THE CULTURE OF TIME AND SPACE

1880 – 1918

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To Rudolph Binion

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S.K.
DeKalb, Illinois

ILLUSTRATIONS

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INTRODUCTION

From around 1880 to the outbreak of World War I a series of sweeping changes in technology and culture created distinctive new modes of thinking about and experiencing time and space. Technological innovations including the telephone, wireless telegraph, x-ray, cinema, bicycle, automobile, and airplane established the material foundation for this reorientation; independent cultural developments such as the stream-of-consciousness novel, psychoanalysis, Cubism, and the theory of relativity shaped consciousness directly. The result was a trans-

formation of the dimensions of life and thought. This book is about the way Europeans and Americans came to conceive of and experience time and space in those years.

The idea for this kind of interpretation came to me from reading the works of phenomenologically oriented psychiatrists, who viewed their patients' mental lives in these terms. They used a categorical frame of reference to reconstruct their patients' experience of time, space, causality, materiality, and other essential categories. The work of the French psychiatrist Eugène Minkowski, elaborated in a collection of case studies published as *Le Temps vécu* in 1933, was especially useful. While Minkowski explored other categories, the focus of his attention was on time, especially on how his patients experienced past, present, and future. He applied the phenomenological method to understand patients who had acute psychotic disorders and could not reconstruct their lives genetically or historically as the psychoanalytic method required. His method is particularly suited for psychotics, because it is often not feasible to link their prior personality with their current pathological personality, which is generally too fragmented and disorganized. I adapt that aspect of the phenomenological method informally, for it is possible to identify many origins or "causes" of changing ideas about time and space, such as the scheduling requirements of railroads that directly necessitated the institution of World Standard Time, or the telephone that immediately and directly changed the sense of space. For all its diversity, the culture of an age hangs together more coherently than does the mind of a psychotic. My primary object, however, is to survey significant changes in the experience of time and space, including some for which I am able to identify no specific "cause." Hence I do not explain why the telephone was invented or why the stream-of-consciousness novel began to appear.

As basic philosophical categories, time and space are particularly suitable as a framework for a general cultural history, because they are comprehensive, universal and essential.

Since all experience takes place in time and space, the two categories provide a comprehensive framework that can include such wide-ranging cultural developments as Cubism, simultaneous poetry, and ragtime music along with the steamship, skyscraper, and machine gun. To avoid the crazy-quilt effect that such an assemblage of sources might create, I select only material that conforms to the essential nature of each of the subtopics that make up the first nine chapters—The Nature of Time, The Past, The Present, The Future,

Speed, The Nature of Space, Form, Distance, and Direction—and emphasize those developments that differ significantly from earlier periods.

I followed two lines of thinking to arrive at these subtopics. The three modes of time—past, present, and future—came from philosophy and were part of Minkowski's conceptual framework. Even Henri Bergson (who insisted that the division of the flux of time into three discrete parts distorted its essentially fluid nature) used the terms repeatedly in his analyses. These modes of time seemed to be natural, compelling, and comprehensive subdivisions for all possible human experiences of time. Subtopics for space were more difficult to determine. In a discussion with Alan Henrikson, I learned that map makers identify four aspects of space that plane maps can show—shape, area, distance, and direction. These categories suggested a framework that was as comprehensive as those for time that I had already decided on, so I combined "shape" and "area" into "form" and added an introductory chapter on the nature of space as I did on the nature of time. My categories thus encompass a wide range of human activities and are mutually exclusive—except for the material on speed. I treat speed in a separate chapter because it was widely discussed around the turn of the century as a topic in its own right, because the material on it would have been impossible to classify as either exclusively temporal or spatial, and because as a juncture of time and space it formed a natural transition between them.

To avoid repetition I have dispersed single corpora among these chapters. The work of Marcel Proust, for example, appears in chapters on the nature of time, the past, the nature of space, and distance. Prominent figures such as Proust have been interpreted with such uniformity that their contributions to the cultural landscape have tended to become as solid and fixed as a rock. By cracking into such routine interpretations, identifying different contributions from various parts of their corpus, and distributing my discussion of them among the subtopics of this study, I attempt to expose fresh surfaces and attribute those contributions to the precise modes of time or space that are appropriate.

To illustrate further the comprehensive range of these topics, in the two concluding chapters I survey how these changes shaped the diplomatic crisis and the actual fighting of World War I. Individuals behave in distinctive ways when they feel cut off from the flow of time, excessively attached to the past, isolated in the present, without a future, or rushing toward one. Nations also demonstrate distinctive

attitudes toward time. For example, the contrast between Austria-Hungary, convinced its time was running out, and Russia, which felt it had time to spare, is striking and is revealed repeatedly in diplomatic documents. The experience of space also varies considerably along national lines: some countries, like Germany, believed they needed more; Austria-Hungary thought that its space was excessively heterogeneous and distintegrating; Russia was universally viewed (and feared) as the country with boundless space. These final chapters illustrate how the changes in thinking about and experiencing these abstract philosophical categories were manifested in a concrete historical situation. The categories of time and space thus provide a comprehensive theoretical framework that allows not only the integration of many areas across the cultural spectrum but also integration along a theoretical vertical axis from "high culture" to popular culture and the material aspects of everyday life.

