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CHARLES SHEELER AND THE MACHINE AGE

City University of New York

PH.D.

1981

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CHARLES SHEELER AND THE MACHINE AGE

by

SUSAN FILLIN YEH

A dissertation submitted to the Graduate Faculty in
Art History in partial fulfillment of the requirements
for the degree of Doctor of Philosophy, The City
University of New York.

1981

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This manuscript has been read and accepted for the Graduate Faculty in Engineering in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

From the 1920's to c. 1945, painter/photographer Charles Sheeler (1883-1965) produced paintings, drawings and water-colors that fused aesthetic concerns with his admiration for machinery and the industrial landscape, subjects he valued as examples of harmony in the universe. In these works, Sheeler consolidated his investigations into Cubism and the influence of paintings by contemporaries, especially the painters then called the "Immaculates," now known as the "Precisionists." He also drew on unconventional artistic sources, taking visual material from the worlds of advertising and engineering, as well as from his own photographs. Sheeler's paintings of 1929 to c. 1945 are perhaps the strongest and most original of his career. Earlier, he had experimented in a succession of avant garde styles deriving from Cezanne, Cubism and Synchronism. Later, in the 1940's and 1950's, the work was often a thematic reprise and took its semi-abstract style from accidents derived from Cezanne, Cubism and Synchronism. Later in the 1940's and 1950's, the work was often a thematic reprise and took its semi-abstract style from accidents derived from photographic techniques. Sheeler saw himself as living in an industrialized world: he felt a responsibility to come to grips

with the "Spirit of the Age," and expressed it in his art as a "machine aesthetic." Hence his subjects of the 1920's and 1930's -- factory scapes and interiors -- were topical in their references. These images were embodied in a camera-based realist style, which like Sheeler's subjects, was his response to a Machine Age Zeitgeist. Style and subjects alike lend themselves to an iconographic analysis and iconological interpretation, an approach which points towards a new interpretation of Sheeler's machine, machine-derived and industrial themes.

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Introduction

From the 1920's to c. 1945, painter/photographer Charles Sheeler (1883-1965) produced paintings, drawings and water-colors that fused aesthetic concerns with his admiration for machinery and the industrial landscape, subjects he valued as examples of harmony in the universe. In these works, Sheeler consolidated years of investigation into the nature of structure and organization which he had studied in Cubism, and in paintings by contemporaries, especially the painters then called the "Immaculates," now known as the "Precisionists." He also drew on unconventional artistic sources, taking visual material from the worlds of advertising and engineering, as well as from his own photographs.

Sheeler's paintings of 1929 - c. 1945 are perhaps the strongest and most original of his career. Earlier, he had experimented, working in a succession of avant garde styles, deriving from Cezanne, Cubism and Synchronism. Later, in the 1940's and 1950's, the work was often a thematic reprise and took its semi-abstract style from accidents derived from photographic techniques.

The unity and the evocative power of Sheeler's paintings of the 1930's have yet to be explored. There are studies deal-

ing with Sheeler's response to Cubism, the foundation of American modernism, in order to establish Sheeler's position within the first wave of American abstraction. Among those who have explored the nature of sheeler's European influences are Martin Friedman, Lillian Dochterman and Milton W. Brown. Friedman, for example, praised the artist's a ability to discover "ready-made Cubistic forms" in the American landscape.¹ Dochterman, in an unpublished Ph.D. dissertation of 1963, approached Sheeler's accomplishments primarily on the basis of Cubism. Presumably extrapolating from Milton W. Brown's study of Cubist Realism in which he defined the movement, Dochterman characterized Sheeler as the first of the Cubist Realists, a statement which fails to take into consideration earlier paintings by Precisionists.² Brown had pointed out in 1956 that Sheeler's development was part of a trend: "Cubist Realism went from Cubism to Realism."³ To Dochterman, Sheeler's realism was illustrational, provincial baggage which diluted the quality of his art.⁴

Others of Sheeler's critics stress his American influences: Sam Kootz, who knew Sheeler in the 1920's and 1930's,⁵ Forbes Watson, who wrote sensitively and appreciatively about Sheeler in the early 1920's;⁶ Sheeler's friend, the poet William Carlos Williams;⁷ and more recently, Hilton Kramer.⁸ To Constance Rourke, author of the first major study of Sheeler, Sheeler's Americanism had everything to do with his accomplishments. Rourke wished to indicate that original and

important works of art could be produced in America.⁹ The pattern of these interpretations is clear-cut. However, when specific criteria for European or American influences enter in, identical pieces of evidence sometimes reinforce opposite or contradictory conclusions. Elements in Sheeler's art which Friedman called cubistic are the same ones Rourke had defined as Sheeler's American "Urformen," motifs with origins in vernacular architecture.¹⁰

Defining Sheeler's painting in terms of the relationships with photographs is another theme in past Sheeler studies. This approach has the advantage of being more tailor-made for Sheeler, who worked in both media, but it has its own inconsistencies. Sam Kootz, who respected the power of Sheeler's photographic images, spoke of Sheeler's photography as being essentially analogous to his painting. The two were alternative voices.¹¹ Kootz shared his appreciation for Sheeler's paintings and photographs with Charles W. Millard. However, for Millard, "To say that Sheeler's painting is photographic, thereby implying that his activity as a photographer shaped his vision as a painter, is misleading."¹² Others, including William Carlos Williams and Sheeler's dealer from 1930, Edith Halpert, had doubts about Sheeler's photography. Halpert's ideas were pragmatic. She feared photographs would detract from sales of paintings.¹³ Williams, though, saw Sheeler's photography as deleterious to his painting, and agreed with another friend, Surrealist painter Peter Blume, who felt

that Sheeler was presenting the chance events of the camera lens as a poor substitute for the gleanings of his imagination.¹⁴

There has been no iconographic study of Sheeler's art, a situation this dissertation is designed to remedy. But the lack of an iconographic approach to Sheeler's work is hardly the only justification for the choice of methodology. Examining cultural symbols and the relationships between imagery and culture, a methodology developed by Erwin Panofsky and others, resolves some of the inconsistencies of past Sheeler studies.¹⁵ Sheeler's philosophical approach to his subjects is documented in his Autobiography. He posited art as a language and a response to what he called "The Spirit of the Age."¹⁶ Art also had the function of revealing inner reality. Sheeler's stance gives strong justification for an iconographic analysis and iconological interpretation. Sheeler's art also lends itself to an iconographic analyses because his camera-based realist style presents his subjects in such detail. The work provides abundant material -- images and symbols -- to be itemized by the iconographer.

Sheeler saw himself as living in an industrialized age. Juxtaposing his work against its historical background -- the "Machine Age" of the 'teens and 1920's defined by Charles and Mary Beard, Stuart Chase, and later, Lewis Mumford,

Siegfried Giedion, Reyner Banham, and others -- provides corrective knowledge for Sheeler's art and ideas.¹⁷ The host of machine-derived images devised by Futurists, Constructivists, European and American Dadaists and Purists are the context for Sheeler's work. In fact, the sources of Sheeler's consciousness have been located variously throughout a nearly complete list of early twentieth century styles. Brown states, "Cubism became involved with the concept of industrial and mechanical functionalism."¹⁸ This is essentially the viewpoint of Robert Rosenblum, who also mentions the importance of "Futurist overtones" for American Cubism.¹⁹ Friedman's interpretation of Sheeler's industrial subjects merges Cubism and Dada.²⁰ Barbara Rose and William Agee see Sheeler's factories and machinery as a kind of delayed Dada.²¹ Dickran Tashian cites Cubism, Dada, and little magazines (Broom and others) as Sheeler's sources, but feels that the paintings from 1920 to 1955 are uneven in statement and formal means.²² Rourke, remembering Sheeler's student days among the stone barns and mill-towns of the Pennsylvania countryside, feels these to be his main sources.²³ Historian Leo Marx discusses Sheeler's machine-related images in the context of a "distinctively American post-romantic industrial version of pastoral design."²⁴ In Art and the Machine, which analyzes the sources for American industrial design in the 1920's and 1930's, Sheldon and Martha Cheney discuss Sheeler's applied design,

and machine aesthetic.²⁵ This study elaborates on directions suggested by many of these scholars, but it also explores new territory, in engineering periodicals, in advertising images and popular culture generally, as well as in advertising and the world of fashion.

The accumulation of varied machine references in many styles was important for Sheeler; yet, stylistic impetus taken alone was not Sheeler's primary consideration. It might be argued that Sheeler's most important influences came from outside the art world, and it may be for this reason that Sheeler's paintings immediately found a receptive audience. Among important issues for Sheeler were impersonality and love of craft. Another was the artist's need to demonstrate to himself, at least, that an artist's work could be of value in an industrialized society. Beginning with his Self Portrait of 1923, Sheeler faced the conflict residing in these issues, and learned to resolve it by establishing industrial imagery as a new canon of beauty. Sheeler worked through his ideas sometimes in single works, sometimes in clusters with a similar theme. Thus the organization of the dissertation falls naturally into chapters which echo these divisions.

Sheeler justified his choice of industrial subject matter on the grounds that industry was a "concern" for a great number of people.²⁶ His interpretation falls somewhere

between an "ideology" and a "mythology." The images have some ideological connotations, for they embody ideas which constitute a politico-social system. For instance Sheeler's factoryscapes are an idealized vision of industry, a point of view in sympathy with the economic basis of Western capitalism. However, Sheeler's art is not polemic, and as Clifford Geertz has pointed out, the role of ideology in a cultural system is commonly propagandistic.²⁷ Sheeler's images might be seen as close to myth (in 1929, Surrealist Eugene Jolas described Sheeler's photographs of the Ford Plant at River Rouge as expressing an "Industrial Mythos").²⁸ He saw his factory subjects as exemplary of universal values. True myth, as historian Richard Slotkin has discussed it, has at least quasi-religious associations.²⁹ In this sense, Sheeler's images sometimes hint at religious and transcendental ideals even though the subjects are completely secular, for they express a vision of harmony, purity and order. At the same time, the images, as their iconography suggests, are topical. An iconographic approach to Sheeler's art points towards a new interpretation of the power of his machine, machine-derived and industrial themes which other approaches have failed to provide.

Footnotes.

- ¹ Martin Friedman, The Precisionist View in American Art (Minneapolis: Walker Art Center, 1960), p. 22
- ² Lillian Dochterman, "The Stylistic Development of the Work of Charles Sheeler," Unpublished Ph.D. dissertation, State University of Iowa (1963), p. 1, 23-33, 98; see also The Quest of Charles Sheeler: 83 Works Honoring His 80th Year (Iowa City, Iowa: University of Iowa, March, 1963), Appendix A.
- ³ Milton W. Brown, "Cubist-Realism," Marsyas, III (1946), p. 157.
- ⁴ Dochterman, Stylistic Development, p. 45, 60, 65-67.
- ⁵ Sam Kootz, Modern American Painters (New York: Brewer & Warren, 1930), and "Ford Plant Photos of Charles Sheeler," Creative Art, VIII, No. 4 (April, 1931), p. 246-267.
- ⁶ Forbes Watson, "Charles Sheeler," The Arts, III (May, 1923), p. 334-344.
- ⁷ William Carlos Williams, "Introduction," Charles Sheeler: Paintings, Photographs, Drawings (New York: Museum of Modern Art, 1939), p. 6-10; "The American Background" from America and Alfred Stieglitz (1934), in Selected Essays of William Carlos Williams (New York: New Directions, 1954), p. 134-158; and "Foreward," Charles Sheeler Retrospective Exhibition (Los Angeles: University of California, Art Galleries, 1954), p. 7-8.
- ⁸ Hilton Kramer, "The American Precisionists," Arts, XXXV, No. 6 (March, 1961), p. 32-38; and "Charles Sheeler: American Pastoral," Artforum (Summer, 1970), p. 35-39.
- ⁹ Constance Rourke, Charles Sheeler: Artist in the American Tradition (New York: Harcourt Brace, 1938), p. 5.
- ¹⁰ Rourke, op. cit., p. 69.
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- ¹³ Mary Jane Jacob and Linda Downs, The Rouge: The Image of Industry in the Art of Charles Sheeler and Diego Rivera (Detroit: Detroit Institute of Arts, 1978), p. 15.
- ¹⁴ Personal Interview with Peter Blume, February 10, 1974.

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- ¹⁶ Charles Sheeler, Autobiography (New York: Archives of American Art, 1937), Nsh 1, frame 101.
- ¹⁷ See Charles and Mary Beard, The Rise of An American Civilization (New York: Macmillan Co., 1927), Stuart Chase, Men and Machines (New York: Macmillan Co., 1929), Lewis Mumford, "American Taste," Art Digest, II, No. 1 (October 1, 1927), Siegfried Giedion, Mechanization Takes Command (New York: Norton, 1969), and Reyner Banham, Theory and Design in the First Machine Age (New York: Praeger, 1960).
- ¹⁸ Brown, Cubist-Realism, p. 139.
- ¹⁹ Robert Rosenblum, Cubism and Twentieth Century Art (New York: Abrams, 1960), p. 221.
- ²⁰ Friedman, op. cit., passim.
- ²¹ See Barbara Rose, American Art Since 1900: A Critical History (New York: Praeger, 1967), p. 102, and also William Agee, "New York Dada 1910-1930," Art News Annual, XXXIV (1968), p. 110-111.
- ²² Dickran Tashian, Skyscraper Primitives (Middletown, Connecticut: Wesleyan University Press, 1975), p. 263.
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- ²⁵ Sheldon and Martha Cheney, Art and the Machine (New York: McGraw Hill, 1936), p. 38, 232.
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Chapter I. The Machine Age: The American Manifestations.

"Our art is, as yet, outside of our art world."

Robert J. Coady, The Soil,
January, 1917.

"If the Victorians took their visual metaphors from the museum, we take ours from...the factory."

E. H. Gombrich, Meditations
On A Hobby Horse, 1965.

A. The Background in American Life.

"With the beginning of the second decade of this century, there is some evidence of an attempt to make a genuine culture out of industrialization -- instead of attempting to escape from industrialization into a culture which, though doubtless genuine enough, has the misfortune to be dead."¹ This statement made by a critic of architecture, the youthful Lewis Mumford, suggests the tenor of a special time in American life in this century. This period was the "Twenties," a decade more than a decade -- an attitude: the Twenties sensibility, if it may be called that, had its beginnings in the 'teens and ended only in the early '30's with the deepening of the Depression. Mumford was writing as one of many intellectuals, Harold Stearns, Van Wyck Brooks, Bertram Russell, Sheldon Cheney, Matthew Josephson,

Oliver Sayler, and others, who had emerged from the war years as social reformers. Their most important task, they felt, was to provide an antidote for America's lack of traditions. Stearns's goal was to bring to an end the "emotional and aesthetic starvation" of American civilization.²

Intellectuals of the Twenties were hardly the first to sense inadequacies in American life. In the 1890's, the American writers, William Dean Howells and Henry James, insisted that their countrymen had been too occupied in the past with the material concerns of carving out a new nation and needed to give some attention to spiritual values. This might bring about the creation of a true American culture, a task long overdue.³ The search for native roots became particularly important for the generation which, as the Twenties unfolded, laid the blame for American provincialism and hypocrisy on the mindless copying of European culture.⁴ The idea was prevalent both among writers and artists, although a host did flock to Paris. But long before the decade had come to a close, many returned to the United States. Art critic Henry McBride was a bit premature when, in 1921, he wrote, "I like Paris, too, you understand, but I think the time has come when it is no longer necessary for a first-rate American to go there."⁵ His comment, in itself, suggests new directions. If

political isolationism was a regressive trend in the 1920's, still, Americans who were retrenching culturally did so in order to examine their own roots at home. It was, as Matthew Josephson later described it, an attempt at a "Great Young New American Movement....We had tried to give expression to some elements of the modern myth of America as a machine economy and a society of the Masse Mensch."6

Looking to the industrial world for inspiration for art and literature was a way of seeking indigenous roots for American civilization's emergence from provincialism. Although industrialization was hardly new in the United States, it was during the Twenties that people generally began speaking of the times in which they were living as "the Machine Age." The reasons are easy to guess at. Where else but in America was there the preponderance of machines in daily use which made the idea of a mechanized society -- a "Machine Age" -- seem more real to ordinary men and women.7 By 1925, there were 3,000,000 radio sets in use in the United States, and 20,000,000 automobiles in a nation of 25,000,000 families.8 Between 1920 and 1930, the number of telephones increased by 85%.9 Americans were using some 60,000,000 machines of various sorts by 1928. And in spite of scathing characterizations by writers like Sinclair Lewis, who, with the novel Babbitt (1922), made his businessman protagonist the symbol of small-mindedness and complacency, businessmen became heroes during the 1920's. Between 1921 and 1930,

over a third of popular magazine heroes in Ladies Home Journal, True Story, Atlantic, and the Saturday Evening Post were industrialists or businessmen.¹⁰ Ernest Boyd's Aesthete: 1924 Model spent a sizeable portion of his time behind "the sales manager's desk, where," Boyd added, "the Renaissance artist of today is to be found."¹¹ The decade of the 1920's also saw the publication of Bruce Barton's The Man Nobody Knows (1925). Barton's message -- that Jesus Christ was a great executive and the "founder of modern business" was well received in the 1920's; and the best selling non-fiction title in 1925 and 1926.¹² Few aside from Barton might exalt industrialization to the degree that Calvin Coolidge did. Coolidge declared, "The man who builds a factory builds a temple, the man who works there worships there."¹³ Yet the vision of their times held by many middle-of-the-road Americans was that of an innovative new era -- a civilization based on technology with leaders drawn from enlightened private management,¹⁴ a point of view certainly encouraged by Henry Ford. Ford published My Philosophy of Industry in 1929 (Chapter I was called, "Machinery, the New Messiah"), in which he declared, "Businessmen are...more influential than politicians, schoolmasters or clergymen...Businessmen should be the readers of the signs of the time."¹⁵

What it meant to be a worker in the 'teens and Twenties was

also changing. The year 1911 had seen the foundation of the Taylor Society for Scientific Management, a firm dedicated to standardizing human motions to achieve machine-like efficiency. The time and motion studies of Lillian M. and Frank B. Gilbreth took a psychological approach to the engineering of human attitudes to adapt them to the new demands of mechanization (1914). And in 1915, with Henry Ford's Highland Park automobile plant, the assembly line, a thirty year old manufacturing technique which combined worker and task in a single mechanized wave of activity, assumed a dominant position in American industry. The term "Fordism" (also "Fordismus" and "Fordize") entered the English language in the early 1920's¹⁶ to describe a new kind of human activity as well as high speed assembly line techniques.

Businessmen were not the only culture heroes of the 1920's. As the decade wore on, the engineer became the model for a changed aesthetic sense. Instances of this aesthetic can be found in the 'teens. A letter to The Soil, Robert Coady's little magazine, which dates to 1916¹⁷, prophetically describes the exact appearance of designed products in the 1920's and 1930's. A "hopeful sign for Art in this country, for Democracy one might say, and for real American Culture, is the advent of the Engineer," the letter runs. George W. Vos, the author, concludes, "The tendency is toward the simple direct streamline....Hogarth's line of

beauty is rivalled by the perfect Indicator Diagram of the reciprocating engine...perhaps...education will give to the machine its true place in Art."¹⁸

The issue was still a live one in the late 1920's. "Why," complained Peter Mueller-Munk in 1929, "with our passion for analysis, does nobody ever try to define the process of the machine in action and to deduct the forms and decorations most closely related to it?"¹⁹ Munk went on to spell out the qualities defining machine made beauty: "sharpness and chastity of forms," exactness, economy, and a "die-stamped" look. Other observers, influenced by Le Corbusier²⁰ extended the sensibility to architecture. As Christopher Mann put it, "The triumphal expression of a practical aim produces... simplicity....The machine works in this way." Mann defined what he meant by an engineer's aesthetic through photographs of an empty factory interior, a social club with the same standardized windows as the factory, of the grandstand at Epsom Downs (England) racetrack, and other similar structures including the operating room at a children's hospital (the caption runs, "An interior designed for strictly scientific and utilitarian purposes may result in a very satisfying composition."²¹) Researchers on Hoover's President's Research Committee on Social Trends, whose work began in 1929, came to analogous conclusions although they tended to Americanize their findings: the arts "today in American life

...may affect [the individual] in various ways:...through the...enjoyment of beauty not only in the conventionally recognized arts of painting, architecture and sculpture, but also as it is manifested in a finely designed motor car...." Frederick Keppel, responsible for the art committee's section, concluded, "We find our American approach to the arts...affected by...the fact that we are ahead of other nations in application and devotion to machinery."²² These examples suggest that a reason for the engineer's popularity was tied to his role as an intercessor, one whose skills in negotiating between man and machine made industrial products appealing. Increasingly, engineers were spoken of as artists. As Santayana stated in 1922, "It is not in churches or in great official residences that artistic success or originality can be expected but rather in engineering works, such as skyscrapers...."²³ The idea was thoroughly developed in the 1930's when the literature of industrial design continued the machine age mythology developed in the 1920's. The statement of the President of the International Nickel Company is an example of the genre:

We who have been trained as engineers...have lived among things of beauty whether they be an assembly of roller bearings, a suspension bridge...or a lofty bay of Bessemer converters. The satisfactions we derive from seeing a mighty steam hammer forge a white-hot ingot are those of every creative artistJust as the Greek sculptors went directly to the anatomy of the human body to create their best statues, the artists of the present day are stripping off the gingerbread...in order to bring out the fundamentals of an age in which great tools and machines...have taken over so many of the old manual processes....²⁴

The Machine Age, thus, was a way of life about which thinking people felt impelled to take a stand. Speculating on the potential effects of mechanization was a popular activity among those believing in a bright future for an industrial age. Some predictions were grandiose: Paul Haworth, writing in 1920, listed "radium, x-ray, the invention of the telephone, wireless telepathy...the moving picture, the application of electricity to rapid transit" as reasons for speaking of the present as a "golden age."²⁵ The President's Research Committee referred to the motor car as a "force" standing between maladjusted man and mental breakdown."²⁶ Pronouncements such as these, glorifying machines as all-powerful,²⁷ are typical for the 1920's. Writers speaking of automatic lathes, milling and planing machines, or presses often designated machinery as being 'more than human' ("it is brisk and active when the man is weary; it is clear-headed and collected when the man is stupid and dull."²⁸) Yet analysts hastened to point out that machinery, which they often anthropomorphized, was well-intentioned towards humanity: "Surely the curious drone of a big dynamo is a paean of joy at being able to provide the people with heat, light and power" wrote a visitor to a model engineering exhibition in 1928.²⁹ It may not be surprising that Henry Ford attributed "clear thinking, clean living and square dealing" to mechanization. As Ford declared in 1929, "Rightness in mechanics, rightness in morals are basically

the same thing and cannot rest apart."³⁰ Economists Charles and Mary Beard shared and popularized Ford's sentiments. Economist Stuart Chase, who published copiously on the ethical ramifications of industrialization, described the phenomenon:

Down the street comes marching a thunderous brass band, dressed in the bravest of scarlet and gold, with Henry Ford at its head tossing a great baton into the air, and immediately behind him, Mr. Charles A. Beard, beating with all his might upon a huge brass drum. As he marches, Mr. Ford is shouting: "The way to...equality of opportunity lies through power;...machinery is accomplishing in the world what man has failed to do by preaching, propaganda or the written word...." [and Beard says] "Machine civilization, even in its present primitive stage, need fear no comparison with any other order on the score of general well being." ³¹

The Beards saw the technological age as "the dawn of the gods."³²

Not all observers were so positive: fears that machinery might run amok and create "a world in bondage to what it invented to set itself free" lie behind descriptions of machines as "moloch-like" or as "hybrid beasts."³³ The nearly immediate popularity of Czechoslovakian playwright Karel Capek's term "Robot" (from the play, R.U.R.) for mechanical humanoids suggests one level of the human fear of technological displacement. The robot was a mechanical up-date of the monster created by Mary Shelley's Frankenstein.³⁴ "Stuart Chase, attempting to respond to those who feared that machinery would destroy the need for human

skill: "Charles Lindberg does little else than confront a machine."³⁵ Chase gave an overview of mechanization in the 1920's and cited educators and religious leaders who, like the Reverend P. Frost, for example, feared that machinery was standardizing humanity. Chase quoted Oswald Spengler, who hoped that "man would blot the machine from his memory," and for a "wholly new world in which nothing of this Devil's technique is left."³⁶ "While economic and political life has become mechanized," stated an English analyst of mechanization, "social life has become anarchic."³⁷

Whether positive or negative, many agreed that mechanization was an inevitability. The feeling that society had somehow to accommodate to changes brought about by industrialization became practically a truism during the 1920's. Formulating a response to mechanization was an activity of all the arts, and remained a live issue into the 1930's. "How should the artist adapt himself to the machine age?" ran a questionnaire in the New Masses (January, 1927). And the magazine received responses from historians, poets, writers and economists including Heywood Brown, Stuart Chase, Van Wyck Brooks, Harbor Allen, Waldo Frank, Robinson Jeffers, Joseph Wood Krutch, Babette Deutsch, Upton Sinclair, Genevieve Taggard and Edmond Wilson. "I think the tendency to worship the machine or even reflect it, passively but admiringly as in pictorial art, is destructive

of life," wrote Van Wyck Brooks. He went on: "The artist mustn't try to adapt himself to the machine age. He must try to live outside it." "Never must he turn his back on it," Stuart Chase warned. On the other hand, "One must war on its monotonies and tyrannies by chanting the rhythm of its speed and beauty." Chase named the poems "Manhattan Transfer," by John Dos Passos, as an example of new art originating from mechanization. "The Machine will be man's new epic conquest," stated Harbor Allen. Both comments were prophetic.

Interest in one particular poet's choice of subject elicited a range of pronouncements on the position of poetry in a machine age. The poet in question was McKnight Black, whose collected poems, published in 1929 under the title, Machinery, was widely reviewed. "Mr. Black is the lark of the 'robots' uttering his morning song before the world has become sufficiently accustomed to the rhythms of machinery to realize that here alone is to be found the real poetic expression of the age."³⁸ Another critic compared Machinery to O'Neill's play Dynamo, and to Ernst Bloch's music, including a symphony incorporating mechanical noises. "Incredible as it might sound," wrote the literary critic of the Ashville, North Carolina Times, "to those of us who are certain poetry is not the same stuff that the Machine Age manifests, here is a book of

real poetry about the very transformer of our times, its basis and symbol, the machine."³⁹ These comments are somewhat surprising in light of the long precedent for poetry with machine subjects, one dating back to the early 18th century, when machinery was really new. This body of work includes descriptions of dredging machines and steam engines by Sir Jonas Moore (1685) and the Reverend John Dalton in 1755, as well as John Dyer's The Fleece (1757).⁴⁰ Yet Black's poetry was exceptional for the 20th century because it eulogized machinery (Black's unambivalent acceptance of a mechanized society is in contrast to the ideas of Hart Crane and e. e. cummings⁴¹). The machine was Black's central and defining image. He treated all nature and human activity in terms of machine metaphors. For Black, the heart was a "pure machine." A Corliss engine wheel's "steel flight" was a metaphor for making love.⁴² Black also used language which seems especially linked to a 1920's aesthetic. His poems are dotted with words like 'pure,' 'precise,' 'steel,' 'Euclidean,' and 'geometric.'⁴³

It is tempting to speculate whether Black's poetry might have been admired by Oliver Sayler, whose Revolt in the Arts was published in 1930. Sayler hoped that a new poetry would emerge which would show the influence of the machine as a force. It would, ideally, utilize the

"tempos, the rhythms, the majesty of the machine."⁴⁴

Revolt in the Arts is typical of end-of-decade summaries and views concerning the impact of mechanization.⁴⁵ Like Stuart Chase a year before, Saylor took the opportunity to prophesy a future for the arts. He enlisted opinions of well known educators, philosophers, and historians, as well as theatre people (David Belasco, Alfred Lunt), film stars (Lillian Gish), and dancers (Martha Graham). To set the tone, Saylor quoted from Walter Lippmann's A Preface to Morals -- "There is no retreat from mechanization," -- and from John Dewey -- "the machine is the authentically embodied Logos of modern life."⁴⁶ Saylor posited a broad, broad role for art: "through the distributive agencies of our Machine Age, art has so insinuated itself into the remotest recess of our daily lives that it is more indispensable to us than religion, politics, or sport and second only to the requirements of food, shelter and sex," but declared that "the machine, the Machine Age and America as we know it need humanizing."⁴⁷ He called for special art forms: "Machine Age art will be mural painting, structurally justified sculpture in alliance with architecture," and asked that artists "descend into the market place, the factory, and the machine shop," to plan machine production -- "to feed the machine with design."⁴⁸ The vision of a machine age left little room for painting or sculpture which could not be mass-reproduced or mass-distributed.

