Life of the Mind in America: From the Revolution to the Civil War*[3], Miller traces the emergence of sublimity in the rhetoric surrounding technological artifacts from the early national period up to the middle of the nineteenth century.

Unlike Miller's study of general intellectual history with only occasional references to literature, Leo Marx's *The Machine in the Garden: Technology and the Pastoral Ideal in America*[4] primarily uses literature to make its point. As the subtitle indicates, Marx conceived of technology as a sudden intruder into the pastoral idealism of the United States. He examines how the pastoral ideals of the virgin continent and the image of the good shepherd were transformed by industrialization.

The third influential theoretician of the American technological sublime was John Kasson. In his monograph *Civilizing the Machine: Technology and Republican Values (1776-1900)*[5], he gives yet another account of the emergence of the sublime in relation to "industrial spectacles," especially in nineteenth-century America. Kasson argues that "Americans' intense aesthetic response to technology and their desire to discover beauty in utility were firmly rooted in republican values" (143). He traces the American fascination with technology to the underlying ideology of utilitarianism and pragmatism. In this sense, he argues, Americans have always deliberately positioned themselves in contrast with Europeans in a conscious effort to define the essence of their own Americanness.

The most recent and so far the most comprehensive analysis of the American technological sublime comes from David E. Nye in his book of the same title, published in

---

[3] Miller, Perry. *The Life of the Mind in America: From the Revolution to the Civil War*. New York: Harcourt, 1965.

[4] Marx, Leo. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. New York: Oxford UP, 1964.

[5] Kasson, John F. *Civilizing the Machine: Technology and Republican Values in America, 1776-1900*. New York: Grossman, 1976.

1994. Nye argues that the technological sublime has been "a preferred American trope through two centuries" (281). He examines different manifestations of the American technological sublime ranging from the dynamic sublime of the railroad, through the geometrical sublime of bridges and skyscrapers, to what he calls the consumer's sublime of the postmodern.

The main difference between the foregoing studies of the technological sublime and my own project is one of scope and approach. Miller goes up to the Civil War and writes an intellectual history with only occasional references to literary examples. Kasson's focus is the period between 1776 and 1900, and his literary analysis by and large is limited to utopian writing in the late nineteenth century. Marx, of course, uses literature quite extensively, but mainly from the nineteenth century. Nye is mainly interested in the social construction of technology and uses literature only occasionally, and only so far as it illustrates his points. While Nye's book served as a major inspiration for my own study, I also provide a critique of many of his statements.

By contrast, the dissertation concentrates on a shorter period, the four decades between 1900 and 1939, as delimited by the beginning of the twentieth century and Henry Adams's encounter with the dynamo on the one end, and the publication of *The Grapes of Wrath* and the outbreak of World War One on the other, because this is the period which best illustrates the decisive changes of mentality that took place. Also, unlike Miller, Kasson, and Nye, I intended to foreground literature and to approach these issues from the point of view of a literary critic, rather than through the eyes of a historian. My chief objective was to trace the literary treatment of this phenomenon in selected representative texts in this crucial period.

As much as literature can be accepted as a singular way of documentation and reflection of social, economic, and psychological changes in a given place and period, a number of novels written in the period between 1900 and 1940 clearly attest to the above claims in a consideration of the interaction of technology and American literature. It would appear that contrary to the generally positive and enthusiastic attitude toward technological progress that was characteristic of society in this period, American novelists in general took a more critical, or at least more carefully ambivalent, stance toward machine culture. My dissertation examines the relationship between technology and the American (broadly defined) modernist novel and survey the range of responses to the spread of technological civilization in the first four decades of American fiction.

III

DESCRIPTION AND RESULTS OF THE RESEARCH PROJECT

The dissertation consists of six chapters. An introductory chapter defines the basic terms of the inquiry, provides some theoretical and historical context, and surveys earlier scholarship on the American technological sublime. The subsequent chapters each center on a specific technology that could be identified as the primary sublime technology of a given decade between 1900 and 1940. A closing chapter explores the demise of the technological sublime after World War One. Each chapter opens with a short introduction into the general cultural significance of the technological artifact considered, followed by the examination of representative texts, which address issues of the technological sublime as they relate to the technology under analysis.

The four technologies discussed in the middle four chapters are the following: the factory as the sublime of production in the early 1900s, the military technology as the sublime of destruction in the Great War of the late 1910s, the automobile as the sublime of mobility that peaked in the 1920s, and finally the airplane as the sublime of aviation that replaced the automobile as the ultimate sublime object in the 1930s. Obviously, the association between the decades and the above areas of technology serves only as a principle of chronological organization, and should not be interpreted very strictly or exclusively. Obviously none of these technologies are limited to specific decades, but it is in the nature of the technological sublime that the effect of each successive technological artifact wanes with time. Such a combination of the chronological and thematic approaches ensures that the literary representation of the cutting-edge of technological sublimity can always be identified and examined.