Not every society has kings, parliaments, labor unions, big cities, bourgeoisies, Christian churches, diplomats, or navies. I do not mean to question the significance of histories of such entities but only to point out that they are not universal. Time and space are. All people, everywhere, in all ages, have a distinctive experience of time and space and, however unconscious, some conception of it. It is possible to interpret how class structures, modes of production, patterns of diplomacy, or means of waging war were manifested historically in terms of changing experiences of time and space. Thus class conflict is viewed as a function of social distance, assembly lines are interpreted in conjunction with Taylorism and time management studies, the diplomatic crisis of July 1914 is seen to have a historically unique temporality, and World War I can be interpreted under a Cubist metaphor. The phonograph and cinema are evaluated in terms of the way they modified the sense of the past, the telephone and World Standard Time are seen restructuring the experience of the present, the steamship and the Schlieffen Plan reflect a desire to control the future, urbanism is viewed as a process of diminishing living space, the politics of imperialism is seen as a universal impulse to claim more space, wealth is conceived as the power to control time and space.

Such interpretations are reductionistic. But if one is to make generalizations about the culture of an age, one must be able to show how a wide variety of phenomena have certain common features in their essential nature or function, and one must also be able to interpret these features in a common language. The interpretation of phe-

nomena such as class structure, diplomacy, and war tactics in terms of modes of time and space makes possible the demonstration of their essential similarity to explicit considerations of time and space in literature, philosophy, science, and art. Put together, they create the basis for generalizations about the essential cultural developments of the period. And by interpreting the culture as a function of time and space, it becomes possible to compare different ages and different cultures topic by topic with less confusion than would be involved in trying to compare historically and culturally specific interpretative categories such as parliaments, unions, families, or bourgeoisies. It should be possible, therefore, to compare the experience of time and space in the Renaissance or the Enlightenment with that of the *fin de siècle* to discover what essential changes occurred in the intervening years. This study provides a contribution to such a larger historical project.

By arguing that my topics are essential, I run the risk of implying that cultural histories with other foci are unessential. Researching the culture of an age, over a number of years, with two topics constantly in mind, one inevitably begins to see everything in that context, even the work of others who have classified and interpreted sources differently. General cultural histories of the period, including some that focus on single nations or cities, have been inspirational and suggestive in drawing my attention to sources and offering a variety of interpretations of them. While I am mindful of the natural bias that comes to any researcher, I must nevertheless venture the claim that my focal topics are more essential from a strictly philosophical point of view. The topics of Roger Shattuck, H. Stuart Hughes, and Carl E. Schorske are framed according to conventional academic disciplines and artistic genres. While I used those frames for subdivisions within my chapters, my basic categories derive from two essential philosophical categories—essential in that they are, as Kant argues, the necessary foundation of all experience. Shattuck focused on four themes in French culture of the period: childhood, humor, dream, and ambiguity as they were expressed in four genres of art, music, drama, and poetry. Schorske interpreted the politics of literature, architecture, city planning, psychiatry, art, and music in Vienna; and Hughes examined a specific discovery in social thought, which can be interpreted as one aspect of the new sense of space—perspectivism.[1] The more limited focus of these studies enabled their authors to go into greater detail, but they did not attempt to analyze the essential foundations of experience, as I have tried to do.

I originally planned to organize the new thinking according to traditional artistic genres and academic disciplines, however much of it cut across those dividers. I finally decided to base the theoretical framework on philosophical concepts, because that allowed me to treat concepts such as simultaneity as a whole and not scatter them throughout various genre and discipline chapters; it forced me to break up large corpora, which sharpened my assessment of their various contributions; and it necessitated thinking through the historical significance of the culture of the period in fresh terms. This approach obliged me to decide upon a suitable subtopic to cover simultaneity—a concept that cut across traditional divisions—and that posed problems. Instantaneous electronic communication, which made simultaneity a reality, affected the sense of the present, speed, form, and distance. I concluded that its most distinctive effect was on the sense of the present.

Technological developments are temporally specific events that often affect great numbers of people, and as such they are a compelling source for historical explanation. To avoid a monocausal technological determinism in cultural history, it is essential to clarify precisely how technology and culture interact.

Some cultural developments were directly inspired by new technology. James Joyce was fascinated by the cinema, and in *Ulysses* he attempted to recreate in words the montage techniques used by early film makers. The Futurists worshipped modern technology and celebrated it in manifestos and art. Several poets wrote "simultaneous" poetry as a response to the simultaneity of experience made possible by electronic communication. Many conceptions of time and space, however, were altered independently of technology, in response to pressures within various genres and disciplines. Paul Cézanne revolutionized the treatment of space in art as he concentrated on the eternal form of *Mont Sainte-Victoire* and the arrangement of bottles and apples in his still lifes. Einstein's challenge to Newton was suggested by the results of an experiment made possible by a new machine—the inferometer—but relativity was largely a revision of theoretical problems that physics had been struggling with for years. The thematic similarity between developments inspired by technology and those independent of it suggests that a cultural revolution of the broadest scope was taking place, one that involved essential structures of human experience and basic forms of human expression.