The publication of Revolt in the Arts marks the end, more or less, of popular writing on the Machine Age. Such ideas generally ceased to be enthusiastically fostered in the 1930's. As the economic effects of the Depression made themselves felt, visions of machinery with the potential to better society faded before the realities of technological unemployment.

The end of the Machine Age and its optimism is easier to locate than its beginnings. The same is true of the special machine-derived aesthetic sensibility that marks painting, sculpture, architecture, and especially design, during the 1920's. This sensibility, which was accompanied by descriptions of a machine-derived aesthetic, or, what was just as common, pronouncements on American culture which included pleas for an appropriate artistic response to a new age, appears in scattered instances beginning around 1900. They peak first in architecture and painting in the 1920's, and then in industrial design in the 1930's.

The social scientist Thorstein Veblen was one of the earliest thinkers who linked industrialization with a specific aesthetic. His descriptions of working principles involved with mechanization also anticipate the discussions of a machine-age style typical of the 1920's. As early as 1906, Veblen discussed machine technology as a "cultural force."⁴⁹ "The machine process displaced the workman as

the archetype," Veblen pointed out. "Industry, industrial processes, and industrial products...have to take the dominant place in the cultural scheme." Veblen concluded, "Men have learned to think in the terms in which the technological processes act."⁵⁰

Veblen's idea of an impersonal, increasingly non-anthropomorphic interpretation of natural phenomena points in the direction of a Machine Age style, for example, Lewis Mumford's picture of a machine-derived style, fully evolved by 1921, took its characteristics from machine-made objects which were functional in design, with a fine finish and a Euclidean, geometric perfection, and neatness.⁵¹ This was the "modern style." Mumford noted that examples were to be found in the design of subway stations and lunch rooms which he felt had evolved beyond the "jangling whiteness" characteristic of an earlier stage of machine production.⁵² Mumford's comment on the evolution of color beyond a "frigid whiteness" is suggestive. The language betrays the extent to which his criteria for machine age objects were a matter of taste. Mumford was not an out and out functionalist. (Citing the automobile as an example, Mumford advocated designing for beauty by modifying useful apparatuses.)

Both proponents and opponents of a technological style for a technological society made such characteristics as

standardization of parts a central issue of their arguments. One of the most interesting critiques of standardization comes from Edward J. H. O'Brien, whose analysis of the American novel, The Dance of the Machines (1929) was a diatribe against "American worship of the machine [which] tends to substitute machine processes and machine activities of every sort for human processes and human activities."⁵⁴ O'Brien concluded that "A machine has neither soul nor developed intelligence."⁵⁵ Yet he had diagnosed sensitively the very thing he hated: the major characteristics of a machine-derived style; standardized shapes, interchangeability of parts, the creation of types, impersonality, crispness, and accuracy (including photographic accuracy).⁵⁶

O'Brien anticipated discussions of industrial design which dealt with the machine as an aesthetic force. These analyses⁵⁷ continued throughout the 1930's and are among the rare exceptions to the collapse of faith in the potential of industry that characterizes the Depression years.

But even as late as 1929, Peter Mueller-Munk, pleading for good designs for machine products, was calling for "sharp forms...stamped in a die" and for factory work which "reflects the exactness and economy of the machine that created it. Such products were the fitting accompaniments to the "beauty of powerhouses, steel structures and...all

the implements of motors and furnaces."⁵⁸

In still another analysis of industrial design, Sheldon and Martha Cheney's Art and the Machine (1936) reviews its history beginning with early exhibitions (for example, those organized by John L. Dana for the Newark Museum and Public Library beginning in 1912), and continuing throughout the 1920's. They repeat some of Mueller-Munk's conclusions. Their study localizes a spreading machine-age consciousness in the mid 1920's. In 1926, for example, "woodworkers tools [were] exhibited with machines and machine parts in art galleries."⁵⁹ And a year later, "spiral springs and compensating gears and even common screws were assembled and exhibited in an art gallery as evidence of a growing awareness of the design character in certain machines, machine parts and machine products."⁶⁰ The Cheneys also connected the structural foundations which produce pure beauty in machine tools to prototypes in ancient Greek sculpture.⁶¹ The comparison is one with a rich 20th century history among apologia for modern art, and was one which the 1920's appreciated. It appears in critics' descriptions of paintings,⁶² in the ideologies of gallery owners like Charles Daniel (who was fond of the term, "the new classicism," for industrial subjects in paintings),⁶³ as well as in The Soil, Broom, the Little Review, and elsewhere.⁶⁴

The approaches taken by Sayler and later by the Cheneys summarize a special expression of the Machine Aesthetic. An emphasis on a machine derived style as a characteristic of objects is one of the major currents of a 1920's sensibility. The emphasis on design is also a crucial factor in Precisionism -- the machine-ist aesthetic appearing in painting. It is not only that Precisionist painting subjects -- machinery, industrial architecture, mechanical devices and related subjects -- are the raw material of the machine aesthetic. The world as depicted in paintings by Charles Demuth, Stefan Hirsch, George Ault, Elsie Driggs, Louis Lozowick, Niles Spencer, as well as Charles Sheeler's machine aesthetic, which will be discussed below, often looks "designed," or presents us with a world of design objects. Human beings are often excluded to emphasize further its mechanistic austerity.

Definitions of a machine aesthetic specific for American painting were uncommon before the 1920's. This is not surprising. If the seven or so years after the Armory Show had introduced the American artist to a notion of modernism, generally, the same years had seen the partial eclipse of the Ashcan and New York Realists school of Robert Henry, George Luks, John Sloan, George Bellows, and others whose renditions of urban subjects were often unglamorous. Still, Bellows's Pennsylvania Station Excavation and other related subjects of 1907-13 are really the

first 20th century prototypes for later depictions of industrial sections of the urban landscape. In the years following the Armory Show, artists experimented with the new forms of European modernism, from Cezanne to Cubistic work whose structural emphasis and a-chromatic palette later influenced the machine aesthetic in painting.⁶⁵ The influence of Italian Futurism was less wide-spread. In the 'teens, Americans tended to confuse Futurism with Cubism, especially since the Futurists were not exhibited at the Armory Show, but only at the Pan-Pacific exhibition. (In general, Futurism was associated with Duchamp's Nude Descending A Staircase, but the term was also used interchangeably with Cubism.⁶⁶) Futurism became familiar to Americans in part through the art of Joseph Stella in the late 'teens. Another form of modernism, Synchronism, combining color theories with symbolist music theory and cubistic forms gained future Precisionists Charles Sheeler and Morton Schamberg, as well as Georgia, O'Keeffe as short-term recruits. By the early 1920's, reactions against Cubism began to appear in the writings of newspaper critics in America's eastern cities. The tendency was to Americanize the French movement. As Marya Mannes, writing in 1930 about the painting of Niles Spencer, put it, "Cubism is a complex way of arriving at exactly what Spencer does by nature....If there is...a distinct and valuable root of painting taking hold in American soil, then surely the work of Niles Spencer is one of its sturdiest roots."⁶⁷ Earlier,

Robert Wolf had written of Louis Lozowick, "Although [he] has had a long and exacting training in Cubism, his pictures are perfectly comprehensible -- put them in any shop window and every street urchin will know what they're about."⁶⁸

B. The New York Art World.

Given all this as a general background, a chronology for the development of a machine aesthetic in American painting might begin as early as 1913. Hints of things to come are to be found in the popular responses to the Armory Show. In fact, newspaper cartoons which criticize abstract Cubist painting suggest that, on a popular level at least, visual metaphors for machines had long been in existence.⁶⁹ If newspaper coverage in general tended to take the work of Marcel Duchamp, Francis Picabia, and others as jokes, the numerous renditions of the Nude Descending a Staircase were often accompanied by newspaper artists' images of the everyday world in cartoons whose cubed or geometric forms give a surprisingly accurate, though trivialized, prediction for paintings which artists like Man Ray, Morton Schamberg, Sheeler, Driggs and Ault were to begin to produce a few years later. "Nobody who has been drinking is let in to see the show," scoffed the New York World (February 17, 1913). That newspaper illustrator's rendering of the work which "impressed us the most" was a "Post-impressionist portrait of Kubelick playing Mozartian Rag-time." It is

composed of gears, electric connections, batteries and wires as well as flashes of electric current -- startlingly like Katherine Dreier's Abstract Portrait of Marcel Duchamp, which followed five years later. The cartoon also touches base with other ingredients of a machine-age sensibility as it surfaced in the 1920's, including analogies with music in general and American jazz in particular.

There are other preparations for a machine ideology to be found in the aftermath of the Armory Show. Marius de Zayas's and Paul Haviland's apologia for Cubism, "A Study of the Modern Evolution of Plastic Expression," was published in Camera Work in 1913.⁷¹ They discussed Cubism as the expression of intellect and rationality and glorified science as a "religious spirit." The study is important because it attributes an "analytical attitude of mind" to artists and to art ("modern art is nothing more than a scientific expression of man").⁷² De Zayas's and Haviland's point of view was not unusual in the 'teens. It can be described as a kind of 'practical idealism." The term, defined by historian Frederick May, refers to changes in religious ideals in the 20th century: "When the middle class American of 1912 needed cosmic reassurance," May writes, "he turned...to the spokesmen of...popular science...."⁷³ But the study of de Zayas and Haviland is unusual in giving space to an elaborate discussion of a

model for the workings of artistic creativity:

all our faculties are in an equal state of activity or receptiveness....perfect equilibrium. When through excitation from the outside world, certain intellectual faculties become unduly excited, this condition of equilibrium is disturbed and the natural tendency of nature to regain its equilibrium is manifested by this impelling force which seeks to rid our mind through expression of the dominant idea which disturbs our equilibrium. The result of this tendency plus action is production.

The analysis -- a pseudo-mechanical model for art-making -- was accompanied with illustrations by Cezanne (The Card-players), and Matisse (a line drawing of a nude).

De Zayas and Haviland were not the only ones to define art with reference to science. Agnes Meyer, writing in the same issue of Camera Work (March 1913) called for a new and rigorous art criticism -- the "How" of art.⁷⁴ And when Haviland went on in the September/October 1915 issue of 291 Magazine to give his analysis of Francis Picabia's portraits using machine images, he produced an analysis of the relationships between human and mechanical imagery which serves as theoretical underpinning for a raft of portraits using machines and machine parts as symbols not only in Picabia's work, but for work by Man Ray, Charles Sheeler, Arthur B. Dove, Katherine Dreier, Jean Crotti, Elsie Freytag von Loringhoven, and Florine Stettheimer.

As Haviland saw it:

We are living in the age of the machine. Man made the machine in his own image. She has limbs which act; lungs which breathe; a heart which beats; a nervous system through which runs electricity. The phonograph is the image of his voice; the camera the image of his eye. The machine is his "daughter born without a mother." That is why he loves her. He has made the machine superior to himself. That is why he admires her. Having made her superior...he endows the superior beings which he conceives in his poetry and in his plastique with the qualities of machines. After making the machine in his own image, he had made his human ideal machinomorphic.

The passage anticipates images of robots appearing in the 1920's. The choice of machines Haviland made is also revealing. There is first the fact that these are small machines -- hand held or at least portable -- and as such, very much a part of daily life. It is this proliferation of machinery which is the starting point for the Machine Age. In addition, there is an association with the life of the senses, especially jazz and early jazz recordings (Gabrielle Buffet wrote of life in New York at the same time as Haviland, "We lived in a haze of jazz and alcohol."⁷⁵), as well as a sexual life for the mechanomorph, which was also a central concern of many artists associated with the Arensberg coterie.⁷⁶

Another critic in the Stieglitz circle whose ideas are involved with the evolution of a machine-ist aesthetic, was Paul Rosenfeld. In spite of the fact that Rosenfeld tended most often to celebrate painting as expressive of organic ties to the soil and human physicality⁷⁷ he was sensitive

to machine-related aesthetic qualities which may have been less obvious but which were equally as important as those discussed by Haviland. Writing in 1921, Rosenfeld allowed for some range in a machine aesthetic. He found that the paintings of Stanton MacDonald Wright "hammered out a sort of steely...music, a music of girders and metal plates and anvils; his aeroplanes whir...."⁷⁸ Rosenfeld found Man Ray "particularly attuned to the modern world; [he] gets sensations from the products of modern industry, the sights and sounds of the modern great town. One can perceive the starting points of much of Ray's work in the window displays of phonograph record shops and drug stores." Among the "novel textures" Rosenfeld found in Ray's art were "pressed rubber...the shine of polished metal surfaces" and experiments with an air brush.⁷⁹ Rosenfeld criticized Demuth for "beribbon[ing]" his industrial subjects -- factory buildings, warehouses and ventilators. All of these artists, though, expressed an American world -- the "young, sanguine, garishly red, white and blue life streaming by outside."⁸⁰

The Stieglitz circle critics were only part of the evolution of a machine aesthetic for American painting. Important as well was the physical presence in New York of Marcel Duchamp, Jean Crotti and Francis Picabia, founders -- if they may be called that -- of New York Dada. All arrived in the first half of 1915 (although Picabia had made an earlier trip to New York in 1913), and their ideas gave lively and stimu-

lating impetus for the development of major principles of Precisionism which surfaced some five years later. Duchamp brought with him the idea and plans for the image of the mechanomorph, in which machine-like physical appearance combined with human characteristics either presented visually or implied in the title, to form a surprising, sometimes even shocking image. The image of the more-or-less-than-human organism was not new in European literature. Particularly the 19th century saw the resurgence of folk tales of monsters, golems, and other humanoids which express tensions and fears of mechanization. Yet Duchamp's sensibility was humorous and ironic. As he was to recall in 1960, "People living in a machine age are naturally...influenced by the age they live in....I introduced derision into that sacrosanct era...."⁸¹ Duchamp's sensibility, like the sensibility of the mechanized exotic beasts of Roussell's Impressions of Africa, Duchamp's source, brought to avant garde American artists humor and precision, which, along with the grandiose nature of his project, the Large Glass (1915-23), left their marks on American painting. Picabia's machine portraits, couched in images drawn from advertisements in commercial and industrial journals, furthered the notion of using unconventional, industrial materials. All of this freed American artists like Ray, Schamberg and Sheeler to re-think their own backgrounds as potential resources. Duchamp's blueprint-like plans, as well as his wire bending and glass silvering activities must have struck an oddly familiar note to these

Americans, for all had undergone training in the practical arts (Ray as a draughtsman and in publishing; Schamberg as a commercial photographer; Sheeler as an industrial designer and photographer). The polished, hard-edged style of Precisionist painting as it was to emerge in the 1920's indicates that Duchamp's obvious craftsmanship expressed in the Large Glass's industrial techniquess had brought new possibilities to painting. Writer Kenneth Burke's comment suggests that the special nature of New York Dada's influence on American artists was to merge art and life: "America is Dada in its actual mode of life, and has produced popular artists to express the Dada....The architecture of the moving van is Dada. Or the eye that notes that architecture is Dada...."⁸² Burke went on to talk about "American intellectuals [who] go to Paris where they learn to be patriotic returning to American with the religion of Joe Cook and Krazy Kat."⁸³

Apollinaire's Soirées de Paris had included references to American popular art in the 'teens. Yet there was a home-grown source which sought to define the hallmarks of American art, Robert Coady's magazine, The Soil, which may have been inspired by Apollinaire.⁸⁴ The Soil, published between 1916 and 1917 (five issues in all), is an important source for the machine aesthetic in American painting. Its first issues contain Coady's essay, American Art, which predicts a near-complete iconography for Precisionism.

Coady named as American subjects "the Panama Canal, the Sky-Scraper and Colonial Architecture. The East River, the Battery....The Tug Boat and the Steam-shovel. The Steel Plants, the Washing Plants and the Electrical Shops. The Bridges, the Cutouts, the Viaducts, the 'Matt M. Shay' and the '3000' [locomotives]. Gary....The Portland Cement Works. Wright's and Curtiss's Aeroplanes....The Sail Boats, the Ore Cars...." He illustrated his ideas with photographs of heavy machinery -- locomotives, steam hammers, shearing machines, moving jib cranes, and interspersed in his collection of images the question, "Who will paint New York? Who?"⁸⁵ Coady's championing of the beauty of machinery also had a note of moral seriousness which distinguished it from the Dadist stance. A letter in the first issue of The Soil from the writer, George W. Vos, recalls his "earliest and most pleasurable realization...of the beauty of things and akin to the mechanical...plaster replicas of the bas relief from a Parthenon." The letter continues,

I have been swayed by that same beauty on seeing a huge Corliss Engine with its well-balanced formI have already turned from an Art Exhibition to marvel at the coordination and the real art of a steam shovel, ripping out great handfuls of boulders and earth, directly across the street from the still pictures and bronzes in the Fifth Avenue Studio. I believe that few men can stand before a modern turbine and its generator and not get some of its spirit....As machines develop, they are simplified. They become better balanced, more sightly, because only that which is useful and essential is left. That is why some of our bridges are truly beautiful.⁸⁶

The reference to the spirit of the turbine recalls Henry

Adams's vision in The Autobiography of Henry Adams, of the dynamo as a spiritual force.⁸⁷ Coady's machinist aesthetic differs from Dada in another way. The images produced by Duchamp, Picabia, Schamberg, Ray and others tend to depict mechanical apparatuses plucked out of their usual utilitarian settings and placed in a new context, the framed world of the picture. Coady, though, in illustrations and text alike, gives a utilitarian context to machinery, by including its urban and industrial settings.

Along with the "291" theorists, and the Dadaist participants of the Arensberg circle, Coady's ideas characterize the thinking among the Americans of the avant garde, who then were affected by European influences -- from Purism, from the Bauhaus, from Neue Sachlichkeit -- during the 1920's. These influences are the background for Precisionism -- the native American amalgam of Cubist forms and industrial subject matter, developed by artists including Charles Demuth, Niles Spencer, Louis Lozowick, Georgia O'Keeffe and Charles Sheeler during the 1920's. Sheeler's response to machinery and machine-derived ideas gave his art of the late 1920's and 1930's a special intensity: a machine aesthetic dominates Sheeler's art and thought. The ways in which he turned these influences to his own purposes are suggested in the chapters which follow.

C. Charles Sheeler and the Machine Age: Early Influences.

The salient biographical information on Sheeler already has been published,⁸⁸ so need be given here but briefly. The purpose of this section is to single out and re-inflect those facts and patterns in Sheeler's life which can be brought to bear on the development of his machine style. Several of Sheeler's important influences including his contacts with ideologies glorifying engineering and machinery, his photography, European connections, and non-artistic sources including commercial photography and contacts in the advertising world will be discussed in the chapters that follow. Sheeler's friendships will be summarized here, as well as his early life and training. The chapter will also include a review of the literature dealing with Sheeler as an artist of the Machine Age which began to appear during the 1920's.

Sheeler was born in 1883, in Philadelphia. Frugality, in combination with respect for the arts were in his family background. From all accounts, Sheeler's parents supported from the beginning his desire to be a painter. Ironically, when Sheeler was prepared to enter the Pennsylvania Academy of Fine Arts in 1900, it was pressure from the Director of the Academy, rather than family pressure which took Sheeler to the Philadelphia College of Industrial Arts instead, so that he might acquire a practical means of self-support. It was assumed that he would not be able to support himself

by his painting.

Sheeler learned the practice of his art in formal training (1900-1909) and through friends. He began his training by attending a three-year course at the Philadelphia School of the Industrial Arts. There, in a classical stone building which still stands, students were taught a late Victorian version of the forms of Egyptian, Greek, Romanesque and Gothic ornament that could be applied to designs for carpets and wallpapers. Sheeler completed the course, but at the time, he learned that applied art was drudgery -- that he still wanted to paint. He felt that painting relied on "inspiration, a process akin to magic,"⁸⁹ rather than on rote learning and charts of ornament. The painstaking preparatory rulings and tracings were the techniques of the applied arts and not of real painting. One of the few memories of the school Sheeler was willing to describe was watching Thomas Eakins make a portrait of Leslie Millier, principal of the school. As Sheeler recalled it, "We witnessed the progress of a perspective drawing which was made on paper and then transferred onto the canvas, to account for charts of ornament [Eakins posed Leslie in front of charts which gave models for the ornament of different eras.]those charts we knew only too well. This careful procedure led us to the conclusion that the man, whoever he was, couldn't be a great artist...."⁹⁰ Sheeler's ideas were to change, but the incident is significant for future practice

of his profession. The time-consuming, careful procedures, the use of tracings -- these are expressions of the concern for accuracy characteristic of Sheeler's later machine ideology and his painting style of the 1930's.

Sheeler switched to the Pennsylvania Academy of Fine Arts in 1903. The atmosphere of the Pennsylvania Academy of Fine Arts was far more conducive to Sheeler's ideals of an art which blossomed through the magic of pure inspiration. Here, his training was dominated by the personality of William Merritt Chase, whose personal elegance successfully combined that of artist and actor in a romantic middle-class image of bohemianism. Chase taught painting style stressing picturesque subjects, often still lifes which included fruit or vegetables or gleaming fish. They were painted in lush brushstrokes and had rich surfaces. Munich trained, his credo was capturing the moment. The fast oil sketch was his mode. The approach provided Sheeler with much that his previous drab schooling had lacked. He developed a virtuoso facility at rendering the small landscape. One painting, Mid-Ocean (1906, Fleischer Gallery, Philadelphia) is typical. The scene, an image of sea and sky, is represented as a double swathe of blue and green, with an edge of white foam separating the two. Given the heavy application of paint, the painted foam is perhaps weightier than the white caps it represents. The painting hints at the future in its lack of human presence. By 1906, Sheeler,

who had begun to be mentioned as a talented Chase student, exhibited such paintings at the National Academy of Design, New York, and in annual exhibitions at the Pennsylvania Academy, the Carnegie Institute and other showplaces for young artists.⁹¹ He had begun to sell a few pieces, and felt that he had been "educated."⁹²

Looking back on his schooling from the vantage point of his 1937 Autobiography, Sheeler treats his early training with the amused tolerance reserved for one's childhood. He remembered feeling that "the world was in our grasp."⁹³ However, his work of c. 1909 on through the early 1920's was to be a dramatic reversal of the academic artistic values in which he had invested his formative years.

A clue to the difficulties Sheeler had in forming his mature style after a golden existence as a recognized Chase student is his own negative reaction to Chase. He seldom saw Chase after 1906, and never after the Armory Show of 1913 which put him on record as a modernist. "I had a close relation with my teacher in my academy days," Sheeler wrote, "but when he saw I was represented in the Armory Show, he never spoke to me again."⁹⁴

Nonetheless, Chase remained a powerful figure for Sheeler for the rest of his life. In his Autobiography, as well as in other statements,⁹⁵ Sheeler formulates what amounts to a

thorough repudiation of Chase's art and teaching method. He pondered the effects of Chase again and again. Even as late as 1939, in a statement written for his one-artist retrospective exhibition at the Museum of Modern Art. Sheeler stressed throughout the brief essay what he had had to "unlearn" from Chase's lessons: "the slashing brushstrokethought to be evidence ofsuccess of the picture: and the "casual portrayal of the momentary appearance of nature" ⁹⁶ Elsewhere in Sheeler's Autobiography, one finds a careful enumeration of what was missing in Chase's teaching. They included, "the building of the elements in a picture," ⁹⁷ and "the consideration of the forms as such." Such statements refer in part to geometric structure as a pre-eminent element in composition, which Sheeler saw demonstrated in Cubism. These ideas later justified Sheeler's realistic treatment of subject matter, since the artist felt that if he chose subjects on the basis of form, the underlying structure of a picture would be abstract: he did not need to create abstractions. Another specific was the idea that a subject might contain more than could be recorded in a single sitting, ⁹⁸ and the value of draughtsmanship.

In the 1930's, Sheeler more than made up for what he had seen as youthful false starts. However, in 1909, he had been ignorant of his real lack of knowledge. The tone of bitterness and resentment about his Chase years is startling: "It was especially fortunate for me," he wrote, "that I

could not anticipate the years following, before arriving at a sense of direction."⁹⁹ He also felt that Chase's influence had been so harmful that he never sought to teach art, fearing the potential adverse effect on his students.¹⁰⁰ There is other evidence for Sheeler's feelings about his image of himself, after he'd begun to realize he didn't know much about painting: "sort of like a tadpole that still hasn't its two hind legs. He has the front ones but the tail is still on."¹⁰¹ The metamorphosis referred to is an extreme one. Sheeler was nearly forty by the time he says, "I really got started on a new direction."¹⁰² Sheeler felt it took him ten years to "bail out" from Chase.¹⁰³ It was another ten years before the painting Upper Deck (1929), Sheeler's self-defined "dividing line" of artistic success.¹⁰⁴ The sales and recognition Sheeler achieved in the 1920's may have complicated his situation in a subtle way, for it may have been even harder for Sheeler to deal with his personal dissatisfaction with his work when it was publically so well-received.¹⁰⁵ In the late 1920's, the difficulties of what Sheeler called his "long journey" produced something of a crisis.¹⁰⁶ There is a two year gap between finished oils in Sheeler's work (from Spring Interior, 1927, to Upper Deck, 1929).

As Sheeler began to draw from within himself the elements of his mature art, he transmuted the after effects of his experiences at the Pennsylvania School of Industrial Arts and the

Pennsylvania Academy into molding forces; disliking Chase's heavily impastoed surfaces, Sheeler developed a concept of a "picture" in which paint did not conceal structure. (To Sheeler, Chase's work was "painting." He tended to refer to his own paintings as "pictures.")¹⁰⁷ In this process, utilitarian and ordinary subjects became important in their lack of artistic appeal. There was also a morality involved in the 'honest' subject treated directly.¹⁰⁸ After 1909, leaving Chase's flamboyance and spontaneity behind, Sheeler began to transform his art.

There are several influences affecting Sheeler's artistic course during the early 'teens. The first, his trip to Europe with his friend, the painter Morton Schamberg, brought him into contact with the art of Cezanne, French Cubism and the painting of Matisse (he visited the collection of Sarah and Michael Stein in Paris). Another artist whose influence was to prove critical to Sheeler's way of thinking was Piero della Francesca (to be discussed in Chapter IV). Piero della Francesca's ordered compositions, harmoniously proportioned figures, and architectural motifs which looked Cubistic to Sheeler and others of his generation are only part of his importance. There is also a concept of how to go about painting which Sheeler learned from looking at the Arezzo murals (Cpt. IV). For Sheeler, these were evidence that paintings should be developed in accordance with careful preliminary "engineer plans,"¹⁰⁹ and the lesson brought

his Chase-style to an abrupt end. The significance of Sheeler's European experiences has been extensively discussed in the Sheeler literature.¹¹⁰ To summarize, his contact with the art of Cezanne and with Cubism¹¹¹ were to affect his later machine style, both because of the emphasis on geometric structure, Cubist greyed-down palette and other formal elements, and because of Cubist choices of ordinary manufactured articles as painting subjects.