Chapter Two, "The Sublime of Production and the Production of the Sublime," examines various aspects of factory production (automation, standardization, Fordism, Taylorism, the "American system"), many of which originated in and survived from the nineteenth century, but gained even more prominence in the early twentieth century, also having a significant influence on creative writing in that period. The aesthetic resonances of factory production in contemporary fiction, as exemplified by works of Theodore Dreiser or John Dos Passos are considered, but center stage is reserved for three representative texts by two authors. Upton Sinclair's *The Jungle* serves as a text exposing the prevailing rhetoric of

the mathematical sublime of technology, while Sherwood Anderson, writer of *Poor White* and the semi-fictional *Perhaps Women*, provides an example for an author deeply conflicted, among other things, about the changing patterns of artistic and technological creation, as well as the connection between machine production and human reproduction.

Chapter Three, "The Sublime of Destruction: World War One and the Military Machine," is devoted to the technological sublime in the context of warfare in general, and the "industrial warfare" of the first technowar, World War One, in particular. Two early novels by John Dos Passos, *One Man's Initiation—1917* and *Three Soldiers*, serve as texts demonstrating an aesthetic response to the increasing technologization of warfare, both on the very specific level of the deployment of increasingly destructive weapon systems and the equally important machine-like aspects of the modern military. World War One dealt a major blow to any positive reading of the technological sublime, but the myth of the machine was successfully revived in the prosperous "business decade" of the Twenties, when the foundations of the consumer's sublime dominating the post-World War One era were first laid down.

The final two chapters deal with two transportation technologies, the automobile and the airplane, that replaced the nineteenth-century train and steamboat as technological icons in the literature of the early twentieth century. The automobile was the defining technology especially of the Twenties, and Chapter Four, "The Sublime of (Auto)Mobility: The Four-Wheeled American Dream," examines the special role of automobiles in the changing context of the technological sublime of the early twentieth century. Novels by various writers, including Sinclair Lewis, John Dos Passos, Theodore Dreiser, but most importantly, F- Scott Fitzgerald's *The Great Gatsby* and John Steinbeck's *The Grapes of Wrath* are analyzed from the perspective of this technology used as a cluster of thematic, symbolic, and metaphoric elements in works of fiction.

Chapter Five, entitled "The Sublime of Aviation: The Winged Gospel," is devoted to another newly emerging icon of the technological sublime: the airplane. Although less prevalent in contemporary fiction than the automobile, a number of writers, such as Sinclair Lewis, John Dos Passos, and William Faulkner used the image of the airplane extensively in their writings as symbolic of civilizational changes. Lewis's early novel, *The Trail of the Hawk* and Faulkner's *Pylon* as representative texts from the periods before and after the great divide of World War One are addressed in greater detail. The airplane is an appropriate machine to close the discussion with, since its role in World War Two signaled the disappearance of much of the positive sublimity surrounding technology, while its

reincarnation in the space program is emblematic of many of the conflicting postmodern attitudes toward technology in the post-war period.

The closing chapter draws conclusions about the relationship between technology and the Modernist period, which was the first to give close attention to such issues as human-machine interaction, technological utopianism, sexual and gender issues, the anthropomorphization of machines, and the technologization of bodies, as seen in works of fiction from the first four decades of the twentieth century. The chapter, as well as the study, closes by considering some ways in which the disappearing American technological sublime of the early twentieth century gave way to consumerism and postmodern culture with its unique relationship with science and technology.

IV

PUBLICATIONS IN THE THEME OF THE DISSERTATION

1. Publications

1.1. Monograph

The Double-Edged Sword: The Technological Sublime in American Novels between 1900 and 1940. Philosophiae Doctores. Budapest: Akadémiai Kiadó, 2003. 114 pp.

1.2. Articles

"World War One and the Technological Sublime in the Early Novels of John Dos Passos." *Hungarian Journal of English and American Studies.* 8 (2) 2002. 25-43.

"The Image of Technology in Selected American Novels of the 1920s." *Eger Journal of English and American Studies*. 7 (2001): 47-60.

1.3. Teaching material

Technology and American Culture: A Distance Learning Textbook. Debrecen: University of Debrecen, 2000. 168 pp.

2. Accepted for publication

"The Sublime of Production and the Production of the Sublime in Sherwood Anderson's *Poor White* and *Perhaps Women*." *Proceedings of the 6th Biennial Conference of HUSSE*. Debrecen: University of Debrecen, 2003. 31 MS pp. (to be published in Spring 2004).