Other technics provided metaphors and analogies for changing

structures of life and thought. The opening up of the interior anatomical terrain of the human body by x-ray was part of a general reappraisal of what is properly inside and what is outside in the body, the mind, physical objects, and nations. Thomas Mann's hero in *The Magic Mountain* remarked that he felt as though he were peering into the grave when he observed his cousin's insides by means of x-ray. Edmund Husserl challenged the Cartesian idea that perception takes place in the mind and argued instead that it is a relation between a perceiver and a thing perceived. The Cubists rendered both the interior and exterior of objects from a variety of perspectives on a single canvas, thereby transcending traditional spatial and temporal limits in art. The airplane altered the significance of national boundaries and traditional geographical barriers between peoples.

In the process of integrating such an array of sources, I use a working principle of *conceptual distance.* Thus, there is greater conceptual distance between the thinking of an architect and that of a philosopher on a given subject than there is between the thinking of two philosophers, and I assume that any generalization about the thinking of an age is the more persuasive the greater the conceptual distance between the sources on which it is based. However the distance must not be too great or the juxtaposition becomes forced. Mindful of that problem I have at times used metaphor and analogy to link material from especially "distant" sources to extend interpretations beyond the confines of strict academic disciplines and their exacting requirements for evidence and argumentation. And so, for example, a discussion of the discovery of the constituent function of negative space juxtaposes evidence all across Western culture including field theory in physics, architectural spaces, sculpted voids, Cubist positive negative space, the pauses and blanks in Mallarmé's poetry, and silence in literature and music. Such broad cross-discipline and cross-genre constructions involve a radical gerrymandering of traditional cultural areas.

This method of grouping thematically related developments without an apparent causal link occasionally led to the discovery of a link. The connection between Cubism and camouflage, for example, was suggested by Picasso's remark to Gertrude Stein, upon seeing the first camouflaged trucks parading in Paris in 1915, that the Cubists had invented camouflage. For a number of reasons the historical significance of these two phenomena was strikingly similar, but, as neither Picasso nor Gertrude Stein documented the connection, I at first assumed that he was just pointing out that significant simi-

larity, much as I have done with other cultural developments throughout this book. But further inquiry revealed that the man who invented camouflage was inspired by the Cubists and explicitly acknowledged that debt. This discovery tightened my interpretation of the major changes in the actual fighting of World War I within a Cubist metaphor. Some analogies, however, remain mere analogies, and although I did not discover any actual connection between their elements (as, for example, between field theory in physics and Futurist "force lines"), the similarity between the two was sufficiently strong to link them in the only way justified by my research—analogically—having a similar structure or function within their respective disciplines or genres and possibly related in fact by processes of communication that I was unable to discover. These analogies constitute the open end of my thinking, but they do not make up the bulk of my argument, which is based on developments of similar cultural function that were causally or, at least, consciously related at that time.

It is impossible to identify a single thesis that properly encompasses all changes in the experience of time and space that occurred in this period. Indeed, one major change was the affirmation of a plurality of times and spaces. Nevertheless, it is possible to indicate the most important development for each of the two major topics—the affirmation of the reality of private time and the leveling of traditional spatial hierarchies. Bergson's philosophy forms the theoretical core of the argument for private time, and Cubism graphically negates the traditional notion that the subject of a painting, for example, is more important than the background. This leveling of hierarchy in various areas of Western culture, it will be seen, parallels the leveling of aristocratic society, the rise of democracy, and the dissolution of the distinction between the sacred and profane space of religion. Although there is some evidence for direct, conscious connection between these parallel developments, such as Louis Sullivan's affirmation of a new "democratic" architecture, the connection remains largely one of analogy, based on compelling similarity.

While I do not mean to present the "relevance" of this study to current problems in a simplistic way, its very conception is associated with the energy crisis of recent years. Contemplating the disastrous consequences of a long-range depletion of energy sources, especially those that affect transportation, it struck me that in the period I wanted to analyze, new energy sources had revolutionized the

experiences of time and space. The age thus had an energy crisis of its own—a crisis of abundance. The tremendous development of railroads and steamships and the invention of the automobile and airplane greatly accelerated transportation and proliferated the places where people could travel at new high speeds. The petroleum industry began to supply combustible fuels on a large scale for the automobiles, and power stations distributed electricity to light up the night and drive electric motors. It was the reverse of the current energy crisis, since its alarmists were generally concerned about a surfeit of new energy sources and its possible nefarious consequences. There was little talk of running out. And unlike the current crisis that has caused panic, the crisis of the prewar period generally inspired hope.

Each chapter begins with the technological or institutional developments that shaped the mode of time and space that is its subject, and then surveys the cultural record, following traditional academic disciplines and artistic genres. Within each subsection I have reconstructed events in chronological order. The concluding date of this study is a natural historical marker; the beginning date is approximate. Some events, such as the publication of Jules Verne's *Around the World in Eighty Days* in 1873 or the invention of the telephone in 1876 precede it, but the bulk of the changes cluster in the turn-of-the-century period and constitute a generally coherent cultural unit.