There is another early influence which turned Sheeler away from traditional art-making and contributed to his interest in machine subjects. Beginning in 1912 and throughout the 'teens, Sheeler and Morton Schamberg shared a weekend studio cottage in Doylestown, Pennsylvania, which was located within sight of Dr. Henry Chapman Mercer's Moravian Pottery and Tile Works. They were in contact with Mercer, a man of drive and originality who, beginning in 1897, absorbed himself in collecting and classifying early American and 19th century tools, vehicles and machines of every possible sort.

Mercer's collection began when, searching for an old fire tongs in a heap of discarded rope machines, spinning wheels and wagons, he became interested in all the objects and bought the lot: "I was seized with a new enthusiasm, and hurried over the county rummaging bake ovens, wagon houses, cellars, hay lofts...."¹¹² Some 17 years later, the Mercer Museum came into being. The building, one of the first

built in reinforced concrete, was constructed of this material because Mercer wanted a fire proof structure to house his collection.

Mercer's collection combines antiquarianism with ethnology. He sought to preserve as artifacts the material goods of rural and small town life which were fast disappearing at the turn of the century. What distinguishes his approach from others who had begun to collect Early American furniture, painting and decorative objects, was his belief in the importance of the most ordinary utilitarian object. All were social and historic documents, analogous to those he had been involved with as Curator of American and pre-historic Archaeology at the University Museum of the University of Pennsylvania. As he told an audience viewing his collection in 1905,

Here we have history presented from a new point of view....you may go down into Independence Hall in Philadelphia....you may go to hear a lecture on the War of 1812...but do you think you are more vividly confronted with the truth...than you are here when you realize, looking at those spinning wheels that once...there was a vast noise of humming from the work of ten hundred thousand women spinning....¹¹³

Sheeler shared Mercer's interest in overlooked objects from the past. A letter to Mercer (March, 1924) suggests how much he prized the old iron latch on the door of his Doylestown cottage.¹¹⁴ It seems likely that Mercer's ethnological habit of classifying his collection by function (each museum

room contained the tools of a particular trade) was an introduction to Sheeler's functionalist appreciation of the beauty of utilitarian objects. Utilitarian objects began to appear in his still lifes in the 1920's, as for example, Siphon, 1923, or the plain pitchers and glassware in other works. Later, he was to write, "Forms created for the best realization of their practical use may in turn claim the attention of the artist."¹¹⁵

In the 1930's, Sheeler's subjects include, in addition to the factory scenes, such subjects as a furnace (Home Sweet Home), and a camera or a dry mounting press (View of New York). Even 1930's paintings that contain early American artifacts tend to include contemporary utilitarian elements -- again, Home Sweet Home's furnace. In such paintings, past and present illuminate each other, another Mercer ideal that Sheeler appropriated.¹¹⁶

Another piece of evidence which suggests that Mercer's influence on Sheeler was a lasting one is the installation of the Little Review Magazine's Machine Age Exposition (May, 1927) of paintings, drawings, photographs, architectural models and machinery, one of the important expressions of a machine age sensibility in New York in the 1920's. Sheeler who exhibited photographs, was also on the Artists' Board, which helped with organization. It is possible that his

influence is to be seen in the exhibition installation of saws, hammers, and other tools hanging on chains from the ceiling.¹¹⁷ One of the features of the Mercer Museum is the installation of items ranging in size from small baskets and hand-sized tools to wagons and buggies hung from the ceiling on wires (Plate 1). Mercer's early temporary displays of his collection in the 1890's had such objects in an outdoor setting hanging from trees.¹¹⁸ The precedent might have appealed to Marcel Duchamp, who was also involved with the installation.¹¹⁹

A last clue to Mercer's influence comes with the conté crayon drawing (Plate 2), Interior, Bucks County Barn (1932). The drawing depicts an old-fashioned hooded buggy and a hay rack, ostensibly in adjoining stalls. The vehicles are depicted in what is for Sheeler an uncharacteristically untidy and crowded arrangement. The scene is reminiscent of the Mercer Museum which, in spite of Mercer's classifications, is overwhelmingly a visual jumble (Plate 3). There is a particular oddity in Interior, Bucks County Barn which can be explained with reference to the Mercer Collection. Like display stalls in sheds Mercer had built to house his collection, the stall in Interior, Bucks County Barn has boards across the front.

If Sheeler's schooling and his early life as an artist turned him away from conventional art-making, Sheeler's friendships also encouraged this tendency. Sheeler chose his friends

from among a group of the most interesting personalities of the 20th century literary and artistic avant garde. They included Morton Livingston Schamberg, whom Sheeler knew by 1906, and continuing through the 1920's, various members of the Arensberg circle, among them Walter Arensberg, Louise Arensberg, Marcel Duchamp, Francis Picabia, and Marius de Zayas (Cpt. II). Sheeler also knew Alfred Stieglitz, Paul Strand,¹²⁰ and Edward Steichen (Cpt. III). Other friendships with William Carlos Williams and with Matthew Josephson¹²¹ began in the 1920's and lasted throughout Sheeler's life. In spite of Sheeler's reserve, or possibly because his shyness caused him to value them, these associations were deep ones, and they represent concrete sources for his machine-ist sensibility.

A summary of the machine interests of Sheeler's friends reveals their diversity. There are, first, the paintings of Morton Schamberg, whose detailed plans Sheeler and the artist discussed, possibly as early as 1912.¹²² Schamberg's machine style which dates after c. 1915-15 takes for subjects parts of weaving machines and cameras. In other works, for example his depiction of a telephone, a domestic machine, Schamberg utilized Futurist and Cubist derived techniques to transform the object.

Cubo-Futurist forms and industrial subjects also appear in

the art of fellow Pennsylvanian and Arensberg circle habitue, Charles Demuth. Demuth is an important influence on Sheeler's art because of the very early dates of his Precisionist factory scapes, because of his sense of organic shapes in industrial subject matter, and also because his watercolors and oils explore the Dadist device of the witty title (see Cpt. II).

Francis Picabia's oeuvre was machine based by the time Sheeler knew him in 1919.¹²³ Much less painterly than Schamberg, Picabia's approach was diagrammatic, incorporating labeled parts and details of wiring and electrical connections often drawn from commercial illustrations. Sheeler responded to Duchamp's work from the time he first saw the Nude Descending a Staircase (1912) at the 1913 Armory Show. Later, he had many opportunities to see Duchamp at work on his Large Glass, and was impressed not only by the mechanomorphic subjects, but by Duchamp's wit and by his "exquisite craftsmanship."¹²⁴ De Zayas's ideas combined an interest in Eastern religions, and a knowledge of Cubism. The machine forms in his caricatures and his mechanistic philosophy¹²⁵ were also important for Sheeler. The two were friends by c. 1916-17, and Sheeler worked in the de Zayas Gallery (later the Modern Gallery) beginning in 1920.

William Carlos Williams influenced Sheeler's thinking. When he was introduced to William Carols Williams by Matthew

Josephson in 1923, Sheeler felt as if he had found a kindred spirit.¹²⁶ Williams was to base his poem Classic Scene on Sheeler's 1931 Classic Landscape, one of the River Rouge subjects. Williams's poem begins: "A power house/ in the shape of/ a red brick chair/ 90 feet high/ on the seat of which/ sit.../ two metal stacks -- aluminum...."¹²⁷ The poem and Sheeler's painting are ostensibly bare statements of fact, in which the creators' feelings about their subjects are absent, but in both, the voice of the artist is revealed in structure, subject choice, and in what is left out -- the human element. Both men are matter-of-fact in presentation; their industrial subjects are shown to need no dressing-up. And in both cases, the particular suggests the universal. This idea, basic to Williams's poetry, is expressed in Sheeler's painting in that a specific site has been chosen for its allusions to broader ideas drawn from historic material -- here, the reference is to a classic Greek temple.¹²⁸

Sheeler also read much of Matthew Josephson's writing and discussed it with Josephson. Both "believed in the beauty of modern machinery."¹²⁹ Josephson had been absorbed with the relationship between the artist and the machine since the early 1920's (to be discussed in Chapter III). In 1923, the year he and Sheeler met, he had published an article, "After, and Beyond Dada," in which he urged artists to "be friend to" the machine.¹³⁰ Later that year, in an essay called "The Great American Bill-Poster," Josephson found

the sources of poetry "not in rose gardens but in testimonials for canned soups and motor cars."¹³¹ Josephson was almost certainly Sheeler's first introduction to the legend of Henry Ford, and his automobile factory at River Rouge, Michigan. His essay on Henry Ford appeared in the October, 1923 issue of Broom, which also featured Sheeler's work.¹³²

New York, the setting for Sheeler's friendships, was also central to a Machine Age zeitgeist. The city, a magnet which drew Duchamp and Picabia from France, de Zayas from Mexico, Schamberg and Sheeler from Philadelphia (Sheeler lived in New York from 1916 to 1932 and within commuting distance thereafter), Williams from across the river in New Jersey, and Josephson, a native, home from Europe, was a force in all these men's work. Picabia's machine style began when he visited New York for the second time, arriving in June, 1915.¹³³ (Earlier, on a 1913 visit, he had called New York "the city of the modern spirit."¹³⁴) The image appears in Sheeler's work beginning in 1920 with the movie Manhatta which Sheeler and Paul Strand made together.¹³⁵ The two organized their film by means of a shot of the skyline which acted as a visual chorus. Quotations from Walt Whitman's poem Manhatta, from which the film derives its name, are superimposed on the skyline shot. The film stresses the city's impersonal energies: of the film's thirteen segments, ten deal with architecture and building construction and harbor activity. The city's population appears

only in crowds, except for the third episode, where there are construction workers.

Matthew Josephson may have seen Manahatta in Paris, for the movie circulated to avant garde European cinemas. Later, Josephson asked Sheeler to make a cover drawing of skyscrapers for his new publication, Aesthete: 1925. Josephson was to link the skyline directly to the machine, calling it "a monumental form of art....created by the demands of industry."¹³⁶

Perhaps the earliest piece of documentation revealing Charles Sheeler as an artist of the machine age comes from the man himself. In the fall of 1918, Sheeler wrote, "With the government's desire to make records of industrial achievement, there should be opportunities to do something with a camera along that line -- if one could connect up with the man who could create the position." Sheeler was writing to Alfred Stieglitz.¹³⁷ He added, "I should be glad to have a line from you." He wrote again, "Along the line of which I wrote you (concerning photographing the industrials)....we took the trip [with] some of my photographs" [to Washington, D.C. to see a Captain Bets of the Signal Corps "who had... great enthusiasm"]¹³⁸.

Sheeler's intention had been to make a pictorial record of industrial subjects. As he had written Stieglitz, "I resent bitterly being made a victim of the army and wish I

could devise the means of frustrating it." The project had been his solution. World War I ended only two months after Sheeler's second letter to Stieglitz, and his project never came to fruition. Still, it is interesting to speculate on possible influences which could have brought Sheeler to his project.

As his correspondence suggests, Alfred Stieglitz was certainly an important influence. Sheeler's earliest real contact with Stieglitz (in a letter of June 11, 1915)¹³⁹ concerned the craft of photography (he sent Stieglitz some Artura paper for printing photographs), and Stieglitz from the beginning encouraged Sheeler's endeavors. Their friendship had deepened by 1916. Stieglitz responded to a letter from Sheeler: "I felt as if I had a real child's birthday party full of wonderful surprises....I cannot tell you how glad I am that you feel as you do about me."¹⁴⁰

In spite of Stieglitz's aversion to commercializing photography, Stieglitz admired both Sheeler's pictorial and commercial work (Sheeler sent Stieglitz prints of commercial record photographs of Chinese and Roman objects along with a non-commissioned photograph of his own in May, 1915,¹⁴¹ as well as photographs of the Doylestown house in November, 1917;¹⁴² later, he wrote Stieglitz about an intended folio of African sculpture.¹⁴³) Stieglitz was directly instrumental -- as an important juror -- in Sheeler's recognition

for pictorial photography in 1918.¹⁴⁴ White Barn, the prize winning photograph at the Philadelphia Wanamaker's competition was the beginning of Sheeler's reputation as a pictorial photographer. Although the plans did not materialize, Stieglitz seems to have intended to use Sheeler photographs of objects for a Camera Work issue.¹⁴⁵

Stieglitz's interests figure in Sheeler's plans to photograph "the industrials."¹⁴⁶ Although the work was never done, the project was a fascinating hint at things to come. It gives evidence of Sheeler's very early interest in the industrial subject, expressed in photography. The context, too, is important. Doing utilitarian work for the Armed Forces is directly comparable to the kind of commission which brought Sheeler to River Rouge some ten years later. In both cases the decision was to make a pictorial record giving some form of artistic status to subject matter conventionally not considered as artistic.

Sheeler painted few strictly industrial subjects in the 'teens and twenties. A small Landscape with Waterfall which includes a mill town on a hill (1911, Collection of Bert Baum), is the single appearance of the industrial subject. Although Sheeler experimented with Cubist, Futurist and Synchronist styles in the 'teens, his paintings and drawings of this period fall within conventional boundaries, still lifes, landscapes and a few nude studies and portraits. All

these works are distinguished by two characteristics which predict a machine style. Sheeler's paint handling became increasingly impersonal during the 'twenties, and the work was decreasingly concerned with color. Cropped images of human subjects also hint at things to come.

Paint is rarely allowed to build up in work of the 1920's. In addition, the white tones in any given painting or drawing are often the whites of bare paper or canvas. This last characteristic has an interesting history generally in American painting. Leaving areas of a finished canvas unpainted seems to be a tactic some young Americans picked up from European modernist painters in the 'teens. At least this is the impression given by a 1919 letter Robert Henri wrote to Sheeler. Henri wanted Sheeler's permission and advice on borrowing a Cubistic landscape for an exhibition Henri and George Bellows were arranging which was to travel to Luxembourg. Henri wrote, "I would suggest a canvas which would not create dispute as to whether it is an oil painting -- you know, [we would like to borrow] one which is all over. I know your interesting houses where much of the canvas is bare...."¹⁴⁷ At an early date, Sheeler painted oils such as Still Life, Spanish Shawl (1912, Lane Collection), in which sweeping and spotted brush strokes contrast with heavy outlines incised into the paint surface. Later, in charcoal, watercolor and gouache, materials are treated so as to give the impression of a seemingly unworked surface, as in Still Life (1922, Collection of Mr. and Mrs. Gordon G. Hertslet,

Plate 5). Sheeler's choices for still life subjects -- often transparent glass objects -- lent themselves to a linear depiction stressing geometric shapes, polished surfaces and minimal color.

Sheeler's treatment of human subjects also predicts his future style. There are few in his oeuvre. Twenties works include two self portraits, a costume piece, and studies of nudes and wrestlers.¹⁴⁸ Taken along with the Self Portrait of 1923, Sheeler's drawings of nudes and wrestlers suggest a pattern in his treatment of the human body. These works truncate the body, and, in a composition process akin to cropping, ignore both the organic divisions of the body as well as conventional modes of presentation. Nude (Horter Collection) 1920, is the image of a torso whose boundaries are hip and buttocks on the right, and a line through the right calf at the lower edge (Plate 6). The result is an unsettling and depersonalized image, whose orientation is somewhat ambiguous. Sheeler's own self image in the Self Portrait (1923, Museum of Modern Art, Plate 7) also ignores body divisions. Although Sheeler shows his upper torso, neatly attired in shirt, tie and cardigan, the head is cut off at the drawing edge at about the level of the cheekbones. Sheeler's treatment of the figure in studies of the 1920's makes them prototypes for the cropped compositions of his industrial subjects of the 1930's. In those later works, however, the use of cropping has the opposite

result from the nudes. With the industrial subjects, the treatment of the image gives a sense of completeness -- a unity with the world beyond the boundaries of the image. With the earlier work, the suggestion is, at the very least, that Sheeler's search for abstraction led him to disregard the organic integrity of the human figure.

Other works of the 1920's which predict Sheeler's machine ideology are the barn subjects. Sheeler treated the barn theme in Cubistic drawings and paintings, and also in photographs.¹⁴⁸ The barns of the 1920's explore a variety of issues which Sheeler returned to in the 1930's, when the barn became an historical metaphor. Sheeler spoke of his interest in this utilitarian subject as the early and rural counterpart for functionalism.¹⁴⁹ Semi-abstract treatments of barn subjects (Barn Abstraction, 1916) are schematic, almost blueprint-like treatments (Plate 8) which prepare for the web-like compositions of conte crayon factory subjects (Plate 9), like Ballet Mécanique (1931). Sheeler's barns are also closely related to the urban subjects of the 1920's in theme, if not in treatment, the model for both being utilitarian architecture (Cpt. III).

Sheeler's subjects of the 1920's are steps on his progress to the industrial subjects of the 1930's. Their critical reception is interesting. Reviewers in the 1920's often

stressed the qualities relating to a machine aesthetic, even though the subjects themselves are not directly machine-derived. One of the earliest of such reviews, that of Henry McBride, writing in the New York Sun and Herald (February 22, 1920), is in the form of back-handed praise. "In America," McBride wrote of Sheeler's art, "aesceticism is not in good form." And Forbes Watson, analyzing Sheeler's art in 1923, spoke of its "clean-cut fineness" which he compared both to early American furniture, and to the kind of taste that produced the airplane.¹⁵⁰ Reviews stressing relationships between Sheeler's photography and painting also singled out machine-related qualities. Thomas Craven wrote of Offices (1920), "In the painting, I found a definite quality, a linear precision."¹⁵¹ (Plate 10)

Reviews dating after 1926 may have taken Sheeler's own clues for their direction. As collector Duncan Phillips reported in 1926, Sheeler "believes painters should not neglect mechanical means to interpret a mechanical age."¹⁵² He went on to specify that Sheeler, "to express the impersonal character of his epoch...withdraws behind the scenes...and reduces to the bare elements of design what he sees or photographs." Philips was describing Offices, and also the telephone in Sheeler's 1923 Self Portrait.

Another description of Sheeler's art, Robert Allerton Parker's essay, "The Classical Vision of Charles Sheeler,"

(1926) is a revealing commentary on a machine aesthetic because the author finds machine-like qualities in Sheeler subjects which were not at all machine-related. The essay begins, "The artist paints pictures with the cool and calculated precision of a scientist."¹⁵³ Parker continues, "Sheeler's precision...at times [is] almost surgical.... Euclidean....These pictures suggest that fundamentally there is no antagonism between modern science and contemporary art...due...to...the remarkable instruments of precision." The paintings to which these terms are applied are surprising: the portrait of a woman in a Victorian dress, mentioned above, Lady at the Piano (c. 1926, collection unknown), Dahlias and White Pitcher (1923, Howald Collection, Columbus Gallery of Fine Arts), and a New England church (1926, Provincetown Church, Bing Collection).

Reviews like these treating Sheeler in isolation form one set of responses to his art in the 1920's. There is another body of critical material which importantly deals with Sheeler as one of a group of like-minded painters of machine age subjects, the Immaculates -- or the Precisionists,¹⁵⁴ which also included George Ault, Charles Demuth, Preston Dickinson, Elsie Driggs, Stefan Hirsch, Louis Lozowick, Georgia O'Keeffe, Niles Spencer and Joseph Stella. When reviews grouping those artists began to appear, reviewers also began to include lists of their subjects, which codified a machine age iconography. Rare reviews of the 'teens

had tended to include machine subjects under the larger heading of modernism. A review of Philadelphia's McClees Galleries Exhibition of Advanced Modern Painting (May 1916) which included a mixed bag of modernist work by Henry Lee McFee, Lyman H. Sayen, Jean Crotti, Marcel Duchamp, George Bracque, Pablo Picasso, Albert Gleizes, Man Ray, Morton Schamberg, Joseph Steel and Max Weber, among others. Schamberg's work was described as "a wedding of architects' plans, machinists' drawings, and a strange sort of an Egyptian relief."¹⁵⁵ The general tone of the review was a lively appeal to open-mindedness where modern art was concerned.

By the 1920's, reviews began to single out machine subjects as particularly typical. Increasingly throughout the 1920's, the choice of machine subjects was considered noteworthy in itself. Describing the art of Charles Demuth in 1923, Henry McBride wrote, "Mr. Demuth is of this era -- he is aware of concrete, of immense implacable walls of red brick, and of the towering smokestacks which cut more of a figure now than church steeples do....He makes it a thing to glorify a subject that the rest of us have been taught to consider ugly."¹⁵⁶ The ideas were echoed in an Art News review of 1928 which included references to factories, sheds, bridges and smokestacks as special Immaculate subjects. Dorothy Grafly, writing in the Philadelphia Public Ledger in 1929 was another who linked the subject choices of

Sheeler, Driggs, Dickinson and others with contemporary life around them. Grafly wrote, "There are hundreds of new forms called into being by modern construction and modern mechanism. There are myriad water tanks on roofs; there are all kinds and conditions of pipes, wires, telephone and electric poles and fixtures; little roof houses atop skyscrapers; signs and signposts; bridges... -- no end, in fact, to the new geometric symbols of complex city life." She continues, "By all these mechanisms the mind of man is stirred."¹⁵⁷

Precisionism is the context for contemporary critical responses to Sheeler's art. After 1927, when Sheeler began to paint industrial subjects, reviews of his work built on already established ideas about a machine age iconography. But there is a special tone in responses to Sheeler's machine style. Early reviews treating Precisionists as a group had tended to stress the timeliness or topicality of their images. As Grafly had put it, "Perhaps the artists are warping the world of a general emotional reaction to the modern pressure of life."¹⁵⁸ By contrast, Sheeler's reviewers tended to put his industrial subjects into a grandiose, almost cosmic context.

The appearance of one of Sheeler's first industrial subjects, the photograph Criss-Crossed Conveyers (1927, Plate 11), when it was first published in Vanity Fair Magazine, set a tone which was often to characterize reactions to Sheeler's

work. The photograph was given the title by the Vanity Fair staff, "By Their Works Ye Shall Know Them."¹⁵⁹ The accompanying text runs, "The Ford automobile factories in Detroit ...[have] the quality of American's Mecca, toward which the pious journey for prayer." Others continued with the quasi-religious metaphor. Sheeler's photograph, Ladle Hooks (1927, Plate 12), taken in the Ford plant's open hearth building, was called by Ford News, the Ford company's in-house periodical, "a cathedral of industry."¹⁶⁰ And to Ernest Brace in 1932, Sheeler was "a sort of Fra Angelico among contemporary painters. His work has the same ascetic and faithful approach to the forms and mass of industrialization as had the Florentine monk toward the religious imagery of his day."¹⁶¹

The background for the recurrent religious metaphor in Sheeler criticism is not hard to find. At least one source is Adams's The Education of Henry Adams, which was on the best seller list between 1919 and 1920, and reprinted in 1931.¹⁶² Adams's images of the Virgin and the Dynamo are descriptions of energy charged forms within peaceful exteriors later to be characteristic of Sheeler's paintings. Sheeler's desire to visit Chartres (he went there in 1929)¹⁶³ is also evidence that he knew Adams's writing as well as his critics did. The theme was later taken up in response to Sheeler's Power series of 1939, a commissioned group of photographs with paintings based on them were published in

1940 in Fortune magazine.¹⁶⁴ A Downtown Gallery brochure which announced the sale of the paintings reflects the typical ebullience of the gallery's owner, Mrs. Edith Halpert.¹⁶⁵ She spoke of "the heavenly serenity of Sheeler's style." But others besides Halpert picked up on the religious theme. The Art Digest reviewer who referred to the "hushed reverence"¹⁶⁶ of Sheeler's painting of a turbine may have had in mind Fortune magazine's commentary on the painting, which abounds in religious metaphors: "Here, in a room larger and more still than a corridor in the Vatican," reads the text, "a hydroelectric turbine floats majestically down into its pit."¹⁶⁷ Fortune's comment on Sheeler's painting of a Boulder Dam transmission tower (Plate 13) runs, "This is as truly a religious work of art as any altar piece, or stained glass window, or vaulted choir."¹⁶⁸ And Sheeler's painting of the turbine units of a Brooklyn steam plant called forth Henry Adams's Chartres. Buckminster Fuller was also cited: "The Almighty opened... the hot valve of absolute energy...."¹⁶⁹

Related to the religious approach was one in which industrial subjects were spoken of as exemplars of harmony.

"Sheeler has a harmonious acceptance of his age, a vision of its rhythm and order," wrote Florence Kellog in 1932.

"These examples of his work make their own contributions to discussion...of...those tools of man's making, which seem to have got out of hand."¹⁷⁰ The industrial subjects were

similarly characterized in 1935, "A great industrial organization purged of industrial dross and chaos," was how they were described by Winslow Ames. Ames felt that, "It is not industry as industry seems, but...the industry of our dreams."¹⁷¹

Purity and harmony were the basis for definitions of beauty for others of Sheeler's critics. "Charles Sheeler shows what an artist can do to make the Machine Age beautiful," wrote W. B. McCormick in 1931. He cited Sheeler's choice and realistic treatment of subjects as the genuine response to those whose art, he felt, only "believes it is...glorifying the machine age. These last two words...echo from public platforms, dinner daises, the radio...and much arty talk....Mr. Sheeler's genius [is] in capturing beauty in the shadow of the Machine Age's most complete monuments...." McCormick felt that the forms and patterns Sheeler chose were "artistically" beautiful, that they were "a realization of human progress."¹⁷²

Reviewing critical responses to Sheeler's work in the 1920's and 1930's gives the climate for Sheeler's art, as well as the breadth of the tendency which viewed his art as the product of a 'Machine Age.' These responses came to an end with the 1940's. Around 1945, Sheeler's style changed, and so did its reception. The tendency in the later 1940's, 1950's, and thereafter has been first, to stress the relationship between art and business enterprise as sponsor¹⁷³ and later, to stress more purely formal values in Sheeler's work¹⁷⁴ rather than to treat it as the special expression of a "Machine Age."

Footnotes.

- ¹Lewis Mumford in Stearns, Harold E., Civilization in the United States (New York: Harcourt Brace and Co., 1922), p. 12.
- ²Ibid., p. iv.
- ³An example is the hero of Henry James's, The American (1877).
- ⁴This issue was discussed by Mumford as late as 1929. See "The Aesthetic of the Machine," American Taste, 1929, in Loren Barnitz, The Culture of the Twenties (Indianapolis and New York: Bobbs-Merrill Co., 1970), p. 401-402.
- ⁵Henry McBride, "Modern Art," The Dial (December, 1921), p. 720. See also Malcolm Cowley, Exiles Return (New York: Viking, 1934), and Matthew Josephson, Life Among the Surrealists (New York: Holt, Rinehart and Winston, 1962).
- ⁶Josephson, op. cit., p. 274.
- ⁷Stuart Chase, "The Ethical Necessity of Meeting the Challenge of the Machine Age," Bureau of Personnel Administration, New York, 1929-1939, p. 11-18. See also, Siegfried Giedeion, Mechanization Takes Command (New York: Norton, 1948), p. 41-44, and Reyner Banham, Theory and Design in the First Machine Age (New York: Praeger, 1970), p. 9-12 for a discussion of the role of small machines in changing public attitudes toward mechanization.
- ⁸Charles and Mary Beard, The Rise of an American Civilization (New York: Macmillan, 1927), p. 714-716.
- ⁹E. L. Lindeman, "Forecasting in the Public Service," Modern Graphic Survey, LXVII (March, 1932), p. 595-599, 647.
- ¹⁰Patricke Johns-Hein and Hans H. Gerth, "Values in Mass-Periodical Fiction, 1921-40," in Gilman Ostrander, American Civilization in the First Machine Age (New York: Harper and Row, 1970), p. 226-34.
- ¹¹Ernest Boyd, "Aesthete: 1924 Model," American Mercury (January, 1924).
- ¹²Frederick J. Hoffman, The 20's (New York: Collier Books, 1962), p. 367-68.
- ¹³Ostrander, op. cit., p. 224.

- ¹⁴Henry F. May, "Shifting Perspectives on the 1920's," Mississippi Valley Historical Review, XXXXIII, No. 3, (December, 1956), p. 406.
- ¹⁵Henry Ford, My Philosophy of Industry (New York: Coward McCann, 1929), p. 101.
- ¹⁶See Beard, op. cit., p. 759, and Charles Merz, And Then Came Ford (New York: Doubleday Durand, 1929), p. 191, 193.
- ¹⁷George Vos, letter to The Soil, I, No. 1 (December, 1916), p. 16-18.
- ¹⁸Vos's ideas anticipate theories of Norman Bel Geddes, and others in the 1920's.
- ¹⁹Peter Mueller-Munk, "Machine Hand," Creative Art (October, 1929), p. 209-12.
- ²⁰Le Corbusier, Towards a New Architecture (Frederick Etchells, translator. New York: Praeger, 1960, reprint of 1927 English edition).
- ²¹Christopher Mann, "Art in Everyday Things," International Studio, XIII (June-December, 1928), p. 83.
- ²²President's Research Committee on Social Trends, Recent Social Trends in the United States (New York and London: McGraw Hill, 1933; begun 1929), p. 958.
- ²³Frederick P. Keppel and R. L. Duffus, The Arts in American Life (New York: McGraw Hill, 1933), p. 33-34.
- ²⁴Sheldon and Martha Cheney, Art and the Machine (New York and London: McGraw Hill, 1936), p. 261.
- ²⁵Paul L. Haworth, The United States in Our Times (New York: Scribner & Sons, 1920), p. 498.
- ²⁶President's Research Committee on Social Trends, ibid.
- ²⁷H. F. Watson, "The Omnipotent Machine," Cornhill Magazine. New (3rd) Series, LXV (November, 1928), p. 625-38.
- ²⁸Watson, Op. cit., p. 630.
- ²⁹Ibid.
- ³⁰Henry Ford, op. cit., p. 35.
- ³¹Stuart Chase, Men and Machines (New York: MacMillan, 1929), p. 16.
- ³²Charles and Mary Beard, op. cit., p. 800.

- ³³ H. G. Schefflauer, "The Machine as Slave and Master," The Freeman (May 12, 1920), p. 208-10.
- ³⁴ A list of robot images of the 20th century would include mechanomorphs in paintings by Marcel Duchamp, Raoul Hausman, and others; robotic-looking imagery also appears in films by Melies, ballet costumes by Oskar Schlemmer, and paintings by di Chirico. The human being as an interchangeable part occurs in film sequences by Leger (Ballet Mechanique; also Leger's Cubistic paintings with war themes), as well as Busby Berkley's later dance numbers; the theme of man on the assembly line is treated by Charlie Chaplin, in Modern Times, and Rene Clair in A Nous La Liberte.
- ³⁵ Stuart Chase, op. cit., p. 11-18.
- ³⁶ Stuart Chase, Men and Machines (New York: Macmillan, 1929), p. 14.
- ³⁷ (R.M.), "Notes on Mechanism III," The New Age, XVI, No. 18 (September 1, 1927), p. 211.
- ³⁸ Unmarked clipping in the possession of Mrs. Lucy Badinot-Stimson (formerly Mrs. Macknight Black), c. 1929.
- ³⁹ Charles Norman, "The Poetry of Steel," Ashville, N. Carolina Times, May 5, 1929.
- ⁴⁰ Francis Klingender, Art and the Industrial Revolution (London: Noel Carrington, 1947), p. 18-21, discusses this poem.
- ⁴¹ See Dickran Tashian, Skyscraper Primitives (Middletown, Connecticut: Wesleyan University Press, 1975), p. 143-188, for a discussion of machine themes in the poetry of Hart Crane and e.e. cummings, and also Hart Crane, "Modern Poetry," in Oliver Sayler, Revolt in the Arts (New York: Brentano's, 1930), p. 294-298.
- ⁴² Macknight Black, "Beside a Corliss Engine," Machinery (New York: Liveright, 1929), p. 63, 34.
- ⁴³ Ibid., passim, and also, "Editor's Introduction," Thrust at the Sky (New York: Simon and Schuster, 1933), p. 8. Black's poems appeared singly in such periodicals and newspapers as the New York Herald Tribune Book Review, in 1925, 1926, and 1927.
- ⁴⁴ Oliver Sayler, Revolt in the Arts (New York: Brentano's, 1930), p. 66. Sayler hoped for a new "Machine Age" poetry.
- ⁴⁵ For other examples, see footnotes 22, 23, 25.

- ⁴⁶ Saylor, op. cit., p. 59-60.
- ⁴⁷ Ibid., p. 73.
- ⁴⁸ Ibid., p. 121; see also p. 129, 151.
- ⁴⁹ Thorstein Veblen, The Place of Science in Modern Civilization (New York: Russell & Russell, 1961; original printing 1906).
- ⁵⁰ Ibid., p. 15-17.
- ⁵¹ Lewis Mumford, "Machinery & the Modern Style," The New Republic, XXVII, No. 234 (August 3, 1921), p. 263-264.
- ⁵² Ibid., p. 263.
- ⁵³ This issue is discussed by Peter Collins, Changing Ideals in Modern Architecture (Montreal: McGill University Press, 1967), p. 159-166.
- ⁵⁴ Edward J. H. O'Brien, The Dance of the Machines (New York: MacCauley, 1929), p. 177.
- ⁵⁵ Ibid.
- ⁵⁶ Ibid.
- ⁵⁷ See Sheldon & Martha Cheney, op. cit., and also books by Walter Teague, Jacques Kahn, Norman Bel Geddes, and others.
- ⁵⁸ Peter Mueller-Monk, op. cit.
- ⁵⁹ Sheldon & Martha Cheney, op. cit., p. 13.
- ⁶⁰ Ibid., p. 7-8.
- ⁶¹ Ibid., p. 261.
- ⁶² See Sam Kootz, Modern American Painters (New York: Brewer & Warren, 1930), p. 18.
- ⁶³ Interview, Elsie Driggs, April 2, 1978.
- ⁶⁴ See for an example, Robert J. Coady, "American Art," The Soil, January 1917, p. 54-56.
- ⁶⁵ Milton W. Brown, "Cubist Realism," Marsyas, III (1946), p. 146-158.
- ⁶⁶ See Milton W. Brown, "The Armory Show in Retrospect," 1913 Armory Show, 50th Anniversary Exhibition 1963 (Henry Street Settlement, New York, 1963), p. 161, 172, 175.

- ⁶⁷ Marya Mannes, "Niles Spencer," Creative Art (July, 1930), p. 59.
- ⁶⁸ Robert Wolf, "Louis Lozowick," The Nation, XXII, No. 3163 (February 17, 1926), p. 186.
- ⁶⁹ Milton W. Brown, "The Armory Show in Retrospect," p. 160-176.
- ⁷⁰ Ibid., p. 170.
- ⁷¹ Marius de Zayas and Paul Haviland, "A Study of the Evolution of Plastic Expression," Camera Work (March, 1913).
- ⁷² For an example of a similar attitude see Frederick James Gregg, "Letting in the Light," Harper's Weekly (February 15, 1913).
- ⁷³ Henry F. May, The End of American Innocence (New York: Alfred A. Knopf, 1959).
- ⁷⁴ Agnes Meyer, "The How of Art," Camera Work (March, 1913).
- ⁷⁵ Information courtesy of the New York Public Library Reference Service.
- ⁷⁶ Gabrielle Buffet-Picabia, in Lucy R. Lippard (ed.), Dadas on Art (New Jersey, Prentice Hall, 1971), p. 4-5.
- ⁷⁷ Stieglitz married the camera in de Zayas's analysis. See "New York at First...", 291, V-VI (July-August, 1915).
- ⁷⁸ Wanda Corn, "Apostles of the New American Art: Waldo Frank and Paul Rosenfeld," Arts Magazine, LIV, No. 8 (February, 1980), p. 159-164.
- ⁷⁹ Paul Rosenfeld, "American Painting," The Dial, LXXI (December, 1921), p. 661.
- ⁸⁰ Ibid., p. 662.
- ⁸¹ Ibid., p. 663.
- ⁸² Marcel Duchamp, as quoted in Katherine Kuh, The Artist's Voice (New York: Harper & Row, 1960), p. 90.
- ⁸³ Kenneth Burke, "Aesthete: 1925 Model," The American Mercury, vol. 2 (February, 1925), p. 24.
- ⁸⁴ See Judith Zilczer, "Robert Coady: Forgotten Spokesman for the Avant Garde in America," American Art Review, II, No. 6 (September-October, 1975), p. 85.

- ⁸⁵ Robert J. Coady, "American Art," The Soil, I, No. 1 (December, 1916), p. 3, and I, No. 2 (January, 1917), p. 54-56. See December, 1916, p. 7, and January, 1917, p. 73, 124, for Coady's questions.
- ⁸⁶ Ibid., vol. 1 (December, 1916), p. 16-18.
- ⁸⁷ Henry Adams, The Autobiography of Henry Adams (New York: The Modern Library, 1931), p. 380-81.
- ⁸⁸ The most complete biographical information on Sheeler appears in his manuscript Autobiography, microfilm, NSH 1 (New York: Archives of American Art, 1937), and in Constance Rourke, Charles Sheeler (New York: Harcourt, Brace & World, 1938) which is based on the Autobiography. Sheeler himself felt Rourke's book was definitive (letter to Mr. Joseph J. Fraser, September 19, 1939, Pennsylvania Academy of Fine Arts, "Sheeler" file). The most up-to-date and accurate biographical material is still Abigail Booth, "Catalogue of the Exhibition and Biographical Notes," Charles Sheeler (Exhibition Catalogue, Collection of Fine Arts. Washington, D.C.: Smithsonian Institution Press, 1968), p. 10-33.
- ⁸⁹ Rourke, op. cit., p. 4.
- ⁹⁰ Rourke, op. cit., p. 15.
- ⁹¹ For Sheeler's exhibitions, see Lillian N. Dochterman, The Stylistic Development of the Work of Charles Sheeler, unpublished Ph.D. dissertation, State University of Iowa, 1963, Appendix B., p. 554-617.
- ⁹² Sheeler, Autobiography, frame S7.
- ⁹³ Rourke, op. cit., p. 22.
- ⁹⁴ Sheeler, as quoted in M. W. Brown, 1913 Armory Show 50th Anniversary Exhibition, p. 95.
- ⁹⁵ See Autobiography, frames 50, 59, 64, 72, 86, 87, and Rourke, p. 22, 23, 25. See also Frederick S. Wight, Charles Sheeler (retrospective exhibition catalogue. Los Angeles: University of California Press, 1954), p. 11.
- ⁹⁶ Sheeler, "A Brief Note on the Exhibition," Charles Sheeler: Paintings, Drawings, Photographs (New York: Museum of Modern Art, 1939), p. 10-11.
- ⁹⁷ Sheeler, Autobiography, frame 59.
- ⁹⁸ Ibid.

- 99 Rourke, op. cit., p. 22.
- 100 Georgia O'Keeffe was another painter of Sheeler's generation who reacted negatively to Chase's teaching. Receiving a first prize for a still life painted in a Chase class at the Art Students' League, she was disillusioned. If what she had done was art, she said, "I wasn't interested." See Daniel C. Rich, Georgia O'Keeffe (Chicago: Art Institute, 1943).
- 101 Martin Friedman, Charles Sheeler, Typescript of tape-recorded interview (New York: Archives of American Art, June 18, 1959), p. 22.
- 102 Martin Friedman, Sheeler Interview, p. 6. See also Martin Friedman, Bartlett Hayes and Charles Millard, Charles Sheeler, op. cit., p. 11.
- 103 Sheeler, Autobiography, frame 65, 76; see also Rourke, op. cit., p. 24.
- 104 Charles Sheeler, A Brief Note on the Exhibition, p. 10.
- 105 For Sheeler's exhibitions, see Lillian Dochterman, op. cit., Appendix B., p. 564-617.
- 106 Rourke, op. cit., p. 143.
- 107 See Rourke, op. cit., p. 18, 19, 23, and also Sheeler, Autobiography, frame 92. Sheeler's early use of the term "picture" can be found in a letter to gallery owner, William Macbeth, September 31, 1909. See Garnett McCoy, "Charles Sheeler, Some Early Documents and a Reminiscence," Journal of the Archives of American Art, V, No. 2 (April, 1965), p. 1-4. See also Sheeler, Autobiography, frame 60.
- 108 There is background for this point of view in criticism of photography in the 'teens. See Chapter 3.
- 109 Martin Friedman, Sheeler interview, p. 5-6.
- 110 See Sheeler, Autobiography, frame 60-65, and also Rourke, op. cit., p. 25-28.
- 111 See Autobiography, frame 82-85, and 62-66.
- 112 Dr. Henry Chapman Mercer, as quoted in The Mercer Mile (Doylestown: Bucks County Historical Society, 1972), p. 5-6.
- 113 Mercer as quoted in the "Doylestown Daily Republican," June 1, 1897, in Donna Gail Rosenstein, "Historic Human Tools: Henry Chapman Mercer and His Collections, 1897-1930," Unpublished M.A. thesis, Univ. Delaware (1977), p. 8.

- 114 Charles Sheeler, Letter to Dr. Mercer (March 16, 1924, Mercer Museum Archives).
- 115 Sheeler, Autobiography, frame 92.
- 116 Rosenstein, op. cit., p. 17 and Bucks County Historical Society, op. cit., p. 5.
- 117 S. Fillin Yeh, Interview with Louis Lozowick, August 25, 1972.
- 118 In the Museum, the wires attach to hooks set in concrete when the ceilings were poured - hence, part of the building plan from inception. See Rosenstein, op. cit., p. 22, and Bucks County Historical Society, op. cit., p. 6.
- 119 S. Fillin Yeh, Interview with Louis Lozowick.
- 120 See Naomi Rosenblum, "Paul Strand," Unpublished Ph.D. dissertation, The Graduate Center, CUNY, 1978.
- 121 Matthew Josephson, op. cit., p. 251, and also S. Fillin Yeh, Interview with Matthew Josephson, August 3, 1974.
- 122 See Rourke, op. cit., p. 37.
- 123 Letter, Charles Sheeler to Alfred Stieglitz, Stieglitz Correspondence, Beinecke Library, Yale University, September 22, 1914. See also Milton W. Brown, American Painting from the Armory Show to the Depression (New Jersey; Princeton University Press, 1955), p. 116, and William Canfield, "The Machinist Style of Francis Picabia," Art Bulletin, XXXXVIII, No. 3-4 (1966), p. 319, for supporting evidence.
- 124 Rourke, op. cit., p. 48.
- 125 Marius de Zayas's ideas are discussed in Leslie Cohen, "Marius de Zayas and the Modern Movement in New York," Unpublished Master's thesis, Queens College, CUNY, 1973, and also by Craig Bailey, "The Art of Marius de Zayas," Arts Magazine, LIII, No. 1 (September, 1978), 136-144.
- 126 Interview with Matthew Josephson, August 3, 1974. Connections between Williams and Sheeler have been discussed by B. Dijkstra, Hieroglyphics of a New Speech (New Jersey: Princeton University Press, 1969), p. 131-144. Dijkstra stresses Sheeler's Cubism in his comparison, and also mentions that William's Classic Scene was based on Sheeler's Classic Landscape (p. 191). W. Guimond, The Art of William Carlos Williams: A Discovery and Possession of America (Urbana: University of Illinois Press,

1968) also takes up this connection. One of the most important similarities Guimond mentions is the desire of the artist to keep himself "out of the picture" (p. 43). However, Sheeler stressed "the local and the ugly" less than Guimond implies (p. 15).

- 127 Collected Early Poems (New York, 1934).
- 128 Bartlett Cowdrey, Charles Sheeler Interview (New York: Archives of American Art, TS 542, December 9, 1958), p. 46.
- 129 Interview with Matthew Josephson, August 3, 1947.
- 130 Ibid., and also Broom, II (July, 1922), p. 346-350.
- 131 Ibid., see also Matthew Josephson "The Great American Bill Poster," Broom, III (November, 1922), p. 310.
- 132 Matthew Josephson, "Henry Ford," Broom, V (October, 1923), p. 137-142.
- 133 Camfield, op. cit., p. 309.
- 134 "Art Rebel Here to Teach New Movement," New York Tribune (March, 1913), part 5, p. 9.
- 135 See Rosenblum, op. cit.
- 136 Matthew Josephson, Life Among the Surrealists (New York: Holt, Rhinehart and Winston, 1962), p. 355, and Interview.
- 137 Charles Sheeler to Alfred Stieglitz, Stieglitz Correspondence, Beinecke Library, Yale University, n.d. (Fall, 1918).
- 138 Charles Sheeler to Alfred Stieglitz, Stieglitz Correspondence, Beinecke Library, Yale University (September 4, 1918). There is no special military meaning connected with Sheeler's use of the term "industrials" (letters to S. Fillin Yeh from the Department of the Army, March 28, 1980, General Services Administration, National Archive and Records Services, April 9, 1980 and April 23, 1980). The "we" in Sheeler's letter refers to Stieglitz's imaginary presence.
- 139 Sheeler to Stieglitz, Stieglitz Correspondence, loc. cit. (1915). The earliest record in the Stieglitz correspondence of contact between the two men is September 18, 1911.
- 140 Stieglitz to Sheeler, loc. cit. (November 1, 1946).

- 141 Stieglitz to Sheeler, loc. cit. (December 1, 1916).
- 142 Sheeler to Stieglitz, loc. cit. (May 25, 1915).
- 143 Stieglitz to Sheeler, loc. cit. (November 22, 1917).
- 144 Ibid. See also Sheeler to Stieglitz, loc. cit. (December 1, 1917).
- 145 Sheeler to Stieglitz, loc. cit., undated.
- 146 Stieglitz to Sheeler, loc. cit. (March 1, 1917). The issue of Sheeler's relationship with Stieglitz is complex. Sheeler was never a Stieglitz group intimate, and was never given an exhibition at Stieglitz's galleries. Yet Stieglitz owned and valued Sheeler's photographs (see Weston Naef, The Collection of Alfred Stieglitz, New York: The Metropolitan Museum of Art, 1978), p. 446-449. Stieglitz's influence on Sheeler's attitudes towards photography will be discussed in Cpt. III.
- 147 Letter, Robert Henri to Charles Sheeler, Stieglitz Correspondence, Beinecke Library, Yale University (February 27, 1919).
- 148 See Dochterman, op. cit., p. 163, 222, 226, 243, 253, 254, 255, 258, 299, and 300. The costume piece (p. 300); a woman in Victorian clothing, was commissioned by Juliana Force.
- 149 See Dochtermen, op. cit., p. 198-202, 207-212-229, 238, 249, and 286. See also Millard, op. cit.
- 150 Sheeler, Autobiography, frame 101, 120.
- 151 Forbes Watson, "Charles Sheeler," Arts, III, No. 5 (May, 1923), p. 338.
- 152 Thomas Craven, "Charles Sheeler," Shadowland, VIII, No. 1 (March, 1293), p. 71.
- 153 Duncan Phillips, A Collection in the Making (New York: Weyhe, 1926), p. 65
- 154 Robert Allerton Parker, "The Classical Vision of Charles Sheeler," International Studio, LXXXIV (May, 1976), p. 68-69.
- 155 See Martin Friedman, The Precisionist View in American Art (Milwaukee: Walker Art Center, 1960), Martin Friedman, Edward Deming Andrews, Vincent J. Scully and H. H. Arnason, "The Precisionists," Art in America, III (1960); and S. Fillin Yeh, The Precisionist Painters: 1914-49 (Huntington: The Hecksher Museum, 1978).

- 156 Kenneth Macgowan, "Philadelphia's Exhibit of 'What Is It,'" Boston Evening Transcript (Saturday, May 27, 1916), p. 6.
- 157 See Henry McBride, "Modern Art," The Dial, LXXIV, No. 2 (February, 1923), p. 217-219, and also "Daniel Gallery Exhibition," Art News (November 3, 1928), p. 9. An early review of painting in Berlin runs, "A new element seems to be the artists' fondness for painting scenes from industrial centers, such as iron works, machine shops, locomotives and building constructions." "Berlin, July 1, 1920," Art News, XXIII, No. 38 (August 14, 1920), p. 2.
- 158 Dorothy Grafly, "Contemporary Art by Americans is Thought Provoking," Public Ledger (Sunday morning, January 20, 1929), Society Section, p. 9.
- 159 Ibid.
- 160 "By Their Works Ye Shall Know Them," Vanity Fair (February, 1928), p. 62.
- 161 Ford News, IX, No. 2 (1929), cover.
- 162 Ernest Brace, "Charles Sheeler," Creative Art, vol. XI (October, 1932), p. 97-104.
- 163 See Henry Adams, The Education of Henry Adams (New York: The Modern Library, 1931), p. v, and also Robert Sklar (ed.), The Plastic Age (New York: Braziller, 1970), p. 9-10.
- 164 Sheeler, Autobiography, frame 99.
- 165 "Power: Paintings by Charles Sheeler," Fortune, XXII, No. 6 (December, 1940), p. 73-85.
- 166 "Sheeler," Downtown Gallery Brochure (Dec. 2-12, 1940).
- 167 "Sheeler Paints Power," The Art Digest, XV, No. 5 (December 1, 1940), p. 8.
- 168 "Power: Paintings by Charles Sheeler," Fortune, p. 74.
- 169 Ibid., p. 76.
- 170 Ibid., p. 80.
- 171 Florence L. Kellog, "Order in the Machine Age," Survey, LXVII, No. 11 (March 1, 1932), p. 389-391.
- 172 Winslow Ames, "A Portrait of American Industry," Worcester Massachusetts Art Museum Annual, II (1936-7), p. 96.

- 173 W. B. McCormick, "Machine Age Debunked," New York American (November 26, 1931).
- 174 See Ben Barkin, "Art at Metamold," Art In America, XXXIV, No. 83 (April, 1956), p. 36, 63; and also Friends of the Whitney Museum of American Art, "Business Buys American Art" (March, 1960), p. 3, 4, 12, 17.
- 175 See Dochterman, op. cit., p. 60, 75.

Chapter II. Charles Sheeler and New York Dada:
the 1923 Self-Portrait

"It was a period of intense activity,
but nothing was done very publicly."
Marcel Duchamp, on the New York
art scene, around 1920.¹

Possibly as early as 1908,² and frequently by the 'teens,³ Charles Sheeler began to travel from Philadelphia to New York City, where, as observer and participant, he became involved in much avant garde artistic activity, especially among the groups who met irregularly at Alfred Stieglitz's 291 Gallery,⁴ at the studio and garden parties of the Stettheimer sisters,⁵ and at the 67th Street apartment of Louise and Walter Arensberg. Between 1915 and 1921, the Arensbergs held a nearly nightly open house for a varied and lively group of artists, poets and musicians, among them Marcel Duchamp, Francis Picabia, Albert Gleizes, Gabrielle Buffet, Juliette Roche, Suzanne Duchamp-Crotti, Jean Crotti, Elsie Von Freytag Loringhoven, Marius de Zayas, William Carlos Williams, Katherine Dreier and Arthur Kreymbourg.⁶ Among the young American painters who frequented the Arensbergs, there were Marsden Hartley, Man Ray, Charles Demuth, Morton Schamberg,⁷ and Charles Sheeler. The Arensberg evenings were energized by Marcel Duchamp. Duchamp was

especially stimulating. His work utilized the startling imagery of machinery to transform artmaking into an impersonal process celebrating the power of the human mind. Duchamp's intelligence and iconoclastic wit encouraged Man Ray, Morton Schamberg and Charles Demuth to interest themselves in machine subjects. By 1920, Man Ray had even abandoned conventional easel painting and painterly techniques. Instead, in works which included The Rope Dancer Accompanies Herself With Her Shadows (1916), Dancer/Danger (1920) and others, he used the air brush, photographic techniques and industrial materials to fabricate ironic, machine-derived images. Morton Schamberg, who had already discussed detailed plans for machine subjects with Sheeler, was only able to turn his plans into paintings in 1916, after he was introduced to Duchamp and had become a member of the Arensberg group.⁸

Sheeler took up the machine theme later than Man Ray or Schamberg, but it became his major subject from 1927 on. Throughout the 1930's and early 1940's, he explored machine themes in a cohesive sequence of paintings of factory and industrial scenes, as well as domestic interiors. These subjects were interspersed with barn studies -- Sheeler felt the barn to be the factory's pre-industrial counterpart.⁹ At first glance, these paintings suggest that Sheeler's evenings at the Arensbergs had little effect on his vision, especially in contrast to the early receptivity of Man Ray

and Schamberg to this kind of subject matter. For the most part, Sheeler's machine inspired pictures were received as depicting a straight forward industrial world. As seen earlier, Ernest Brace wrote, "His work has the same aescetic truthful approach to the forms of industrialism as had [Fra Angelico] to the religious imagery of his day."¹⁰ The general climate of acceptance for Sheeler's machine subjects rendered in an ultra-precise realist mode is also a comment on American attitudes towards art in the 1930's. As modern subjects, his factories were exemplary; his other works suggested that modernity could be traced back to roots in the utilitarian traditions of the American past. Although Sheeler's paintings took their structural underpinnings from the geometric and angular shapes of Cubist abstractions,¹¹ they still seemed true to life (Sheeler's paintings have always remained popular works, never having to face the hostility of a public unsympathetic towards abstraction).

Sheeler's rare statements about his work reveal an earnest tone of high moral seriousness. He equated beauty and utility: as he wrote in his Autobiography, "Forms created for the best realization of their practical use may in turn claim the attention of the artist." (He was also influenced by the connections made by the Shakers between religious beliefs and the search for perfect utility in objects of daily use.)¹² These sentiments are far from the eccentricities and attacks on convention typical of other partici-

pants in the New York Dada experience. All this was to be expected of an artist who, throughout his life, maintained an austere ideal of artistic order, one which he first articulated in 1916. In a statement for the Forum Exhibition organized by Willard Huntington Wright and others, he spoke of art as "...the perception...of universal order."¹³

Identifying an objective criterion for beauty remained important for Sheeler, and throughout his career, it marks his incipient Neo-platonism.

Charles Sheeler was hardly a Dada personality. Still, important principles of his artmaking are directly based in Dada ideas. There is more than just the interest in machine imagery that links his work to that of his friends in the Arensberg group. There is, for example, the whole matter of a Dadaist stance. Throughout the 1930's his subjects are dealt with coolly, distantly, but with humor. "Sly humor" was a characteristic that the artist admired in Marcel Duchamp,¹⁴ and Sheeler's own humor was expressed in Dadaist fashion. In Classic Landscape (1931), for example, industrial storage tanks are seen as equivalents to the classical Greek temples on the Acropolis (Cpt. V). If the painting has sources in Purist theory, and is stamped by the reformer's morality of Purism, Sheeler's treatment of the notion borrows the Dadaist technique of the surprising title. He also composed the painting so as to set up the characteristic Dadaistic tension in which a visual pun is humorously

activated through the image's relationship to the title. As with Demuth, the artist whose sensibility perhaps comes closest to a Dadaist humor, Sheeler's Self Portrait and many subsequent works are images with reversals and surprises. Both artists worked in the spirit of Walter Arensberg's comment, "All those who live without formula are Dada[s]." ¹⁵ Thus, View of New York (1931), is no view at all but depicts a mysterious-looking camera covered with a black cloth on a stand behind which the sky is seen through a window (Plate 14). Even Sheeler's obsessive realism -- he based his pictures on photographs, always referring to the paintings as "pictures" ¹⁶ -- is itself derived from the Dada "ready-made," once removed. Like the "ready-mades," actual objects claimed from the everyday world, Sheeler's "pictures" define reality photographically. They present pieces of the world taken 'as is.'

The Dadist principles of Sheeler's paintings, even as late as the 1940's, are not just belated spin-offs of New York Dada. There is a special link between this whole body of work and Sheeler's early Arensberg days. This link is epitomized in a single picture, Sheeler's Self Portrait of 1923 (Plate 7). It is Sheeler's most intense expression of his artistic credo and anticipates the style of his art after 1929. The portrait also stands alone as a comprehensive synthesis of Sheeler's contacts within the Arensberg circle, reflecting the friendships of his Arensberg years. It is clearly a Dadaist statement for an artist otherwise so

un-Dadaistic. The Self Portrait raises issues that were to remain Sheeler's exclusive concerns well into the 1940's and retained his interest until he ceased to paint in the early 1960's.

The most conspicuous object in Self Portrait is a telephone. A second glance reveals the torso of a man -- presumably the artist -- reflected in a windowpane behind the telephone. Sheeler included details of clothing, but not his face, which is cut off at the drawing's upper border. Sheeler usually worked on a drawing board set up on the perpendicular.¹⁷ The vertical of a drawing board is seen in reflection. The windowpane itself serves the function of the mirror conventionally used in painting self portraits. It suggests that, instead of his physical likeness, Sheeler is presenting an artistic self image. If this is so, obvious questions follow: Why this object and why not the artist's features?

The commanding presence of the telephone is Sheeler's declaration in favor of a machinist art. First, the telephone is a machine, and it is the first explicit machine reference to appear in his work. Second, the telephone is paradigmatic since it embodies Sheeler's definition of beauty. Sheeler's friends knew that he regarded the telephone as a particularly beautiful object.¹⁸ If he thought so, it was because, as he was to say of his later industrial subjects. "The forms looked right because they had been designed with their utility in mind...it was inevitable that Beauty would result."¹⁹

Sheeler extended his machinist definition of beauty in the world to his picture-making, which he later compared to "the building of a watch or an aeroplane."²⁰ Last, the telephone also projects Sheeler's vision of machine logic as a facet of his machinist aesthetic. Like other objects in the Self Portrait, and like the subjects Sheeler chose for pictures in the 1930's, the phone is an ordinary type, something mass-produced. Because the phone is such a familiar class of object, it is possible to learn about it as a whole even when only part of it is depicted. Thus, the viewer is encouraged to glean more information about the table, the chair, the torso reflections, and the window than shows in the Self Portrait (It can be reasoned, for example, that the window has two finger-plates for raising and lowering, though only one is visible). It is as if Sheeler were thinking back to his Self Portrait when he wrote in a review of an exhibition of Classical Greek sculpture in 1925, "...even in a fragment like the section of a figure, the whole conception is not abated."²¹ Sheeler formulated his message of machine logic compositionally as well as conceptually. The Self Portrait forecasts later industrial subjects where he tended to place larger or more important forms on the diagonal, in order to unfold the most complete view of their structure possible from one fixed viewpoint (Upper Deck, 1929, is an example).

The telephone is expressive in other ways. As Sheeler's earliest machine reference, the drawing is Sheeler's statement about the communicative, content-oriented function of

his art: a telephone is a machine specifically designed for communication. Later, in his Autobiography (1938), Sheeler was explicit about his machine subjects. He chose them as his way of listening and responding to his audience. Sheeler chose his machine subjects because "industry predominantly concerns the greatest numbers...."²² In the Self Portrait, the telephone's unexpected position is a surprise which engages the viewer's attention; its prominence hints that communication was an important issue for Sheeler. Further, Sheeler as artist appears in reflection. It follows that his 'real' self must be located in the 'real' world outside the drawing, which the artist shares with his viewers. Another device focuses attention on this space in front of the drawing. The drawing appears to have no foreground. Because the top of the table runs along the edge of the window frame, at first glance it reads like a surface frame. The table extends forward like a shelf into the viewer's space.

Sheeler's presentation of his machine subject also brings up ideas about impersonality. Because it is whole and because of its position, the telephone takes precedence over the human presence in the Self Portrait. The telephone also dominates because of the depersonalized aspects of the artists's 'real' image. The human reflection is incomplete and less lifelike even than the telephone wires, which have springy energy. Further, even though the telephone is an

an anonymous object, it has a telephone number on its number plate which identifies it as one phone among many. By contrast, Sheeler's own reflection is of the most generalized type. Based on evidence internal to the drawing, the image can be identified as human and male, but it needs the title to specify it as that of the artist.

However, the Self Portrait is not a simple statement about depersonalization. As the portrait suggests and personal statements as well as later works confirm, Sheeler had come to consider his own presence a form of self expression which interfered with his message to the spectator.²³ In the Self Portrait, Sheeler presents his physical self as nearly incorporeal. The image might suggest that the process of art-making is to take place ostensibly without the artist. Sheeler defines himself through the telephone. One might even say the telephone is Sheeler's alter-ego.

Beyond their meaning taken singly, the torso reflection and the telephone form a composite symbol. Because Sheeler juxtaposed the two they merge. The human torso and the telephone have structural similarities which Sheeler stressed through details of parallel placing. Each is turned slightly to the left. This angle hides the right side of Sheeler's body giving prominence to this left shoulder and arm. It gives the artist a one-armed look which duplicates the telephone's one left receiver and receiver 'arm.' In addition, because the telephone is a vertical complex with a round

upper segment, its position directly in front of and contained within the larger outline of Sheeler's body humanizes it. The round upper section which contains the mouthpiece seems like a head, and substitutes for this missing portion of Sheeler's anatomy. Outside of these structural links, Sheeler provides two more clues which indicate how closely he associated himself with his telephone image. With the exception of his own reflection, Sheeler pairs the various objects (table, phone wires, window shade cord) in the Self Portrait with their shadows. Because the composition is double-lit, one would expect the telephone, like the window shade cord, to be reflected in the windowpane behind it. However, Sheeler replaced the image of the telephone's reflection with his own shadowy image. The artist's physical self is literally the reflection of the machine. The telephone, too, has an identity which confirms it as Sheeler's surrogate self. "Audubon 4514," the telephone number Sheeler inscribed on the phone's number plate, was Sheeler's own telephone number at the time he drew the Self Portrait.²⁴

As with his subject matter, Sheeler's non-painterly and realist style endorses the Self Portrait as an expression of a machinist aesthetic. There is a direct connection between Sheeler's drawing and the stark, sharply focused photographs of architecture (Cpt. III) for which he achieved considerable reputation as early as 1917. The Self Portrait carries over the clear blacks and sharp whites Sheeler liked in his photo-

graphs, and the drawn forms have the even modulations and non-tactile surfaces of the photographic surface. Sheeler eschewed the build up of pigment.²⁵ In some areas, the layer of pigment is so thin that the texture of the paper showing through it has the tonality of a slightly grainy photograph. Large areas of the table and the windowpane surface are the white of unworked paper.

Devising a style based on the formal qualities of sharp focus photography -- an art produced by machine, as it were -- is an important aspect of Sheeler's development. It enabled him to free himself from the influence of William Merritt Chase, his teacher. (Until 1909, the year Sheeler was first exposed to modernism in Paris, he had prided himself on his Chase-like proficiency, painting spontaneously in a way that 'captured the moment' in thick gobs of pigment.) If the Self Portrait was Sheeler's ticket to artistic maturity, its machinist formulations also enabled him to resolve his position vis a vis abstraction. After experimentation with abstract and semi-abstract compositions based on Cubist Synchronist models between c. 1912 and 1920, Sheeler came to feel that "a purely abstract presentation of forms....at times results in erecting a barrier before the viewer and direct contact and reaction to the....forms."²⁶ He justified rejecting overt abstraction by defining pure forms in the world and the structural underpinnings of his pictures as abstract in themselves. The style of the Self Portrait, which gives emphasis to these pictorial qualities, was Sheeler's solution to the dilemma.

In 1923, Marcel Duchamp visited Sheeler at his studio, and noticed the Self Portrait. Sheeler remembers that Duchamp "pulled up a chair and sat down before it for a few minutes and when he got up he said in that mild voice of his, 'I like it.'"²⁷ Sheeler's story about Duchamp is a homey sidelight to the circumstances which are background for the Self Portrait. If the picture is fascinating, it is not only because it represents an artist's manifesto but also because it is a compendium of Dadaist references and ideas generated in avant garde circles in New York in the 'teens that Sheeler had turned in on themselves, subverting them to his own purposes.

A Picabia drawing, Dada Movement (1919) gives a taste of the atmosphere the Stieglitz and, later, the Arensberg groups generated (Plate 15). The drawing is a schematic diagram of a dada-alarm clock charged with wave-like lines or wires, and names replace numerals. The wires flow to a "dada" battery terminal and trace the artistic evolution of French and Russian modernists back to Ingres. The name Arensberg appears on the wires just above Picabia's name in a position second only to the clock face. Of the group of twelve names which replace the numbers on Picabia's clock, four are those of people Sheeler knew well: Duchamp (one o'clock, the beginning); Juliette Roche (five o'clock); Crotti (eight o'clock); and Gabrielle Buffet (twelve o'clock).

Dada Movement epitomizes the new ideas about impersonality to

which Sheeler was exposed when he became part of the Stieglitz and Arensberg circles. For example, among the Stieglitz circle, Marius de Zayas particularly argued for impersonality and objectivity in artmaking. With Paul Haviland, de Zayas had collaborated on an article published in the March, 1913 Camera Work, in which, as noted above, they stated, "Modern art is a...scientific expression of man."²⁸ From 1918 to 1923, Sheeler worked at galleries run by de Zayas (The Modern Gallery in 1918; The de Zayas Gallery until it ceased operations in 1923), handling and photographing pieces de Zayas selected as examples of the impersonal artistic spirit. In addition to exhibitions of Picasso, Braque, Cezanne, Picabia, and the Americans Patrick Henry Bruce and John Covert, de Zayas's selections included African art, Chinese art (de Zayas was interested in Zen Buddhism and the ideas of Lao-Tse) and Meso-American art.²⁹

At the Arensbergs, too, the issue of artistic impersonality was much discussed. Sheeler may have heard Albert Gleizes describe American art as a "leap head first into the impersonal." Gleizes had written an essay on this subject as the catalogue introduction for the Fourth Annual Exhibition of Modern Art held at Stefan Bourgeois's gallery in May, 1919.³⁰ Gleizes most certainly would have discussed his ideas with Duchamp and Picabia at the Arensbergs. He surely spoke of them with Juliette Roche, Joseph Stella and Sheeler, all of whom had work in the Bourgeois exhibition. Another American

visitor at the Arensbergs whose artistic stance was in sympathy with Sheeler's was Marsden Hartley; as Hartley wrote in 1921, "The true artist despises the personal...."³¹

The concept of the mechanomorph as developed by Marius de Zayas, Duchamp, Picabia and, later, by Charles Demuth is another expression of Dadaist interests in the machine subject and artistic impersonality. The mechanomorph was also a current topic in the circle of Stieglitz gallery habitués. As mentioned, Paul Haviland commented on Picabia's machine portraits in the September-October, 1915 issue of 291 magazine, "Man made the machine in his own image. She had limbs which act; lungs which breathe; a heart which beats; a nervous system through which runs electricity. The phonograph is the image of his voice; the camera is the image of his eye."³²

Ideas like Haviland's give special meaning to Sheeler's Self Portrait, especially since Sheeler knew Picabia's work well. One of his earliest communications with Stieglitz was a note inquiring about the dates of Stieglitz's 1914 Picabia exhibition.³³ Sheeler must have seen Picabia's portrait of Stieglitz on the cover of the July-August, 1915 issue of 291 (Plate 17), and probably saw the exhibition de Zayas gave Picabia at the Modern Gallery in January, 1916. When Sheeler was de Zayas's assistant at the de Zayas Gallery, he surely saw Picabia's machine portrait of his employer, which was based, in part, on a diagram of a Delco system (the lighting

and starting apparatus of an automobile).³⁴

As the above suggests, the Self Portrait may have been shaped by Picabia's operating principles for the machine portraits of his friends, in which he used small machine parts and mechanical devices to present their goals, personal histories and psychological traits. As a Picabia statement in the New York Tribune put it: "The machine has become more than a mere adjunct of life. It is really a part of human life...perhaps the very soul. In seeking forms...by which to expose human characteristics, I have come at length upon the form which appears...most fraught with symbolism. I have enlisted the machinery of the modern world and introduced it into my studio."³⁵ Picabia's portrait of Marie Laurencin includes an automobile fan -- Laurencin was a breath of fresh air. Picabia gave Stieglitz circle critic Paul Haviland the likeness of a lamp, like a light bulb, Haviland's ideas were illuminating.³⁶ He depicted Gabrielle Buffet, his wife, as an automobile windshield. This portrait, called The Faithful One, is his tribute to Buffet's protectiveness.³⁷

As with Picabia's symbols, the meaning of Sheeler's Self Portrait is dependent on the viewer's ability to decode it, using a cryptography employing knowledge of the functions of the machine in question. Further, the images of both Picabia and Sheeler are visual metaphors, punning images which affect the viewer in a similar way. Like Picabia's fan and lamp (and the more schematic alarm clock in Reveil Matin), the

image includes wires carrying electric current; they suggest the energy of the sitter's personality. Also, Sheeler's telephone is surprising because it so literally carries over technological information into portraiture. The artist is more than 'just like' a telephone; he seems to be one. Sheeler's portrait is also like Picabia's because even though the imagery of both portraits is a calculated surprise, their messages are serious statements that follow quite logically from the choice of machine. They differ in one respect. Unlike Picabia's work, it is the missing element -- it is the fact that the artist hardly appears at all in his own Self Portrait -- which is disconcerting. What is visible looks very ordinary.

Another private level of meaning for the Self Portrait is possibly as a tribute to Morton Schamberg, Sheeler's friend and fellow Philadelphian, who began to paint machine subjects after 1915. Schamberg's paintings are the results of discussions with Picabia at "291" but his plans for such paintings pre-date the works and may even pre-date his New York contacts. He may have discussed his ideas with Sheeler as early as 1912.³⁸ If so, these ideas would be Sheeler's earliest exposure to the possibility of a machine subject. This connection has weight, because until Schamberg's sudden death in the influenza epidemic of 1918, Sheeler and Schamberg were in constant contact. From 1908 on, the two shared studios in Philadelphia and Doylestown. In Europe in 1909,

they made the discovery of the work of Piero della Francesca together, and agreed that Chase's lessons had to be unlearned. Two works of 1918 indicate how linked Sheeler and Schamberg could become artistically. These are Bowl of Flowers, not quite finished when Schamberg died, and Sheeler's Flower in a Bowl. Except for the number of flowers (three in Schamberg's oil, one in Sheeler's), the works are nearly duplicates in coloration and paint handling. They seem to be mirror images, suggesting that the two artists may have worked from the same flower-bowl-table setup, or, at any rate, that these objects were part of common studio equipment. Both works also relate closely to a Sheeler photograph of 1915, and seem to anticipate Sheeler's precise floral studies, a major theme in his work of the 1920's.

Hints of another kind of influence show in an Untitled Schamberg of 1916. The work is supposedly based on a stocking machine reproduced in a catalogue, borrowed from Schamberg's brother-in-law. It also resembles, in part, the wooden molds from which machine parts are cast in its three dimensionality. Whichever is the case, the work clearly copies an actual form. If it is abstract, abstraction derives from the unfamiliarity of the subject. The sensibility of treating geometric forms literally is background for Sheeler's choice of subjects of the 1930's.

Schamberg's oil, Telephone (1916), is a direct prototype for

the Self Portrait (Plate 16), prefiguring aspects of Sheeler's formal treatment of the subject. Sheeler and Schamberg both show the telephone from a similar vantage point and in a similar position on a table. Both note the effect of light striking off a polished black surface, and both note detail. Even though Schamberg's image is semi-abstract, his presentation, like Sheeler's, includes the telephone number plate.

Sheeler's Self Portrait predates by a year the first of Charles Demuth's symbolic portraits of friends. It may be due to the familiarity of both artists with ideas discussed by Arensberg circle habitués that Sheeler's Self Portrait is similar to portraits Demuth later made of Georgia O'Keeffe, John Marin, and Arthur Dove, and similar to Dove's own symbolic portraits. Like the Picabia "portraits," the sitter is represented not by his or her likeness, but by means of objects with which he or she might be associated (Demuth's portrait of O'Keeffe contains a plant, a reference to O'Keeffe's floral subjects). And like the Self Portrait, which is an artistic manifesto of sorts, Demuth's portraits also include information about artistic issues. In the O'Keeffe portrait, the radiant starburst shape formed by the rearranged letters of O'Keeffe's name read upwards to form the word "F E E E K," a sound which is a little like Demuth's word "whopee." He had appropriated the exclamation as an onomatopoeic term to identify what he felt was the untranslatable excitement of good painting.

Even without Demuth's poster portraits, important influences came to Sheeler from Demuth. Sheeler's Cubistic Yachts (1922) an image which appears as a painting, a drawing and a lithograph (Plate 63), is close enough to Demuth's Sailboats (1919), and other similar subjects which began to appear in his art after a summer in Provincetown in 1914, to suggest that Sheeler looked very closely at Demuth's oils and water colors when they were exhibited at Pennsylvania Academy of Fine Arts annual exhibitions and yearly at the Daniel Gallery. And Sheeler's barn subjects, which come into his art c. 1918, are vernacular, colonial architecture, a subject which Demuth had already selected as one of his themes.

Using a machine or an industrial form to suggest or stand for human characteristics defines both Sheeler's Self Portrait and Demuth's art in the 1920's. As with the idea of the symbolic portrait generally, this image -- the image of the mechanomorph -- can be traced to Duchamp and Picabia, and was also taken up by Man Ray and Schamberg. As with the other Americans, Demuth's art seems to have helped to make Duchamp's ideas accessible to Sheeler, while at the same time, his apparent admiration for Duchamp's craftsmanship³⁹ would certainly have been important to Sheeler, who also admired Duchamp's precision and sheer manual dexterity.⁴⁰

Other parallels between the Self Portrait and Demuth's industrial landscapes suggest Demuth's influence. Because

Sheeler's telephone is such a monumentalized image, it can be compared to the smokestacks, chimneys and ventilators which appear in Demuth's work as early as 1920. These forms in Demuth's factoryscapes have sexual undertones (as Kermit Champa has suggested, Demuth's ventilators and other forms, like Duchamp's Fountain, symbolize both male and female genitalia⁴¹). Such symbolism is markedly absent in Sheeler's art. Yet the popular passion for Freudian analysis among intellectuals in the 1920's, which included discovering sex symbolism in ordinary objects,⁴² gives some context for suggesting that Sheeler may have at least known that the "candlestick" type phone of the Self Portrait could be described as a phallic symbol.

Beyond this, there are parallels on the part of both artists in their interest in the artistic effects of mystery, an attitude which recalls the fact that both Demuth and Sheeler had been students at the Pennsylvania Academy of Fine Arts at a time when it was avant garde for students to adopt fin de siecle poses of aloofness or secrecy. The point of view shows in Demuth's deliberate ambiguity in treating his industrial subjects. Paintings like End of the Parade -- Coatsville, which shows a factory, and whose title is about the beginning of industrialization, are tantalizing documents of mystery and artistic impersonality because they give so few clues to the artist's opinion of his chosen subjects. Although the Self Portrait's images are clearly defined, and its message has to do with communication between artist and

viewer, the shadowy reflection which Sheeler chose as part of his self image has its parallels in Demuth's stance.

The Self Portrait is also a special reference to de Zayas's caricature of Stieglitz (Plate 18). This drawing of 1914 pre-dates Picabia's portrait of Stieglitz by a year, and Sheeler was familiar with the works of de Zayas as early as 1908.⁴³ In de Zayas's caricature, a series of circles is his image of Stieglitz as a camera; Stieglitz is all glasses, eyes and lenses. De Zayas's meaning translates easily, although the work is semi-abstract. The de Zayas reference is important for the Self Portrait. Although Sheeler's composite self image connects with Picabia and de Zayas, there is a level of meaning which may derive from de Zayas alone. The Self Portrait has a special iconography grounded in a theoretical system of caricature de Zayas created. This system was presented along with a show of his caricatures at Stieglitz's gallery in 1916. De Zayas established coordinates of representation: "The spirit of man represented by algebraic formulas; his material self by geometric equivalents; and his initial force by trajectories, within the rectangle that encloses the expression and represents life."⁴⁴ The Self Portrait makes reference to two of de Zayas's coordinates and incorporates the two others. The window reflection is a kind of apparition, a literal rendition of de Zayas's category of "the spirit of man;" the telephone wires can be read as "trajectories" of "initial force." These connections re-confirm the role of the telephone. As de Zayas's "geometric

equivalent" for the "material self," the telephone is Sheeler's surrogate. The window frame is the obvious equivalent for de Zayas's "rectangle that...represents life." Beyond this, there is a hierarchical value system in de Zayas's theory which sheds some light on Sheeler's feelings about himself as an artist. De Zayas's caricatures could be "absolute" or "relative" depending on whether he felt the subject "influenced time" or lived "in the moment."⁴⁵ This meaning is carried by a simple formal device, the placement of the "life" rectangle which can be seen in the Stieglitz portrait. Stieglitz is an "absolute" because the forms making up his image extend beyond the literal rectangular "life" border of the training. The caricature of a "relative" type would be enclosed within the "life" rectangle. To the viewer cognizant of de Zayas's system, Sheeler defines himself as an "absolute." Hidden by the window shade and cut by the larger rectangle of the window frame, Sheeler's body extends beyond both these rectangles.

However, Sheeler's telephone Self Portrait differs from the images of de Zayas and Picabia in an important respect. Of all the machines available to his art in 1923, Sheeler picked one specifically designed for two-way communication. The reference is inescapably to Marcel Duchamp. As Duchamp was later to say, it was "the spectators who complete the picture."⁴⁶ Sheeler's reflection tells of his presence both in the drawing and, by implication, in the spectators' space.

Sheeler most probably knew about Duchamp's perspective system worked out in the Green Box notes for the Large Glass/The Bride Stripped Bare By Her Bachelors Even (1917-23), in which objects had "apparitions" in other dimensions. Duchamp was working with this idea during the years Sheeler was friendly with him. In any case, even though it is possible with the Self Portrait to pick out de Zayas's references here, and Picabia's influence there, it is the references to Duchamp which pervade the drawing.

Sheeler said of Duchamp, "He was built with the precision and sensitiveness of an instrument for making scientific machinery."⁴⁷ It is no accident that Sheeler described Duchamp as a machine in one of his infrequent descriptions of a friend. In fact, if the Self Portrait is noteworthy, it is not only as a guide to Sheeler's education as provided by Duchamp's Large Glass, but also as a tribute to Duchamp's personality. The Self Portrait's secrets and displacements are Sheeler's tribute to the cagy humor Sheeler admired in Duchamp: "His humor never took the form of jokes but twists of expression."⁴⁸

Sheeler's window and windowpane image are also a response to Duchamp, deriving from the Large Glass in form as well as in the application of a principle. Like Duchamp's 'Bride' and 'Bachelors,' Sheeler's image is placed on glass. Further, like the 'Bachelors' and their 'waterwheel' and 'glider,'

Sheeler's torso is behind a machine and nearly headless. Sheeler's imagery has a built-in paradox which also links with the Large Glass. Both artists, finally, remain mysterious. Sheeler omits parts of his body. Duchamp's figures are enigmas with or without the Green Box notes. Both artists, too, deal in hidden forces. Like the Large Glass which embodies the invisible mysteries of gas and electricity, the telephone wires in the Self Portrait vibrate with unseen energies; the pull cord for the window shade which arcs upwards, defying gravity, is a clue to the presence of the artist lurking beyond the picture frame outside of his picture. Thus the Self Portrait might even be called as Duchamp called his Large Glass, a "delay in glass." Sheeler was pleased that many viewers did not immediately notice his reflection in the windowpane. Just as Duchamp's exhaustive notes on the Large Glass do not really clarify its mystery, in an analogous fashion, Sheeler's desire to communicate combines paradoxically and inextricably with his desire for secrecy.

Another aspect of Duchamp's influence is Sheeler's admiration for Duchamp's craftsmanship, which had deep roots in Sheeler's experience. In his Doylestown days from 1909 to 1918, Sheeler haunted the Mercer Museum of early farm implements, machinery and domestic utensils, and later the Barber collection of Pennsylvania Dutch craft in the Philadelphia Museum of Art.⁴⁹ Sheeler's love of Shaker craft probably originated here, long before he gave it form in art. Duchamp's crafts-

manship seems to have legitimized or reinforced Sheeler's own craftsmanship and choice of subject. Sheeler said of Duchamp, "Whatever he touched -- even the foolery -- had a beautiful precision."⁵⁰ Finally, Sheeler's admiration for Duchamp's craftsmanship dominates his description of Duchamp's Large Glass. In spite of his admiration for Duchamp's "meanswhich were skillfully concealed," Sheeler described the Glass in terms of the details of Duchamp's technique. The forms, he wrote, had "their outlines defined by a wire -- like a line of lead painted on the back of the glass. Large areas of clear glass remained...so that the observer also saw in addition to the design whatever casual things occurred behind the unpainted areas....the exquisite craftsmanship gave evidence of the remarkable ability of this artist's hand to carry out the orders of the eye."⁵¹

Craft, in Duchamp's and Sheeler's sense, hides the artist behind the art. Duchamp said, "It's fun to do things by hand. I'm suspicious, because there's always the danger of the 'hand' which comes back, but since I'm not doing works of art, it's fine."⁵² Craft, perhaps Duchamp's means of being an artist in secret without admitting he was one in any accepted sense, became Sheeler's means as well. Craft enabled Sheeler to express himself in concrete artistic terms, without sacrificing his desire for impersonality. For example, Sheeler often was to spend months on a single picture,⁵³ while at the same time using a camera obscura to project the original

conception on canvas.

As with delay and mystery, the theme of absence also links Sheeler's art to Duchamp. In this connection, there may be a relationship between the Self Portrait and Duchamp's Tu M' (1918), in which shadows of a corkscrew, bicycle wheel and hat rack are, like Sheeler's reflection in the windowpane, the shadows of absent real objects. These are objects Sheeler must have known because Duchamp derived them from his "Ready-Mades" of the 'teens. (Sheeler remembered other "Ready-Mades," household objects not unlike the corkscrew: "a tin cup, a can opener, an egg beater, a strainer."⁵⁴) Tu M' also has a meaning as a compendium work, a statement in paint in which Duchamp pulled together references to other works, thus underscoring aspects of his artistic ideology. This practice is another general line of affiliation to the manifesto-like function of Sheeler's Self Portrait. Sheeler's windowpane reflection is more than an expression of absence. The fleeting nature of such a reflection defines it as an image in transition from one location to somewhere else. In this sense, the Self Portrait is the first of a persistent imagery of windows and doors in Sheeler's later art which also is owed to Duchamp. Duchamp's constructions of the early 1920's, Fresh Widow, The Brawl at Austerlitz, and the Door from his studio at Rue Larrey have echoes in Sheeler's View of New York (1931), Interior with Stove (1932), The Open Door (1932), Window (1935), and The Upstairs (1938). The images in these works

are connectives -- entrances, exits -- but to what? Where they lead is always out of the picture. Sheeler also extended the image to include canals (American Landscape, 1930, Plate 40), pipelines (Ballet Mecanique, 1931, Plate 9, and Industrial Architecture, 1931, Plate 39), railroad tracks (Classic Landscape, 1931, Plate 44) and alleys (City Interior, 1935, Plate 47), which also begin and end beyond the boundaries of the works in which they are placed.

The imagery of entrances and exits has an early form in Sheeler's Stairway to Studio (1924), and appears even earlier in Sheeler's photographs of the staircase in his Doylestown studio, beginning in 1914. Like the other connectives, these studio stairways also begin and end beyond the picture frame. The mystery here might reside in Sheeler's studios as well. When N. W. Ayer executive Gordon Wilbur visited Sheeler's New York studio/apartment probably late in 1929, he found a bare white room with nothing in it but a few photographs turned neatly face to wall, one or two pieces of photographic equipment and a Bauhaus chair.⁵⁵ The scene is reminiscent of Man Ray's description of the room where Duchamp worked in 1920: "nothing...could remind one of a painter's studio."⁵⁶ Sheeler's painted image of his studio, View of New York, verifies Wilbur's memory, but is even more austere. As mentioned above, the view to which the title refers is the view of an empty sky.

Given these analogies, vast differences remain. For Sheeler, who was a shy man, windows and doors seem a little like openings in a shell. Duchamp's windows and doors were expressions of paradox. Sheeler's statement also differs from Duchamp's in that "My things don't go outside the boundaries of the actual."⁵⁷

Sheeler's Self Portrait was illustrated in The Arts (January, 1924). Forbes Watson, the reviewer, justified beginning his article with the image by writing, "There is something so exceedingly contemporary about a telephone and something so resolutely inartistic that it is surprising that Marcel Duchamp did not paint a portrait of a telephone descending a wire. However, he didn't as far as I know. He left the telephone as virgin soil for Sheeler to explore."⁵⁸ Watson's comment points out one interesting fact about Sheeler's telephone image. There are few artistic prototypes for this "resolutely inartistic image." Exceptions are the Schamberg, discussed above, and also a Paul Outerbridge photograph of 1922. Outerbridge described photographing ordinary objects such as light bulbs, coffee cups and paint rollers and his ideas are clues to the way the photograph keys into Sheeler's image.⁵⁹ Outerbridge saw such objects as examples of pure form in strict adherence to Clive Bell's definitions of abstract values. The idea prepares in part for at least one level of meaning in Sheeler's telephone image. He saw the phone as a truly beautiful object. Besides Outerbridge, though, there are few

references to the telephone. A notable exception is found in The Soil (December 1916), where a poem by Arthur Craven describes a telephone. The poem must have interested Robert Coady, The Soil's editor, with his passion for vernacular culture. In it, Craven elaborates on a passage taken from Walt Whitman's Manahatta: "New York! New York!....I see there science married / To industry, / In an audacious modernity,...The American telephone,/ and the softness of elevators...."⁶⁰ Craven's poem displays the sensitivity of the European visitor to New York to aspects of daily life New York's inhabitants may have taken more for granted. The connection Craven made between science and industry presages the mentality of the Sheeler Self Portrait. There are few other references to phones in the 'teens besides Craven's, unless one counts Wlateral Pach's comment included in a review of a photograph exhibition: "As the telephone is an extension of [man's] sense of hearing, so the camera is a means of extending...[man's] sense of sight."⁶¹ Pach's reference, beside giving the telephone semi-scientific connotations, is relevant as a document which suggests that in 1921, the telephone still seemed novel.

Art world and little magazines aside, there are at least vernacular sources for Sheeler's telephone image. Those are to be found in advertisements paid for by the telephone industry. In 1908, AT&T hired N. W. Ayer to help them change their public image from that of a monopoly which ruthlessly

suppressed competition to a service industry in the public good.⁶² A survey of AT&T corporate advertisements between 1908 and 1923 suggests that telephone imagery of the 'teens provided a reservoir of associations which left their mark on Sheeler's thinking. An advertisement of 1910 sets the tone: The telephone was "Everyday magic" (Plate 19). Aladdin's lamp, so the text runs, "transported its owner from place to place in the twinkling of an eye....The Bell telephone is far more wonderful -- and it is a reality."⁶³ Another advertisement spoke of "the magic flight of thought ...Bell telephone had made it a common daily experience."⁶⁴ Still other advertisements touted the technological expertise embodied in the telephone. Telephones represented "the multiplication of Power;"⁶⁵ they were "Annihilator(s) of space;"⁶⁶ and represented "The measure of progress."⁶⁷ Other advertisements stressed the business end of technology: the phone was an "Energizer of Business." The accompanying text is something Sheeler might have liked: "Telephones...carry the currents of communication everywhere to energize our intricate social and business mechanisms." Telephones represented "Accuracy,"⁶⁸ more than that, they represented "A highway of communication;" "The telephone unites the Nation."⁶⁹ The telephone also made possible a "sixth sense -- the power of personal projection...you are virtually in two places at once."⁷⁰ (Plate 20) Throughout all these advertisements, the motif which remains a constant is the image of the telephone, the "candlestick" type in use to c. 1925, which is the phone

of the Self Portrait (Plate 21). A candlestick type telephone is brandished in some of these advertisements, in which the phone is juxtaposed with AT&T's Bell System logo to give it symbolic status. In other advertisements, the viewer looks past oversized telephones in the foreground towards pastoral and industrial vistas. Elsewhere, phones line up like utility poles along the sides of a highway which fades into the distance, an image which might recall 19th century Hudson River School paintings with their vistas of trees. Another common device was to show oversized phones in combination with maps of the United States.

Sheeler went on to do two more self portraits. In the first one of 1924, we see the rather withdrawn, worried-looking face of the artist. The second, The Artist Looks at Nature of 1943, recapitulates some of the issues of the 1923 Self Portrait. The artist who shows himself from the rear, face hidden, again tells us about the effacement of artistic personality. The Artist Looks at Nature is an artistic diary, including references to past works. The artist shows himself painting on site in a pastoral setting, which, nonetheless, includes city walls (they recall the walls of Lhasa, 1916). The work on the artist's easel is Interior with Stove (1932), a work based on a photograph taken in Sheeler's Doylestown cottage more than a quarter of a century earlier. The choice of subject documents Sheeler's common practice of re-using motifs from much older works. The work, in which the artist

does not paint what he sees, is a flirtation with Surrealist ideas. It also suggests that given a choice of a landscape and a machine-made subject, technology dominated. Given all this, though, there are obvious differences between the more straightforward wit of the later self portrait and the earlier one, differences which one might expect, due to the circumstances bearing on the 1923 Self Portrait. Sheeler's 1923 Self Portrait, in its numerous references packed into one work, in its sly humor, and in the elegance and impact of its telephone image, is evidence of the artist's thorough understanding of New York Dada and his manifesto plotting his artistic future.

Footnotes.

- ¹ Marcel Duchamp, as quoted in Bram Dijkstra, Hieroglyphics of New Speech (New Jersey: Princeton University Press, 1969), p. 43.
- ² Sheeler, Autobiography, New York, Archives of American Art, Nsh 1, frame 68, 82, and Bartlett Cowdrey, Transcript of an Interview with Charles Sheeler (December 9, 1958), New York, Archives of American Art, p. 10.
- ³ Letters, Charles Sheeler to Alfred Stieglitz, Stieglitz Correspondence, Beinecke Library, Yale University, June 11, 1915, November 1, 1916, December 1, 1916, and others.
- ⁴ For a discussion of activities at "291", see William Innes Homer, Alfred Stieglitz and the American Avant Garde (Boston: New York Graphic Society, 1977) which also contains an extensive bibliography.
- ⁵ Florine Stettheimer's paintings document such gatherings. See for example, La Fete a Duchamp (1917), Sunday Afternoon in the Country (1917), and Picnic at Bedford Hills (1981).
- ⁶ For a discussion of the activities of the Arensberg group, see William Camfield, "The Machinist Style of Francis Picabia," Art Bulletin, XXXVIII No. 3-4 (1966), p. 309, ff., and Francis Naumann, "Walter Conrad Arensberg: Poet, Patron and Participant in the New York Avant Garde, 1915-1920," Bulletin, Philadelphia Museum of Art, LXXVI, No. 328 (Spring, 1980).
- ⁷ For information on Morton Schamberg, see Ben Wolf, Morton Schamberg (Philadelphia: University of Pennsylvania Press, 1963).
- ⁸ See Constance Rourke, Charles Sheeler, An Artist in the American Tradition (New York: Harcourt Brace, 1939), p. 37.
- ⁹ Sheeler, Autobiography, frame 92, 93.
- ¹⁰ Ernest Brace, "Charles Sheeler," Creative Art, XI (October, 1932), p. 97.
- ¹¹ See Milton W. Brown, "Cubist Realism: An American Style," Marsyas, III (1956), p. 139-60.
- ¹² Sheeler, Autobiography, frame 92.

- ¹³Sheeler statement in The Forum Exhibition of Modern American Painters, Anderson Galleries (March, 1916).
- ¹⁴Sheeler, Autobiography, frame 78-79.
- ¹⁵Walter C. Arensberg, "Manifest du Movement Dada," Litterature, Annee 1-3, no. 20 (1920-21), p. 16.
- ¹⁶Sheeler, Autobiography, frame 63, 67, 87, 88, 89, 90, and elsewhere.
- ¹⁷Photograph, New York, Archives of American Art, Sheeler clipping files, Nsh 1 ff.
- ¹⁸Interview with Hannah Josephson, August 3, 1974.
- ¹⁹Sheeler, Autobiography, frame 101.
- ²⁰Sheeler statement in American Painting and Sculpture: The Museum in Action, Newark Museum, 1944.
- ²¹Sheeler, "Notes on an Exhibition of Greek Art," The Arts, VI (March, 1925).
- ²²Sheeler, Autobiography, frame 101.
- ²³Ibid., frame 86.
- ²⁴Information courtesy of Ms. H. Clayton, New York Telephone Company, October 1, 1974.
- ²⁵Letter, Robert Henri to Charles Sheeler, Stieglitz Correspondence, Beinecke Library, Yale University, February 27, 1919.
- ²⁶Sheeler, "Notes on an Exhibition of Greek Art."
- ²⁷Martin Friedman, Transcript of an Interview with Charles Sheeler (New York: Archives of American Art, June 18, 1959), p. 7.
- ²⁸Marius de Zayas and Paul Haviland, "A Study of the Modern Evolution of Plastic Expression," Camera Work (March, 1913).
- ²⁹For studies of Marius de Zayas, see footnote 146, Cpt. I.
- ³⁰Albert Gleizes, "Art European - Art American," catalogue essay for the 4th Annual Exhibition of Modern Art, Bourgeois Galleries, May, 1919.
- ³¹Marsden Hartley, Adventures in the Arts (New York: Boni and Liveright, 1921), p. xiii.

- ³² Paul Haviland, statement in 291 Magazine, nos. 7-8 September - October, 1915).
- ³³ Letter, Charles Sheeler to Alfred Stieglitz, Stieglitz Correspondence, Beinecke Library, Yale University, September 22, 1914.
- ³⁴ The term "Delco system" entered Sheeler's artistic vocabulary as a synonym for artistic inspiration, see Rourke, p. 193.
- ³⁵ Francis Picabia, as quoted in the New York Tribune, October 24, 1915, part IV, no. 2, p. 23.
- ³⁶ For a discussion of these images, see William Camfield, op. cit.
- ³⁷ Ibid., see also Dickran Tashian, Skyscraper Primitives (Middletown, Connecticut: Wesleyan University Press, 1975), p. 39.
- ³⁸ Rourke, op. cit., p. 37.
- ³⁹ See Forbes Watson, "Charles Demuth," Arts Magazine, III (January - June, 1923), p. 78.
- ⁴⁰ Rourke, op. cit., p. 48.
- ⁴¹ See Kermit Champa, "Charlie Was Like That," Artforum, XII, No. 6 (March, 1974), p. 58.
- ⁴² Ibid.
- ⁴³ Sheeler, Autobiography, frame 68.
- ⁴⁴ Marius de Zayas, "Caricature: Absolute and Relative," Camera Work (April, 1914), p. 19-20.
- ⁴⁵ Ibid.
- ⁴⁶ Marcel Duchamp, as quoted in Anne d'Harnoncourt and Walter Hopps, "Reflections on a New Work by Marcel Duchamp," Bulletin, Philadelphia Museum of Art, LXIV, No. 299-230 (April - September, 1969), p. 23.
- ⁴⁷ Sheeler, Autobiography, frame 78.
- ⁴⁸ Ibid.
- ⁴⁹ Rourke, op. cit., p. 31.
- ⁵⁰ Ibid., p. 48.
- ⁵¹ Ibid.

- ⁵²d'Harnoncourt and Hopps, op. cit., p. 38.
- ⁵³Interview, Matthew Josephson, August 3, 1974.
- ⁵⁴Rourke, op. cit., p. 48.
- ⁵⁵Interview with Gordon Wilbur, March, 1972.
- ⁵⁶Man Ray, Self Portrait (Boston: Little, Brown and Company, 1963), p. 68-69.
- ⁵⁷Sheeler, as quoted in Bartlett Hayes and Frederick Wight, Charles Sheeler, A Retrospective Exhibition (Los Angeles: University of California, 1954), p. 23.
- ⁵⁸Forbes Watson, "Opening the New Year," The Arts, V (January, 1924), p. 50.
- ⁵⁹See Paul Outerbridge, "Seeing Familiar Objects as Pure Form," Art and Decoration, XIX (May, 1923), p. 23, 94.
- ⁶⁰Arthur Cravan, "The rhythm of the ocean...", The Soil, I, No. 1 (December, 1916), p. 36.
- ⁶¹Walter Pach, "Art: At An Exhibition of Photography," The Freeman (February 23, 1921), p. 565-566.
- ⁶²Noel L. Griese, "AT&T: 1908 Origins of the Nation's Oldest Institutional Advertising Campaign," Journal of Advertising, VI, No. 1-4 (Fall - Winter, 1972).
- ⁶³AT&T Corporate Advertisement Files, March, 1910.
- ⁶⁴Loc. cit., n.d.
- ⁶⁵Loc. cit. (September, 1909)
- ⁶⁶Loc. cit. (August, 1912).
- ⁶⁷Loc. cit. (May, 1920).
- ⁶⁸Loc. cit. (January, 1919).
- ⁶⁹Loc. cit. (October, 1921).
- ⁷⁰Loc. cit. (December, 1909, February, 1915, and July, 1909).

Chapter III: Charles Sheeler's Paintings and Photographs:
1900-1940

"He was objective before the rest of us were."¹ This is photographer Edward Steichen speaking around 1937 about his friend and fellow photographer, Charles Sheeler. Steichen's comment is of interest in several ways. It reflects the quarrel between photographers taking place at the turn of the century.² There were "soft-focus" photographers. Edward Steichen, for example, used special out-of-focus lenses early in his career, and often made prints from negatives which had been brushed on, drawn on, or otherwise manipulated. By contrast, the work of Alfred Stieglitz after 1915-16 is that of the sharp-focus photographer who made so-called "pure" or "straight" photographs, and disapproved of any tampering with the mechanical process of taking a photograph. Such photographers sought a style which was objective. The issue is background for Sheeler's endeavors, particularly since behind it was the question of how to justify photography as an art form. In one way or another, both sides looked to painting styles as models for their endeavors. Critic Norman F. Butler may have had the Barbizon School in mind when he wrote in 1916,

I believe we must lay it down as a general rule that in pictorial work, that is, in photographs where the intention is in personal expression,

all definition should be, must be soft...a landscape photographed in the middle of the day with bright light and strong shadows would not look artistic if it were drawn sharp and 'clear'. Its suggestive quality would be lost and the wealth of detail rendered would destroy any feeling of treatment.³

Others agreed with Butler: "A photograph is no longer a map...the avowed purpose of the man who uses light as his technique [is] to create moods in the soul of the observer."⁴ For these critics, the artistic aspect of photography was the human touch, the artist's hand at work in developing, retouching and reprinting the negative.

Proponents of straight photography thought otherwise. In 1912, even before Steiglitz and Strand began to produce sharply focussed images, Dan Dunlop had written in Photo Era Magazine, "Can a straight print from a straight negative be art?" His answer was "Yes."⁵ Others besides Dunlop felt that it was unretouched work which was the best testimony to the artistic skill of the producer. Photographer Paul Outerbridge spoke of finding "pure forms" in photographs of ordinary objects like cups, print rollers, stepladders and the like.⁶ Still others valued photographs as examples of freedom from conventional aesthetic standards: Painter Walter Pach maintained in 1921, "Often there are things in the photographic section of the Sunday papers that I enjoy for the very reason that no one has been introducing his aesthetic ideas between me and the vision." Pach also said,

"I don't want to think of Rembrandt when I look at photographs."⁷

Given this background, Steichen's above comment clearly places Sheeler on the sharp-focus side of the argument. It also sets Sheeler among an avant garde, specifically the avant garde associated with Alfred Stieglitz, which included Paul Strand, Steichen, and Edward Weston. His photography can be compared with a whole class of images by Steiglitz, Strand, Edward Weston, and others. The efforts of these men to utilize a modern medium -- the camera -- to find fresh images of new subjects, often subjects novel because of their very ordinariness, were well underway by the 'teens. It is no accident that a charge leveled against such photographs was that of over-attention to the material world which eroded the potential spiritual content of their work.⁸ Hence photographers' statements that they were seeking to idealize the material aspect of photography. Weston, for example, was pleased when he was compared to the Japanese artist, Hokusai.⁹ Both were said to have found the spiritual essences in mundane objects.

Sheeler's statements about his photographs are another matter. Throughout a double career spanning nearly six decades during which he made both paintings (beginning around 1900) and photographs (beginning around 1912), he made a few carefully considered comments on connections between his photographs and his paintings. In spite of these

statements, or possibly even because of them, the relationship between Sheeler's activities as a photographer and a painter is something of an enigma. This chapter will examine the background and progress of Sheeler's evolution. He began as a painter whose photographs were influenced by painting. He ended up as a painter and photographer whose paintings had been influenced by photographs. The relationship Sheeler established between his painting and his photography makes particular sense when referred to artistic ideals which are the expression of a 1920's machine esthetic. Later, as seen in some of the barn paintings (to be discussed below) and especially in the Fortune Magazine "Power Series" (1939) the formal characteristics of the photographic image came to dominate, and Sheeler's compositions stressed details more than structural concerns. Other aspects fall into place as practicalities.

Sheeler wrote in his Autobiography (1937), "Photography is nature seen from the eyes outward, painting from the eyes inward."¹⁰ The statement recapitulates a standard 19th century argument about the nature of the two disciplines. The Symbolists, for example, had viewed painting as an activity connected with mind and spirit, while photography was primarily bound to the physical world.¹¹ Sheeler also spoke of differences in image-making in the two media. In the catalogue statement written for his Museum of Modern Art retrospective in 1939, he said of painting that it was the "result of a composite image and [that] the photograph..[was] the

result of a single image."¹² Both statements opt for the co-existence of painting and photography: they essentially map out separate aesthetic territory for photography and painting. Both purport to solve any problems arising from working simultaneously in two disciplines by parcelling out certain qualities to the one discipline and certain qualities to the other. None of this, though, is helpful in explaining the painting Upper Deck (Plate 22), which has a photograph source that is identical (Plate 23). The painting was a pivotal one for Sheeler; he referred to Upper Deck as his "dividing line."¹³ "With Upper Deck," Sheeler said, "I sought to have a complete conception of the picture established [before painting it]."¹⁴ Earlier, he wrote, "the planning proceeded as the picture developed."¹⁵ The photograph was taken on board the oceanliner, the Majestic, in 1927. It was intended for a commercial commission for a brochure published monthly by the North German Lloyd steamship company.¹⁶ As we will see in Cpt. IV., such magazines, which appeared during the heyday of steamship travel, contained schedules and featured stories about the ships and passengers. For unknown reasons, the photograph was never published.

What is one to make of the relationship between the painting and photograph of Upper Deck? What we are faced with here is a situation which Sheeler's statements about painting and photography do not clarify. There is nothing about these two works, for example, which might tell us which is the image seen from the eyes "inward" and which from the eyes "outward."

Nor is it possible to tell from these two images which look so similar which one is -- as Sheeler called it -- the "single" image and which is the "composite."

If these statements are tantilizing, there is other material which gives clues to the artist's intentions. There is the fact that Sheeler was an artist whose self-declared goal was to express the spirit of what he called "a mechanical age,"¹⁷ and who, for this reason came to make special connections between his paintings and his photographs. One of these decisions was one about objectivity and accuracy. Beginning with Upper Deck, Sheeler ceased using drawings as studies in favor of photographs. He explained, "I began to find my preliminary drawings lacking in sufficient information. Believing that one in any field of work should avail himself of any means helpful...I have made photographic records...more informative than any drawing." Increasingly camera vision became the standard for the form of his completed artistic statement: "No drawing can give you the actuality."¹⁸

There are reasons why Sheeler did not always make his ideas about the relationship between his paintings and photographs public knowledge. The first has to do with his personality and wit -- which depended to a certain extent on secrecy. One can sense this in the 1923 Self Portrait (Plate 7), in which Sheeler is headless and shows his torso only in reflection. (In another self portrait of 1943, The Artist Looks at Nature, we see a complete figure, but Sheeler has

positioned himself so that we do not see his face.) The Self Portrait is ostensibly the simple representation of a telephone, and Sheeler was delighted when his viewers failed at first glance to notice the human torso. The medium is conte crayon, the medium of which Sheeler was to say that he could use it to create an effect least like a painting -- most like a photograph.¹⁹

Secrecy pervades Sheeler's career in other ways. Here was a man who periodically burned drawings, studies and notes as an artistic strategy. As he stated in a macabre image, "An efficient army buries its dead."²⁰ It is typical that Sheeler declined to elaborate his position in response to a questionnaire sent by Alfred Stieglitz, on what photography meant, later published as the December, 1922 issue of the magazine, Manuscripts. Sheeler wrote, "It is better to leave the matter in the hands of the literary folk ... in selecting the camera, I have chosen the medium through which I can best express my opinions concerning photography. [To express my opinions] for me it would be like a fish, who, wishing to demonstrate his pleasure in a seafaring life, came out on the beach."²¹ The image is nearly as drastic as that of buried soldiers.

Sheeler's secrecy and ambivalence hide a fascinating story. It has its background in the aesthetic climate of the 1920's, still not comfortable with photography.²² On the one hand, there is the issue of whether photography was a valid art

form, an issue which was important well into the 1930's. In 1931, for example, when Julien Levy opened his gallery, one of his first acts was to pick up where Steiglitz had left off, and go on record as a crusader for photography.²³ In spite of all this, Sheeler did allow his friend the poet, William Carlos Williams, to make a specific reference to Sheeler's use of photographs in the 1939 MOMA catalogue. As Williams wrote, Sheeler "had especially not to be afraid to use a photographic camera in making up a picture."²⁴ But Williams did not speak about the details of Sheeler's working process until 1954, in an introduction to a catalogue for a Sheeler exhibition in Los Angeles.²⁵ This essay spells out what he had only implied in 1939 -- that Sheeler used an opaque projector in translating photographs into canvas. The use of the device is not surprising. As Sheeler had written in his Autobiography, he sometimes planned specific photographs as preparations for paintings.²⁶ Yet there was a specific force in Sheeler's life which acted against his being entirely open about the extent and importance of his photography. This force was his dealer from c. 1930, Edith Halpert. Halpert, who championed her artists, was less than enthusiastic about Sheeler's photographs. She felt they detracted from his reputation as a painter.²⁷

The influence of Halpert's opinions, still in effect today, was to keep Sheeler's photographs out of the public eye.²⁸ Yet, Sheeler took photographs throughout the 1930's and, in fact, there was a climate of opinion prevalent by the early

1930's which may have encouraged Sheeler to feel that straight photographic realism was a particularly suitable expression of a machine aesthetic.²⁹ A statement in a trade journal, Western Advertiser, 1931, is typical: "It is quite possible," wrote the author, Preston Duncan, "that the peculiar power and beauty of the machine age will find its best interpreter in the artist's tool developed by the Machine Age -- the camera."³⁰ The sentiments were echoed a few months later in reviews of Sheeler's work. W. B. McCormick, praising Sheeler in 1931 for doing "what an artist can do to make the Machine Age beautiful," noted that Sheeler had chosen as the slogan for an exhibition the statement, "Nothing is so astonishing as Truth." Sheeler's slogan, McCormick felt, was evidence that "Mr. Sheeler knows how startling and compelling of interest stark realism is in art. As the supreme illustration of Mr. Sheeler's genius in capturing beauty in the shadow of the Machine Age's most complete monuments, I refer...to the Classic Landscape, the Upper Deck and the American Landscape."³¹ McCormick was not the first to associate Sheeler's photographic-looking painting style with unconventional subjects. Earlier, in 1926, Forbes Watson and Lloyd Goodrich had noted in an Arts Magazine review that "Sheeler's recent work in oil...shows the influence of his photographic work in its intense concentration on the visual reality of objects which leads him to see and paint aspects of the outside world that no other artist seems to attempt."³² One of the works to which Goodrich and Watson were referring to was Doylestown Stair-

case, a painting with a slightly machine-like flavor because of its stair treads which jut out from a center beam like propeller blades or wheel spokes. This, at any rate, was the painting's resonance for its owner, Broom editor, Matthew Josephson, who discussed the work in these terms with Sheeler.³³

McCormick did not specifically refer to the camera in his reference to Sheeler's realism. Others who commented on Sheeler's work in 1931 discussed the relationship between Sheeler's painting and his photography, and made connections between the resultant style and Sheeler's subject choice. Kathrine Grant Sterne, for example, who discussed objectivity in art, that is, "the Russo-German cult of sachlichkeit [as] ...essentially an American invention, " gave as one example "Fordism...the River Rouge series of Charles Sheeler." Sterne traced American realism back to Americans' well disguised sentiment for...their native land: "the importance of milieu in the American novel and drama, she wrote, "is as valid an act of extraversion as the building of Brooklyn Bridge, or the planning of Holland Tunnel."³⁴

Another example is Sam Kootz, whose point of departure was Sheeler's photographs, which he discussed as though they were paintings to emphasize the high quality of Sheeler's works as well as the equality of the two media. "The line drawing, the athletic tenseness of line, the plastic sequences, the exquisite textures, the intricate rhythms, are as sure, as

conscious as the best modern painting." And he concluded, "in these Ford photographs, [Sheeler] has articulated the very soul of steel, in a series of the truest portraits of our times."³⁵

The opinions of Kootz, McCormick and Stearns were repeated throughout the 1930's. Florence Davies, critic of the Detroit News, writing of Sheeler's factory subjects connected machine subject and photographic style. "Sheeler is the precisionist par excellence...No atmospheric haze obscures the machine-like exactness of the scene." Davies's comments were included in an analysis of Sheeler's work which traced his "characteristic perspective" to the fact that "Sheeler long ago added to an ability in painting an expert skill in photography."³⁶ Reviews of Sheeler's work at the end of the decade continue the tone of earlier statements in relating painting photography and the machine subject. Sheeler's Power series of 1940 was discussed from this point of view: "If this is the machine age, as we have so often been told, then these Sheeler paintings are the quintessence of modernism. Other artists who have sought to interpret the machine age have taken refuge in abstract symbols. Sheeler gives us the machine with...all the precision of the camera."³⁷

Even if Sheeler was undecided about how much to go public about his photographic sources in the 1930's, his vision of

image making beginning during the 1920's and lasting until the mid-1940's seems to have been one which photography alone could satisfy. The fact that he kept on painting -- and adapted his photography to his painting -- gives his work its verve. Examining the history of his decisions leading to his important 1930's work suggests how the artist's mind must have worked as he sought to create an art which would be the inspiring and harmonious expression of a machine aesthetic. There is a pattern to Sheeler's decisions. As time went on, he changed his mind about the importance of photography, and he progressively re-located photography's position within his aesthetic system.

Sheeler's earliest photographs were made for Philadelphia architects. These were utilitarian shots of houses for sale.³⁸ He didn't do such work for long. Yet, at least in one way, when Sheeler began to approach photography as an art form, his vision never essentially changed.

One might consider Bucks County Barn (White Barn), 1916, one of Sheeler's earliest non-commercial photographs (Plate 24). It won him an important prize and a reputation as a photographer in 1918.³⁹ It resembles the commercial photographs, first, because it is a photograph of architecture; Bucks County Barn stresses structure and expanse, and provides a great deal of information about detail. Also, like the photographs for architects, it is unpretentious. There are

few dramatic touches, shadows, or high contrasts of light and dark. The light is even. The photograph hints at the barn's setting, but the treatment of subject matter is not picturesque. The scene is calm and there are no people.

Photographs like Bucks County Barn reflect the first relocation of Sheeler's aesthetic. As late as 1916, the year of this photograph, Sheeler had told photographer Alfred Steiglitz that he preferred to paint.⁴⁰ Uncommissioned photographs like Bucks County Barn are evidence to the contrary. Sheeler may well have derived his first ideas about the relationship he was to establish between painting and photography from Steiglitz. Steiglitz felt that photography was the art form of the century. If the painter Velazquez were alive today, Steiglitz said, he would use the camera. All the same, he wrote to Sheeler, "An artist cannot help but respect the medium he uses [whether painting or photography]. It is merely a repetition."⁴¹

Sheeler seems to have taken Steiglitz's comments very much to heart. As early as 1917, he began to exhibit photographs and paintings together, an action which attested to the equality of the two media. At the time, the photographs were discussed from the point of view of their "modernistic" qualities. The term is, of course, one borrowed from descriptions of painting. As the reviewer stated, Sheeler "had sought to prove by photography the reality of modern forms

and values." The reviewer seems to have been making a connection between Sheeler's photographs of African sculpture and the paintings of Picasso which were being exhibited in New York in the 'teens.⁴²

By 1920, Sheeler had begun to make correlations between his paintings and his photographs which give almost literal expression to Stieglitz' vision of the equality of the two art forms. A Sheeler photograph, Still Life: Zinnia and Nasturtium Leaves, published in Vanity Fair magazine in 1920, was discussed by Sheeler in terms of its relationship to painting (Plate 25). As he told his interviewer, he had become "convinced that certain problems which baffle the modernist painter could be partially solved by photography -- particularly those having to do with selection, arrangement, mass, texture and line."⁴³ Yet the camera was not just a tool. The text accompanying the photograph continues, "Mr. Sheeler has repeatedly verified with the wholly impersonal lens of the camera, the existence in nature of rhythmic and emotional forms which the public has all along thought of as being mere inventions of the painter. Mr. Sheeler's photographs are invariably unretouched."

Sheeler, following his own advice, selected and rearranged motifs in translating the photograph into a painting (Flowers in a Bowl, 1918). In the painting (Plate 26), the angle of vision is tipped up; Sheeler reversed the position

of bowl and table corner; he deleted the nasturtium leaves, and added two extra zinnia leaves to the flower stem. He also altered texture. In the photograph, the emphasis is on a variety of shiny, smooth surfaces. The light striking off the porcelain bowl is echoed by the shine of light reflected off the nasturtium leaves and mirrored in the polished table top. In the painting, texture is synchronized with tonality. The zinnia, its leaves, water, bowl, and table top shade from light to dark and the shading technique is carried out in a choppy brushstroke which gives an all-over unity. The brushstrokes are the equivalent of the polished texture which unify the photographic image.

Given all of this, the photograph and painting are remarkably similar, similar enough to suggest that the kind of vision governing the translation from photo to painting is photographic. There is a background for this kind of transition in something Sheeler's close friend, Morton Schamberg, is said to have believed. According to Walter Pach, Schamberg felt that "by seeing something in nature that others had not seen, and registering it 'you make it yours.'"⁴⁴ Sheeler's attitudes are derived from photography in this intellectual sense of claiming the object. At the same time, the relationship between painting and photograph clearly shows the painter's hand at work. The comparison also showed a 1918 viewer that the artist's eye and his intellect were noting semi-abstract motifs in the world around him.

Works like Flowers in a Bowl and its photograph suggest how quickly Sheeler moved on from considering only painting as art to including photography in his category of aesthetic considerations. By 1920, he began to make additional distinctions -- between kinds of photography. In 1917, he wrote to Stieglitz about his photographs of his Doylestown house, "I decided that because of something personal which I was trying to work out in them, that they were probably more akin to drawings than to my photographs of paintings and sculptures, and that it would be better to put them on a different basis."⁴⁶ In addition to the desire for a personal photographic language, the basis seems to have been partly financial. As he wrote to collector John Quinn in February, "My pictorial photographs being closely allied to my paintings and drawings in their intention, I have always priced them on a different basis than my regularly commissioned work."⁴⁷ The distinction between "pictorial" photography and commissioned work is the second step in Sheeler's evolution. Later, he did an enormous amount of commissioned work, and he came to consider his commercial commissions prime raw material for aesthetic consideration. But for a while, in the early 1920's, he tried to keep the two separate.

There is another point to be considered with Sheeler's photographs of the late 'teens and 1920's. The evolution from Bucks County Barn to others of the same group indicates that Sheeler was developing his individual aesthetic standards.

What is interesting about his work is the fact that some of his photographs more obviously relate to standards conventionally used for paintings than others. Comparing Bucks County Barn with Bucks County House, Interior Detail is a case in point (Plate 27). What we have with Bucks County House is a situation in which the subject matter itself is within the bounds of those considered artistic -- the floral still life. This was a subject Sheeler himself often chose for paintings in the 1920's.

But there is another aspect of the photograph which gives it its painting-like associations, at least to a viewer of photographs in the 'teens. The floral subject of Bucks County House is carefully framed by the deep window embrasure, and framed again by the window, and the darkened area behind it. Here we have a photograph which in spite of the avant garde criteria set down for photography in the 'teens -- that is, its sharp focus, and attention to detail -- is still composed like a painting of a well-established and accepted academic type. Here, Sheeler shows the viewer that his photograph is artistic material by establishing a double internal frame. The flower is twice separated from the 'real' world, doubly defined as aesthetic, and the conventions are those of a painting.

Bucks County Barn lacks this internal frame, and in the 'teens Sheeler did other photographs of architectural detail

which also lack it. Photographs like Doylestown Staircase have obvious prototypes, for example, in photographs like Paul Strand's Porch Shadows (1910). In both there is the attempt to move in close, or to choose a less usual angle of vision, and in so doing, to discover new structural configurations -- exactly, in fact, as Sheeler described it in his Vanity Fair statement. Yet there is an important difference between these two photos. Sheeler's photograph includes the staircase's functional core, its center beam, from which the stair treads radiate, as its compositional center. Strand's photograph, in spite of having at first glance the look of a radiating unit, is an image of disjointed and flattened elements. It is Strand's photographer's vision which slides the elements into an off angle and then unifies them by pairing the objects with their shadows.

Bucks County Barn marks another kind of transition in Sheeler's aesthetic. The photograph is one of a series of paintings, lithographs and drawings with similar themes including Barn (1917, MOMA), Barn Abstraction (1917, MOMA), Barns (1917, Albright-Knox Collection), Barn Abstraction (1918, Arensberg Collection, Philadelphia Museum of Art), Bucks County Barn (1918, Howald Collection, Columbus Gallery of Fine Arts), Bucks County Barn (1923, Whitney Museum) and others (Plate 8). These works, which Sheeler produced until shortly after the mid-1920's, play off advanced European painting styles of the first decades of the century --

both Cubism and Futurism. The emphasis on structure and geometry makes these works advanced for the United States in their day. They are a rather elegant translation of Cubistic ideas in which Sheeler substitutes a more localized reading of Cubism for the typical Cubist subjects of bohemianism and cafe life. His choice was to select images from everyday life in the area near his Doylestown country house. The choice represents more than Sheeler's interests in functionalism in architecture. Sheeler's attention directed towards local Pennsylvania Dutch culture is one root for his cultural nationalism in the 1930's.

Comparing Bucks County Barn and Barn Abstraction (1917) suggests that choice of subject is in itself preparation for the analysis of structure. Realism and semi-abstraction are closely related in these two works. Along with the emphasis on surface detail in both is a tendency which is almost skeletal. Barn Abstraction looks almost like a blueprint, if ever there were a blueprint in existence for this kind of anonymous vernacular barn architecture. The photograph seems different because it is all surface. Yet in this image of whitewashed stone and wood, where contrast is reduced to a minimum, every window frame, board and board edge has a graphic intensity which compares to the vision achieved synthetically in the lithograph. The sparse and pared down look of the lithograph is achieved in another way -- by Sheeler's habit, established in the 'teens, of leaving large

areas of canvas or paper bare in finished work.⁴⁷

Photography, painting and Cubism merge in other ways in Sheeler's art in the early 1920's. There is a special group of works which include multiple views of the same subject. These works have a background in the literature of Cubism. In the essay, Cubism, by Gleizes and Metzinger, the authors predicted a future for Cubism when it might be better understood. Someday, they hoped, "the fact of moving around an object to seize it from several successive appearances, which, fused into a single image, reconstitute it in time, will no longer make reasoning people indignant."⁴⁸ The idea sounds like a definition Sheeler was to evolve, and it was given early expression in photographs he took in 1917 of African sculpture for Marius de Zayas's portfolio, African Negro Sculpture, 1918.

One photograph in particular, of a musical instrument, and others of sculpted heads, were highly regarded in their day because the forms were arranged so as to reveal the hidden surfaces of objects by means of reflections and shadows.⁴⁹ These effects of shadow, whose possibilities may originally have been discovered accidentally, were developed in compositions which were in no way accidental. As de Zayas wrote in his introduction to the portfolio, "Sheeler has used the light to project the Negro vision. He photographs Negro sculpture in its plurality [italics mine] of form and effect."⁵⁰ Sheeler went on to use a similar technique in

the conte drawing, Objects on a Table of 1924 (Plate 29), in which he lit his subject from different angles. The tie to photography is particularly marked in Objects on a Table, because lighting technique is the same as that developed by commercial photographers for advertising photographs. Sheeler, in exploiting the technique in a Cubistic drawing, produced one of the first of a line of such images, as for example, a well known Edward Steichen advertising photograph of shoes.

What is important about Sheeler's composite imagery is the emphasis on wholeness -- the extent to which even the hidden side of objects finds its place in his art. Equally interesting is the connected notion of time, which one might expect to be part of these images, because theoretically, one must move around the object to see the hidden side. Sheeler took up this idea in Lhasa (1916), which hints at the artist's knowledge of Futurism, and later in Yachts (1922, Plate 30), which is a later stage in the artist's vision of synthetically constructed whole forms. Although the vision is seemingly that of a fleet of yachts, it could easily be read as the successive images of one single complete yacht, because each repetition gives slightly different information to add up to a whole. This emphasis on completeness rather than motion, on the result, not the activity, has a special meaning in Sheeler's art. It was an attitude which was particularly marked in the 1930's indus-

trial subjects, where it is related to Sheeler's neoplatonic point of view about the industrial world. The attitude has its origins in these works of the early 1920's. In these works in which circling the object stresses not the viewer's motion but the object's completeness, the sensibility comes from a kind of camera sense. It derives from the camera's potential for rendering physical data that Sheeler increasingly appreciated.

Sheeler was also becoming steadily more aware of the camera's ability to render physical data because of his involvement with commercial work. After 1923, and especially from 1924 to 1927, Sheeler was photographing for Edward Steichen at the Conde Nast publications, Vogue and Vanity Fair. He was producing works which stress detail -- the shiny elegance of a French dress, the stitching of a collar. At the same time, there are photographs like one of the Countess Rucellai, Vogue, August 1, 1926 (Plate 31). This photograph is on one level a standard studio work, but since it incorporates both frontal and profile views of the sitter, it echoes the sensibility of Yachts. Again, there is the emphasis on completeness which Sheeler demanded of camera vision, and which is another stage in the development of his aesthetic sense.

The mid-1920's saw the phasing out of Cubist-related connections between Sheeler's paintings and his photographs. During those years, Sheeler's art in both media came to depend on a new vision of the relationship possible between

them. Sheeler's aesthetic went through two changes. As the photographs just discussed suggest, the first change was the result of his increasing involvement in commercial advertising photography. The other instrument of Sheeler's changed aesthetic sense was the movie Manhatta, filmed by Sheeler and Paul Strand in 1920,⁵¹ and shown semi-privately in New York in the 1920's. Marcel Duchamp arranged for a joint screening in 1920 or '21 at Miles Studios, 130 West 46th Street, with one of his own films.⁵² Manhatta is a hymn of praise to New York City, which has in its background Sheeler's and Strand's admiration for the poet Walt Whitman. It is also a tribute to Alfred Stieglitz' early photographs of the city. The movie predicts Sheeler's factory subjects of the 1930's because of the way it refuses to treat New York's population as anything but an impersonal mass. It is Sheeler's photographs of architecture, though, which are the most interesting in terms of future developments.

Sheeler's photographs of New York City deriving from Manhatta were considered by his contemporaries to be particularly unique and exciting. Alfred Steiglitz sent photographer Edward Weston to meet Sheeler on the basis of relationships he saw between the New York images, and Weston's important factory photograph, Armco Plant, Ohio, 1922. Weston wrote in his diary about the importance of Sheeler's New York photographs.⁵³ His own stunning photograph of the kind of subject matter that even today is conventionally considered

unaesthetic suggests one reason why Sheeler's images might have been considered important: They were of unassuming subjects. The New York views had an unpretentious quality, an air of casual, somewhat diffident objectivity which had few parallels among Sheeler's contemporaries. Most city-scapes by Strand, Steichen and others had a dramatic focus absent in Sheeler's work. One of their few parallels, incidentally, is in Stieglitz' later photographs of New York City. These photographs, taken in the 1930's are like Sheeler's in their tendency to an all-over composition, a lack of a central focus.

Sheeler's images in the New York photographs are novel in another way (Plate 32). The New York photographs take from Manahatta a new sense of an image. They share with Manahatta a panned or panning image, the image produced by a movie camera moving across the urban terrain, which is unlike painting or some still photographs. Compositionally, these photographs are images which are not framed, or, to put it differently, they are a kind of image which is framed continuously and in sequence, unlike the image composed within the boundaries of the ground glass lens of a still camera. In movie vision, because the boundaries are shifting continuously, they tend to disappear. This is, at any rate, the vision in Sheeler's photographs which shows buildings as portions, as vertical or horizontal swathes, even when, for example, he could as easily have chosen to fix the in-

stant in the film when his given subject was centered in his view. It is also the sensibility behind his choice of vistas, fading into smoggy distance.⁵⁴

The filming of Manhatta is crucial to the development of Sheeler's art. Its tactics are those behind Sheeler's enormously important River Rouge series of photographs of the Ford automobile plant which he made in 1927. And the two events taken together, that is, Manhatta and the River Rouge photographs are, finally, the explanations of the relationship between Upper Deck and its photograph.

The River Rouge commission was the turning point of Sheeler's career. It was his introduction to a kind of subject which truly engaged his interest. As he was to say of the factory, "There I was to find forms which looked right because they had been designed with their eventual utility in view, and in the successful fulfillment of their purpose, it was inevitable that beauty would be attained."⁵⁵ And he wrote about Henry Ford, "One doesn't believe it possible that one man could be capable of realizing such a conception."⁵⁶ In one way or another, the industrial subject remained his concern thereafter.

It was as if with the River Rouge subjects, two things came together for Sheeler: the aesthetic potential of a mechanical device, the camera, and the machine subject. The Rouge

photographs suggest the depth of Sheeler's commitment to industrial subjects.

The River Rouge commission marks the last translocation of Sheeler's aesthetic. The photographs, importantly, mark Sheeler's acceptance of commercial commissions as ground for artistic creation. The River Rouge photographs also suggest the importance of the lessons in movie vision which characterize the New York photographs. In the Rouge photographs, the sense of form is extended, expanded, splayed.

These factory images divide into two major compositional types: close-ups of individual machines, as in Blast Furnace and Dust Catcher (Plate 33), and larger images of the factory scape whose composition type is of a web or a vista, as in Pulverizer Building (Plate 34). These images consistently are unframed, or, at most, partially framed, images. They are constituted so as not to seem isolated as images, but to give a sense of context for their subjects by not leaving space at the photo edge, for example, Production Foundry (Plate 35). Coke Oven Area (Plate 36) is an image which exists in two versions. Although one version has an architectural frame on the right, the shape which is a strong and dark accent exaggerates the unframed look of the photograph composition as a whole by drawing attention to the other three unframed sides. The angle border has parallels in another Sheeler photograph, Blast Furnace and Skip Bridge

(Plate 37). Here, too, there is a slanted form at one edge. One might argue that the forms are really a result of correcting lens angles. Here, for example, one could argue that Sheeler made a choice to keep the one side straight at the expense of the other. Yet the artist could as easily have decided to dispense with the angle by cropping that side, which would have isolated the subject in space, and he didn't.

As far as other scenes are concerned, the network of Ballet Mecanique (Plate 9) is typical. Again, Sheeler never allows for space surrounding an object which might suggest that it is in isolation. The same is true in the photograph, Storage Bins at the Boat Slip (Plate 38) in which the river and a string of boxcars at the riverside are continuous forms. Such works became studies for paintings in the 1930's. Industrial Architecture (Plate 39) is the exact double of its photograph. With American Landscape (Plate 40) Sheeler added a portion of a ladder at the lower right. The object is a kind of sly joke; the ladder literally bridges the gap to the world beyond the painting. The ladder is also a device which strengthens Sheeler's sense of a painting as a splayed and expanded image by giving it a reference which is to the scale of the single viewer.

The relationship between Powerhouse #1 (Plate 41) and the conte drawing, Smokestacks (Plate 42) which followed, is similar. The photograph is the one exception in the River

Rouge series to Sheeler's vision of expanded form, because the stacks are isolated against the sky. Yet Sheeler changed the composition in the drawing. By moving the stacks up in the drawing (by cropping the drawing's upper edge), Sheeler returns to the balance seen elsewhere of giving a larger context to his subjects.

This context was, at least in one case, more than a general one. There is evidence which suggests that it was Sheeler's idea to make an extremely specific reference to the world beyond photograph and painting. The relationship between a study for Classic Landscape (Plate 43) and the finished oil (Plate 44) is one that shows that when Sheeler created his expanded images he had a specific world in mind. Sheeler expanded the study on both sides to produce Classic Landscape. And, as a photograph (Plate 45) by an anonymous Ford photographer indicates, the landscape segments Sheeler added are not imagined, but the actual factory scene (almost certainly Sheeler photographs once existed).⁵⁷ The same is true of City Interior (Plate 46), where the added top, sides and bottom segments are actualities (Plate 47). The machinery is taken from the photograph Blast Furnace and Dust Catcher (Plate 33).

To summarize, the picture which emerges from the River Rouge photographs and the paintings and drawings connected with them is of an extremely successful artistic strategy,

grounded in Sheeler's decisions about the nature of photography and his ideals for artistic expression. About three years went by before Sheeler turned the photographs into paintings. It is a period in which Sheeler did few paintings, with the exception of Spring Interior, (1927), a picture which Sheeler later repudiated because of its unplanned execution, and with the exception of the 1929 painting Upper Deck. The years 1928 and 1929 were years of reflection for Sheeler, in which it almost seems as if he was waiting for the other artistic shoe to drop. Then after Upper Deck, Sheeler's dividing line, come the works of the 1930's, all based on photographs.⁵⁸

Walter Benjamin wrote in his prophetic essay, The Work of Art in the Age of Mechanical Reproduction about Dadaist paintings: "What they intended and achieved was a relentless destruction of the aura of their creations, which they branded as reproductions."⁵⁹ This, he felt, was also the unique effect of film and of photography. It is this quality which is true of Sheeler's photographs of unassuming subjects, which are composed in a radically unassuming way. In making photographs, Sheeler seems to have only partly satisfied his desire to create work which would be the mechanical expression of a mechanical age, for he went on to translate the photographs verbatim into drawings and paintings.

The lack of an "aura" in Benjamin's sense has other connotations which reflect on Sheeler's position with reference to the other artists in the 1920's and 1930's, for example, painting by the Immaculates, later called Precisionists, which had been identified as a home-grown American avant garde sharing a common sensibility.⁶⁰ Precisionist paintings are the background for the industrial themes which occupied Sheeler throughout the 1930's. Sheeler's art comes directly out of Precisionism. Yet it differs from the Precisionism of the 1920's. For one thing, due to his photography, Sheeler rendered form with a kind of verisimilitude until then not part of the language of advanced painting of this century. One might compare, for example, a painting like Stefan Hirsch's Milltown (c. 1925, Plate 48) as one of many examples which are prototypes for Sheeler's American Landscape (1930), one of his key works of the 1930's. Both paintings depict factory buildings, smokestacks and warehouses lining a riverbank, and in both, at the river edge, where one might expect to see the bustling activity of a loading crew, there is no one. Milltown is primarily the expression of the counterpoint of generalized geometric shapes; the painting derives from Cubist abstraction. Hirsch's emphasis does not encourage the viewer to expect information about the factory's location or functioning. By contrast, Sheeler's painting includes a wealth of detail; the sensibility is empiricist. An informed viewer might identify a cement processing plant and storage silos, and further specify the site as the Ford

automobile plant at River Rouge.

Comparing Elsie Driggs's Pittsburg (1927, Plate 49), with Sheeler's Smokestacks (Plate 42), suggests yet another way Sheeler's approach to his industrial subjects differs from the Precisionist treatment of images. Both artists represented the dramatic image of smokestacks. Each depicts the subject as a towering form, seemingly so large that its image must be cropped in order to contain it in a single view of the canvas. Driggs's subject, a blast furnace, has a spatial border composed of thick clouds of flame and smoke. The painting has its greatest density of form at the center. As with paintings by Demuth, Spencer and others, Driggs's style of composition has its roots in the overlapped and centered clusters of French Cubist compositions. Smokestacks, in contrast, is not a centered composition. Sheeler did not permit an arrangement of space at the edges which might suggest that his image is to be viewed as an isolated motif. If the drawing takes in only segments of the length of railroad tracks, girders, pipelines and smokestacks, still, those forms seem unmanipulated, and the very nature of Sheeler's subject choices tells the viewer that all are portions of larger wholes. The composition seems to move outward to refer to a matrix in reality beyond the drawing's edge. With Sheeler, one must look first to Cubism and then beyond for other than Cubist sources.⁶¹

What is the reason for these differences between Sheeler's vision of industrial subjects and that of his contemporaries the Precisionists? One answer lies in influences which come from outside the art world. If Sheeler's treatment of his River Rouge subjects is without parallel in American painting, it is in part because their forms are derived from Sheeler's commercial photography of the middle and late 1920's, which is not Cubist in origin. Sheeler underwent moments of indecision, afraid that his commercial photography was a drain on his painting. In 1928 he complained, "As for painting -- I am tempted now and then to buy some interesting color or canvas. I hope they don't deteriorate before they are used."⁶² Yet he learned to draw out both formal and philosophical ideas from the commercial side of things. His most important paintings of the 1930's reveal this.

Sheeler's friendship with photographer Edward Steichen, with whom he worked on the Conde Nast publications Vogue and Vanity Fair, beginning in c. 1923, shaped his thinking. Vaughn Flannery, art director for the Philadelphia based advertising company, N. W. Ayer, was another commercial influence. As seen above, there is also Sheeler's admiration for industrialist Henry Ford's breadth of vision. The enthusiasms of writer Matthew Josephson and other American literary figures who published iconoclastic little magazines during the 1920's also directed Sheeler's attention to the unconventional possibilities of commercial assignments.

If one were to pinpoint the chain of events which brought Sheeler to the material he chose to paint in the 1930's, one might just as easily start with Henry Ford. On December 2, 1927, Ford presented a new Ford automobile, the Model A, to the American public. Excitement about the new car was at a high: the manager of the New York Ford dealership, finding that his showroom could not accomodate the crowd waiting to see the Model A, rented Madison Square Garden. Responsible for the Model A's popularity was Vaughn Flannery. During the fall of 1927 Flannery had conducted a meticulously orchestrated promotional campaign in which he instructed Ford salesmen throughout the United States in how to best whet the public appetite. Flannery's campaign was new in advertising, for in addition to focusing attention on the new Ford itself, he also sought to create a glamorous image for the Ford Company, by touting the aesthetic side of industry. Flannery may have realized the possibilities in Ford Company model books (Plate 50), collections of photographs of new cars made for automobile dealerships' use, in which Fords and Lincolns were shown in the setting of the Rouge factory.⁶³ In any case he came up with the idea of special photographs of the Ford plant which recorded industrial architecture and machines, photographs which, when seen as a group, might be an artistic record of the industry because they would be associated with the name of a known creative photographer. To this end Flannery called on Charles Sheeler.

The reasons behind Flannery's choice of Sheeler for the Ford commission are consistent with his novel approach to advertising work. Flannery admired Bauhaus artists: he knew about them as early as 1922.⁶⁴ Central to the Bauhaus vision of a new union between the fine and applied arts, one that would obliterate distinctions between them, would be to hire a fine artist to execute a commercial commission. It was Flannery's contention that "in modern automobile advertising good design and popular taste are rapidly approaching each other."⁶⁵ It is no accident that one of a set of Sheeler photographs of the Ford Model A which appeared in the Sunday New York Times (December 18, 1927),⁶⁶ departed from current advertising practices which tended to depict the automobile as part of a dramatic scenario. Sheeler's photograph (Plate 51), a close-up without human actors, emphasized the car as a designed object. Flannery's admiration for Sheeler's art and ideas (the two men often visited Philadelphia's Barnes collection of twentieth century art together)⁶⁷ was a factor which encouraged Sheeler to treat the Ford job as more than a routine commission. It was particularly Sheeler's reputation for photographs that suited Flannery's purposes. Flannery was especially impressed with the photographs of barns taken in the 'teens.⁶⁸ He had also seen Sheeler's photographs of stage, fashion and society personalities which were appearing nearly monthly in the Conde Nast publications. Sheeler had been invited by Edward Steichen to photograph for the magazines beginning in c. 1923. As with the associ-

tion with Flannery, the work for Steichen also serves as background for the Ford commission.

Steichen's example influenced the look of Sheeler's commercial portrait photography. A comparison of Sheeler's photograph of a model in a Callot dress (Plate 52) and Steichen's photograph of a model in a Paquin dress (Plate 53), both in the November 1, 1926, issue of Vogue, indicates that there are instances when it is difficult to tell the fashion photographs of the one man from the other. In both photographs, a reflective, almost pensive expression on the face of the model is the foil for a formally posed presentation of the figure and costume; both photographers exploit the abstract details of shadowed form and reflected light to enrich the appearance of the models' fashionable gowns.

Sheeler became close friends with Steichen. On weekends at Steichen's Connecticut home, the two discussed both commercial and personal art-making.⁶⁹ Particularly important in those discussions were Steichen's ideas about advertising. He felt that "If I can't express the best that's in me through... advertising photos...then I'm no good."⁷⁰ It was Steichen's repeated contention that, "All my work is commercial.... There has never been a period when the best thing we had was not commercial art."⁷¹ He saw commercial patrons as the new Medicis. Steichen's ideas were not unique. They represent an enthusiastic and highly committed version of others of

his time. By 1922, Earnest Elmo Chalkins had predicted Steichen's ideas. He wrote in a review of a poster exhibition, "Advertising promotes the same creative opportunity as the Church offered in the Fifteenth Century."⁷² Later Sheeler was to state, "I believe the term artist should have a wider application than is implied by reference to the fine arts."⁷³

Sheeler's connections with Steichen and with Flannery were critical influences upon what Sheeler was to make of the Ayer commission to photograph at the Ford plant. If the ability to sense the possibilities of photographing the factory scene was the product of Sheeler's own modern imagination, still, the photographs owe much to his colleagues' example and support. Despite the difficulty in assimilating industry to fashion, Sheeler certainly had his Conde Nast experience in portrait photography in mind at River Rouge.⁷⁴ He called the photographs he planned to take at the Ford plant "portraits of machinery."⁷⁵ The River Rouge photographs, paintings and drawings bear out Sheeler's designation. There are compositional similarities. The society portrait of the Countess Rucellai in the August 1, 1926, issue of Vogue (Plate 31) which takes in both front and profile views of the sitter is comparable to works like Sheeler's conte crayon drawing, Ballet Mecanique (1931), with its views of the adjacent sides of industrial apparatus (Plate 9). Characteristic of the River Rouge work as well is the stress on

minute detail, often a requirement of the promotional element of the advertising of consumer goods, or in fashion magazine representations of glamorous stage or screen personalities. Sheeler's photograph of a French circus rider Renee Adoree (Vanity Fair, November, 1926) shows her in a pose calculated to show off the elaborate draperies of her stylish outfit. It is often the details in the River Rouge paintings which carry the iconography, as for example, in City Interior (Plate 47), an oil of 1936. When Sheeler enlarged a study of 1935 to make the painting, he used as studies the photographs he had taken at the Ford plant in 1927. The painting's message is expressed as an imagery which seeks to replicate the appearance of actualities: machinery assembled in such crowded abundance that a factory seems to be a whole city, and even outside space has walls like an interior.

The relationship between the oil American Landscape (Plate 40) and the photograph on which it is based (Plate 38) also hinges on a detail. Sheeler replaced the serial number on the side of the boxcar in the photograph with the Ford logo. The painting is thus a more specific reference to the Ford plant than even the photograph had been. A tiny half-cropped human head at the lower border of the photograph, Pulverizer Building (Plate 34) is another seemingly insignificant detail, yet Sheeler chose to carry it over into the conte crayon drawing, Industrial Architecture (1931, Plate 39) perhaps giving a glimpse of a universe in which it is machinery

which counts and not the men who run it.

There is no mistaking Sheeler's enthusiasm for the Rouge commission. He wrote to Walter Arensberg from Detroit, "What wouldn't I give for the pleasure of showing you through this unbelievable establishment. It defies description...."⁷⁶

And he wrote in his Autobiography (1937), "Since industry predominately concerns the greatest numbers, finding an expression for it concerns the artist."⁷⁷ Throughout the 1930's, his reliance on motifs drawn from the techniques of commercial and advertising work, work done for the mass media, was the expression of these sentiments. The photographic look of the 1930's paintings -- their details, more stressed than what one might expect from sharp-focus photography, and their composition showing adjacent angles which puts subject matter on display -- all these were Sheeler's tools in creating a new painting style with a popular base, and all have their sources in the pages of Vogue and Vanity Fair magazines.

There is another dimension to Sheeler's paintings of the 1930's. Contrary to usual notions about the nature of popular art, his ideas were also an expression of a special avant garde point of view. In accepting the Ayer Ford commission, Sheeler was aligning himself with the concerns of a particular group of 1920's intellectuals who were investigating American popular culture. Prominent among this group were Waldo Frank and other literary figures, including Harold Loeb and

Matthew Josephson of the little magazine, Broom (as in 'a new broom sweeps clean'). Broom's editors evolved and publicized the idea that American's increasingly mechanized society, her consumer goods, even the language of advertising copy and billboards were the emerging, long-awaited expressions of an indigenous culture which could rival Europe, and which might begin to sweep away the hypocritical, genteel legacies of 19th century Victorianism.⁷⁸

To preface his investigations, the ebullient Josephson stated that his basis was "an ethnological study of...the Americans" (Broom, November, 1922). "The advertisements", he wrote, "contain the fables of this people." Josephson discovered that factories could be "monuments in rows of flaming chimneys." He wrote about the poetry of automobile advertisements as "simply lovely work."⁷⁹ This last is a taste Sheeler must have shared. Throughout his life, he loved fine cars.⁸⁰ Sheeler wrote about a Lincoln which he acquired after he photographed it for Ayer, "To sit behind the wheel is a revelation. It is to begin all over again. The feel and sound of the engine is something to wake up in the middle of the night and think about." Sheeler's feelings for the Lincoln were, like Josephson's, responses to aesthetic experience: "My pleasure in it is akin to my pleasure in Bach or Greco and for the same reason -- the parts work together so beautifully."⁸¹

Sheeler and Josephson became friends in the spring of 1923, and by October, Sheeler's paintings and photographs were featured in Broom. There is a very specific connection between the Broom Sheeler issue, and Sheeler's development. The issue contained Matthew Josephson's "Henry Ford," an essay which had the tone of a folk tale and expounded on the mystique of Henry Ford and the Ford plant; the essay probably was Sheeler's formal introduction to the subject which was later to be of such importance to him. Josephson's tone was one of awe: Ford was "not a human creature. He is a principle, or better, a relentless process."⁸² Four years later, Sheeler's impression was like Josephson's: "One doesn't believe it possible that one man could be capable of realizing such a conception."⁸³

Josephson's essay introduced images which were later to be realized in Sheeler's River Rouge paintings of the 1930's. The essay is almost certainly the source for Sheeler's notion that the smoothly meshed operations of the factory could be viewed as a spiritual force. The essay spoke of factory architecture as a modern embodiment of the religious architecture of the past. As Josephson described it, "Mr. Ford was opposed to the erection of imposing and costly churches. He refused to contribute to his own parish church for this end. But in his automobile plant, he built the costliest and most beautiful powerhouse in America....Ford filled the windows of his powerhouse with stained glass."⁸⁴ Sheeler

later was to call the industrial world the modern substitute for the Gothic cathedral. And he included one or another of the Rouge factory's powerhouses in six of the industrial works, including the important oil, Classic Landscape (1931, Plate 44), the drawing Smokestacks (1931, Plate 42), in the 1927 photographs Power House #1 (Plate 41), Production Foundry and Criss-crossed Conveyors (Plate 11), and in the photo-mural, Industry (1932).⁸⁵

In 1921, the painter Marsden Hartley had, in an essay, American Values in Painting, listed Sheeler among a group of painters who were "American in type"; he had warned his readers, "Art in America, like a patent medicine or a vacuum cleaner...can hope for no success until ninety million people know what it is."⁸⁶ Hartley's apparent willingness to categorize painting as a product which -- like the American creation, the vacuum cleaner -- was designed to be sold to a mass audience, might perhaps be considered his tongue-in-cheek on American art lovers, or alternately as his comment on the potential power of the burgeoning American advertising industry, taken in its infancy. Six years later, Charles Sheeler, with the River Rouge photographs followed by the paintings of industrial subjects, had turned Hartley's sentiments into prophecy of sorts. In drawing new material from the artistic language of advertising, Sheeler had expanded the definitions of painting. His paintings of the 1930's anticipate the photo-realism of the 1960's, especially

the Fortune Magazine "Power" series. In these paintings, which are images of different kinds of industrial power, Sheeler retains the machine ideology of earlier work. Yet the paintings introduce a new note into Sheeler's art because of their dependence on more abstract formal qualities of photographs, including shadows which do not define form, which oppose the photograph's potential for extreme visual accuracy. This is particularly the case in Electric Power (Boulder. Plate 13), where the sharply tilted forms make a flat surface pattern, and Sheeler's treatment of the shadows of the rock formation tends to decrease its bulk, and also in Rolling Power, where the subject is so close to the foreground that details of all kinds are a dominating network of surface incident. These paintings hint at Sheeler's art of the 1950's, which began to depend on techniques derived from the image of superimposed photographic negatives. Barn subjects, for example Bucks County Barn (1932) are another variant, in which all-over dryness and evenness of detail suggests other works, like Bassett Hall (Plate 54), with a drawing seemingly derived from the tracing of a photograph (Plate 55). Works like Bassett Hall are due to the direction Sheeler's art took in the late 1930's. It might be suggested that Bassett Hall looks different because the style of its photograph source has changed, to one more concerned with surface incident. The "Power" series and barn and architectural work of the 1940's are a specific development in Sheeler's work. He may have

been encouraged to move to a kind of photo-realism because the connections with advertising and photography seemed to permit a realist art which had a popular base, and yet was avant garde at the same time. The enthusiastic reception for his paintings in the 1930's attests to their success.

Footnotes.

- ¹Edward Steichen, as quoted in Constance Rourke, Charles Sheeler, Artist in the American Tradition (New York: Harcourt Brace & Co., 1938), p. 67.
- ²See, for example, Karl Davis Robinson, "The New York Salon," American Photography, XIX (August, 1925), p. 429, 430, 434. Sheeler was a jury alternate for this exhibition which favored sharp-focus work. Other discussions of the subject include: "Pictorial Photography in America," The Photographic Journal of America, LX (March, 1923), p. 115-116; Robert Allerton Parker, "The Art of the Camera," Arts and Decoration, XVI (October, 1921), p. 369, 414, 415; T. J. Whittaker, "Photography," Arts and Decoration, II, No. 11 (September, 1912), p. 396-397; Dan Dunlop, "Straight Photography," Photo Era, XXVIII (June, 1912), p. 208, 256-257, and (July, 1912), p. 3-6; Norman F. Butler, "Focus - Sharp or Diffused," American Photography, X, No. 5 (May, 1916), p. 748-749; Mary Fanton Roberts, "Imagination and the Camera," Craftsman, XXVI (August, 1914), p. 517-523; "The Straight Photograph, and Why," The Photographic Journal of America, LIII, No. 8 (August, 1916), p. 340-342; "Art and the Machine," Arts and Decoration, XIV (April, 1921), p. 445-446; Charles Marriott, "The True Functions of Photography," Photo Era, XXXIV (May, 1920), p. 229-231; I am indebted to bibliography in Dr. Naomi Rosenblum, "Paul Strand," Unpublished Ph.D. dissertation, The Graduate Center, City University of New York, 1979. I am also indebted to Dr. Rosenblum's suggestions. For a general survey of the state of photography by avant garde photographers, painters and writers of the 1920's, see Manuscripts No. 4 (December, 1922). For discussions of photography as an art form, see Sherril Schell, "Photography as an Art Medium," International Studio, LXXVI, No. 309 (February, 1923), p. 416-419; Charles H. Caffin, Photography as a Fine Art (New York: Amphoto Reprint, 1972, 1st Edit. 1901); William M. Ivins, "Photography and the Modern Point of View," Metropolitan Museum Bulletin, I (October, 1928), p. 16-24; "A Camera Year," Art News, XXX, No. 28, p. 12; "Art by Camera," Art Digest, VI (November 15, 1931), p. 9; Anthony Guest, Art and the Camera (London, 1907); Paul L. Anderson, Pictorial Photography (Philadelphia and London: Lippincott, 1923); C. Hayes Sprague, "Art in Photography," Brooklyn Museum Quarterly, XVIII (1931); Walter Pach, "Art: At An Exhibition of Photography," The Freeman (February 23, 1921), p. 565-566; and Thomas Cravan, "Art and the Camera," The Nation (April 16, 1924).
- ³Norman F. Butler; see footnote 2.
- ⁴Mary Fanton Roberts; see footnote 2.

- ⁵Dan Dunlop; see footnote 2.
- ⁶Paul Outerbridge, "Seeing Familiar Objects as Pure Form," Arts and Decoration, vol. XIX (May, 1923), p. 23, 94.
- ⁷Walter Pach, "Art: At An Exhibition of Photography," The Freeman (February 13, 1921), p. 566.
- ⁸See Butler, Roberts, and Whittaker, footnote 2.
- ⁹Nancy New Hall (ed.), Daybooks of Edward Weston (New York: Aperture, 1973), p. 191.
- ¹⁰Charles Sheeler, Autobiography, Archives of American Art, Nsh 1, frames 94-98.
- ¹¹For a discussion of Symbolist attitudes toward photography, see Rosalind Krauss, Alfred Stieglitz's "Equivalents," Arts Magazine, LIV, No. 6 (February, 1980), p. 134-137.
- ¹²Sheeler, op. cit., and "A Brief Note on the Exhibition," Charles Sheeler, Paintings, Drawings, Photographs (New York: Museum of Modern Art, 1939), p. 11.
- ¹³Ibid.
- ¹⁴Ibid.
- ¹⁵Ibid.
- ¹⁶Information courtesy of Lee Marks, Gilman Paper Company, January 17, 1980.
- ¹⁷Sheeler, Autobiography, frame 101-102, and also, "Barn, a Thing of Beauty to Charles Sheeler," Bridgeport Sunday Post (August 21, 1938) for Constance Rourke's statement on the importance of the industrial subject.
- ¹⁸Sheeler, Autobiography, frame 113.
- ¹⁹See Charles Sheeler, "Charles Sheeler - 1946," Art News, XV (March, 1946), p. 30. For a discussion of the use of conte-crayon, see Sheeler, Autobiography, frame 111.
- ²⁰Sheeler, as quoted in Rourke, op. cit., p. 144.
- ²¹Sheeler, Letter, June 5, 1922, in Manuscripts, No. 4 (December, 1922), p. 3.
- ²²See footnote 2.
- ²³Katherine Grant Sterne, "In the New York Galleries," Parnassus, vol. VI, No. 7 (November, 1931), p. 7-8.

- ²⁴William Carlos Williams, "Introduction," Charles Sheeler: Paintings, Drawings, Photographs (New York: Museum of Modern Art, exhibition catalogue, 1939), p. 10.
- ²⁵William Carlos Williams, "Foreward," Sheeler Retrospective Exhibition (Los Angeles: University of California, 1954), p. 7.
- ²⁶Charles Sheeler, Autobiography, frame 112, 113.
- ²⁷See Mary Jane Jacob and Linda Downs, The Rouge (Detroit: The Detroit Institute of Arts, 1978), p. 14-15, for a discussion of Halpert's role in downplaying Sheeler's photographs.
- ²⁸See correspondence between Harry Lowe and William H. Lane (New York: Whitney Museum of American Art, Sheeler Files, 1968).
- ²⁹One of the earliest expressions of this point of view can be found in Charles H. Caffin, Photography as a Fine Art (New York: Amphoto Facsimile Books, 1972, 1st Edit. 1901), p. iv.
- ³⁰Preston Duncan, "The Camera Comes of Age," Western Advertising (January 1, 1931), p. 32-33, 48.
- ³¹W. B. McCormick, "Machine Age Debunked," New York American (November 26, 1931).
- ³²Forbes Watson and Lloyd Goodrich, "New York Exhibitions," The Arts, IX, No. 2, p. 97, 102-103.
- ³³Interview, Matthew Josephson, August 3, 1974.
- ³⁴Katherine Grant Sterne, "American vs. European Photography," Parnassus, IV (March, 1932), p. 16.
- ³⁵Sam Kootz, "Ford Plant Photographs of Charles Sheeler," Creative Art, VIII, No. 4 (1931), p. 264-267.
- ³⁶"Fogg Museum Acquires Unusual Sheeler," Art Digest, IX, No. 8 (1935), p. 6.
- ³⁷"Sheeler Paints Power," The Art Digest, XV, No. 5 (December, 1940), p. 73-82.
- ³⁸Charles W. Millard, III, "Charles Sheeler, American Photographer," Contemporary Photographer, VI, No. 1 (1968), n.p.
- ³⁹Ibid .

- ⁴⁰ Letter, Alfred Stieglitz to Charles Sheeler, November 1, 1916, Stieglitz Correspondence, Yale University.
- ⁴¹ Ibid.
- ⁴² "Modernist Photographs," American Art News, XVI, No. 4 (December 15, 1917), p. 3.
- ⁴³ "Still Life: Zinnia and Nasturtium Leaves," Vanity Fair (May, 1920), p. 80.
- ⁴⁴ Walter Pach, see footnote 2.
- ⁴⁵ Letter, Charles Sheeler to Alfred Stieglitz, November 22, 1917, Stieglitz Collection, Yale University.
- ⁴⁶ Letter, Charles Sheeler to John Quinn, February 16, 1920, Quinn Collection, New York Public Library.
- ⁴⁷ This practice dates from the 'teens. See Letter, Robert Henri to Charles Sheeler, February 27, 1919, Stieglitz Collection, Yale University.
- ⁴⁸ Robert L. Herbert (ed.), Modern Artists On Art (New Jersey: Prentice Hall, 1965), p. 15.
- ⁴⁹ See Rourke, op. cit., p. 80.
- ⁵⁰ Marius de Zayas, "Introduction," African Negro Sculpture (1918).
- ⁵¹ I am indebted to Dr. Naomi Rosenblum, op. cit., for discussions of Sheeler's and Strand's roles in Manahatta.
- ⁵² Letter, Marcel Duchamp to Jane Heap and Margaret Anderson, Little Review files (Milwaukee: University of Wisconsin, undated).
- ⁵³ Edward Weston, as quoted in Newhall, op. cit., p. 12, 190.
- ⁵⁴ See also Morton Schamberg's photograph, Rooftops (1917), collection of Van Deren Coke, Albuquerque, New Mexico; the industrial subject and un-framed composition type are prototypes for Sheeler's development. The same is true of industrial images by German photographer Albert Renger-Patzsch. These post-date Sheeler's industrial photographs but not his drawings and paintings. Sheeler could have seen Renger-Patzsch's work at the Stuttgart Film und Foto exhibition, 1929.
- ⁵⁵ Sheeler, Autobiography, frame 101.
- ⁵⁶ Letter, Charles Sheeler to Walter C. Arensberg, October 25, 1927, Arensberg Archives, Philadelphia Museum of Art.

57 See The Rouge (exhibition catalogue), Detroit Institute of Arts (1978), p. 33.

58 Throughout his career, Sheeler based paintings on photographs. Still Life: Zinnia and Nasturtium Leaves (1918; photograph, 1915) may be one of the earliest. During the 1920's, paintings such as Church Street E1 (1920) represented simplified versions of forms derived from photographs, while still retaining general elements of composition. Church Street E1 derives from the movie Manahatta. It has been suggested by Dr. Naomi Rosenblum, op. cit., (Conversation, November, 1980), that the painting was based on a photograph taken with a still camera during the filming of Manahatta. Sheeler may have discovered subjects for photographs as a result of his involvement in capturing images with a movie camera (only a still photo, Dr. Rosenblum feels, would capture a scene with sufficient sharpness to make it useful as a painting study). Other 1920's works based on photographs include Offices (1920); the photograph, c. 1920, was published in Vanity Fair (January, 1921), p. 72 and the lithograph Delmonico Building (1926-27; the photograph was published in Vanity Fair (November, 1926), p. 72). In Delmonico Building the forms in the lithograph are not simplified, so the correspondence between lithograph and photograph is exact. Delmonico's sets a pattern for the 1930's, in which image and polished style alike come from photographs. Paintings like Upper Deck (1929, photograph c. 1927) are exactly like their photograph sources. Classic Landscape (1931), American Landscape (1930) and City Interior take sections from photographs. It is the opinion of Mary Jane Jacob, The Rouge (Detroit: Detroit Institute of Arts, 1978), p. 33-43, that at least in 1927, there were photographs, now lost or inaccessible, which were the exact images of each of these paintings. One might also posit photograph sources for Americana (1931) in which the sharp angle of vision suggests photographic vision and also Home Sweet Home (especially since Sheeler was known to have taken photographs of similar subjects in his home, see Charles Sheeler: Paintings, Drawings, Photographs (New York: Museum of Modern Art, 1939), frontispiece. Cactus (1931, Photograph c. 1923-31) and the entire Fortune "Power" series are based on photographs. During the 1930's, Sheeler also did black and white conte crayon drawings including Chartres, Industrial Architecture, Ballet Mecanique, Interior Bucks County Barn, in which tonality and gradations from light to dark are like photographs (see footnote 19). The relationship between painting and photography changed markedly by the 1940's. From c. 1943, Sheeler structured paintings based on simplified and overlapped motifs, often painted in semi-transparent overlays, which suggest superimposed photographic negatives.

- ⁵⁹Walter Benjamin, "The Work of Art in an Age of Mechanical Reproduction," Illuminations (New York: Schochen, 1979), p. 238.
- ⁶⁰See Henry McBride, "Modernistic Americans," New York Sun (October 30, 1926), and "The American Group at Daniel Gallery," New York Sun (November 12, 1927); see also, "Exhibit," New York World, April 3, 1927.
- ⁶¹See Milton W. Brown, "Cubist-Realism: An American Style," Marsyas, III (1946), p. 139-160, for an important discussion of Precisionism's Cubist sources.
- ⁶²Letter of January 11, 1928, to Walter Conrad Arensberg, Arensberg Archives, Philadelphia Museum of Art.
- ⁶³Model books were used by Ford dealers to order photographs of the automobiles for prospective clients. Such books were also circulated among company advertising and sales managers. Information courtesy of Mr. James Bradley, Curator, National Automobile History Collection, Detroit Public Library, Detroit, Michigan.
- ⁶⁴Telephone Interview, Mrs. Vaughn Flannery, August 2, 1979.
- ⁶⁵Vaughn Flannery, as quoted in Geoffry Holme, Industrial Design and the Future (New York: Studio Publications, 1934), p. 43.
- ⁶⁶Sheeler photographs of Ford Model A's were used without his credit line in the New York Times Rotogravure Picture Section, the society section of the newspaper (see also January 8, 1928).
- ⁶⁷Interview, Mr. Gordon Wilbur, January 12, 1973 and Telephone Interview, Mrs. Vaughn Flannery, August 2, 1979.
- ⁶⁸Telephone Interview, Mrs. Vaughn Flannery, August 2, 1979.
- ⁶⁹Letter, Mrs. Vaughn Flannery, July 26, 1979.
- ⁷⁰Steichen, as quoted in Paul Strand, "Steichen and Commercial Art," New Republic, LXII (February 19, 1930), p. 21.
- ⁷¹Steichen, as quoted in Carl Sandburg, Steichen the Photographer (New York: Harcourt Brace and Company, 1929), p. 51.
- ⁷²Ernest Elmo Chalkins, "The Art of the Poster," International Studio, LXXVI, No. 307 (December, 1922), p. 215.
- ⁷³Charles Sheeler, as quoted in Constance Rourke, op. cit., p. 131.

74. There were more than 90 portrait photographs between 1923 and 1927. I am indebted for consultations with Diana Ekins, Archivist, Conde Nast, Inc. (July, 1979).
75. Letter of October 25, 1927, to Walter Conrad Arensberg, Arensberg Archives, Philadelphia Museum of Art.
76. Ibid.
77. Charles Sheeler, Autobiography, frame 101.
78. Even earlier, Robert Coady, art dealer and publisher of The Soil, had urged Americans to open their eyes to American culture. Already by 1917, Coady had noted happily that, for example, the hectically lit window displays of a large Times Square men's clothing store were "an exhibition of pictures...." Coady declared, "Daumier would have done it in about the same way." The Soil (January, 1917).
79. Matthew Josephson, "The Great American Billposter," Broom, III (November, 1922), p. 304-312.
80. Sheeler's love of automobiles might be traced back to the Arensberg circle and Francis Picabia's fascination with elegant sportcars. For a painting which documents Picabia's enthusiasm, see Florine Stettheimer's La Fete a Duchamp (1917).
81. Letter of February 6, 1929, to Walter Conrad Arensberg, Arensberg Archives, Philadelphia Museum of Art.
82. Matthew Josephson, "Henry Ford," Broom, V (October, 1923), p. 142.
83. Letter of February 6, 1929, to Walter Conrad Arensberg, Arensberg Archives, Philadelphia Museum of Art.
84. Matthew Josephson, op. cit., p. 139.
85. The image of the powerhouse also appears in the conte crayon drawing Smokestacks (1931), in the 1927 photographs Power House #1, Production Foundry and Criss Crossed Conveyors, and in the photo-mural, Industry (1932).
86. Marsden Hartley, "American Values in Painting," Adventures in the Arts (New York: Boni and Liveright, 1921), p. 60-63. Hartley's list included, along with himself, Dickinson, Demuth, Ray, Schamberg, O'Keeffe, Davis, Walkowitz, Marin and others.

Chapter IV: Charles Sheeler's Upper Deck: Prototype
for a Machinist Style.

As Precisionist painter Elsie Driggs humorously recalls it, her dealer, gallery owner Charles Daniel, had the inside story on fellow artist, Charles Sheeler.¹ Sheeler had told him in 1928 that Raphaelle Peale's After the Bath, a painting of 1823, explained what he - Sheeler - was up to in painting² (Plate 56).

Peale's is a curious painting. What its title leads us to expect is the image of a nude body. Instead, what Peale has given us is a trompe l'oeil rendition of a crisply starched heavy linen napkin that seemingly conceals a nude bather from the eyes of the prurient. The towel is a banal household article, yet its size and function in the canvas are somewhat ambiguous. It could be interpreted as a curtain which masks the bather -- yet what Peale represents is actually a much smaller napkin concealing a print of a bather. However one interprets these mysteries, Sheeler's comment to Charles Daniel is startling. What possible connections could there be between After the Bath and Sheeler's art?

Unlikely as it may seem, there is a broad range of similar-

ities between After the Bath and Sheeler's Upper Deck (1929), a major painting which is the forerunner to Sheeler's machinist paintings of the 1930's (Plate 22). Both are images in which there is something more than meets the eye. Both pictures suggest something absent, something concealed, so strongly that it -- or at any rate, its possibility -- is insinuated into the viewer's imagination. If the Peale is a study in thwarted voyeurism and the power of erotic suggestion, Sheeler's subjects are images of another kind of power.

What Upper Deck depicts is machinery. The center of the canvas is taken up with the compact bulk of two electrical motors. These motors are the specific power sources for two of a ship's complement of intake and exhaust manifolds. They control the supply of air which boilers below deck use to generate steam (they also expel exhaust gasses). Although the artist has chosen a moment when no waste gasses can be seen issuing from the squared-off exhaust vents, the complexity of the machine grouping is an indication of the potential for energy, for whirring activity taking place behind the casings of the squat and rounded motors, and within the flattened discs of the "squirrel cage" fans.

What does it mean that an artist like Sheeler speaks of Peale's painting as a clue to his intentions? The answer is partly to be found in Peale's folksy Americanness, blending puritanism,

humor and the surprise element in a single image. Further, whether or not Sheeler was thinking of a possible comparison between Peale's image of freshly laundered white linen and the crisp and sparkling colors of Upper Deck's machinery painted white, the painting suggests that Sheeler remembered that a ship is scrubbed and painted constantly.

Peale's meticulous realism and finish are also qualities which must also have had a special meaning for Sheeler. He had written in 1925, "great purity of plastic expression may be achieved through the medium of objective forms [i.e., realism]...."³ Intermittently during the early 1920's, Sheeler departed from his early Cubistic experimentations -- and from an overtly abstract approach, and began to investigate the possibility of a realist art. His Self Portrait of 1923 documents this change. In the 1923 Self Portrait, the artist was beginning to equate realism with clarity and directness of message; he gave himself a mechanical alter-ego, a telephone to stress his ideals.⁴ Beginning with Upper Deck and for the next fifteen years, Sheeler definitively committed himself to realism.

The connection with the Peale is, finally, a clue to Sheeler's personality. He liked to pique the viewer's curiosity. But, Sheeler's wit notwithstanding, there is more at issue here than a tongue-in-cheek reference to a 19th century aesthetic forebear. Upper Deck has a 20th century background in Sheeler's

involvement with the ocean line subject, which was an evocative symbol for both the artist and his contemporaries. Sheeler's choice of the ocean liner image is at the crux of a diverse set of artistic and cultural issues, all involved with machine imagery and its philosophical implications.

When, in 1939, Sheeler called Upper Deck the "dividing line,"⁵ he was talking about a work whose significance was perhaps clearer to him than at any time in the decade since he had painted it. During the intervening years, Sheeler had produced a closely related series of paintings dealing with industrial themes whose stylistic and thematic unity contrasted sharply with the variety of experiences and abrupt changes of the 'teens and the 1920's, when Sheeler did work influenced by Futurism and Synchronism as well as Cubism. Upper Deck is the first painting in Sheeler's machine-derived aesthetic, and Sheeler stamped it as his encompassing statement about the industrial world. Sheeler's approach was surmised even before 1929 by collector Duncan Phillips. He wrote in 1926 that Sheeler "believes painters should not neglect mechanical means to interpret a mechanical age."⁶ Phillips specifically mentioned the 1923 Self Portrait, although he could also have been thinking of Church Street El or Offices, which he owned by 1926. Yet Upper Deck expands the portrait's machine aesthetic in one crucial way. In the Self Portrait, machinery

-- the telephone -- had a symbolic role because it is a cryptic stand-in for the artist. In Upper Deck, though, there are no human references.

Upper Deck expresses Sheeler's new vision, first, because machinery is a total subject. The machinery, painted white, shares the picture space only with the sky, and the flooring to which it is bolted. Railings and a ship's ladder to the left indicate that the setting is a ship and the flooring is the deck, but the sea is not visible. Further, unlike the Self Portrait where Sheeler directs the viewer's attention to human and mechanical power sources which presumably are located to beyond the borders of the picture,⁷ in Upper Deck the power source consists of two electric motors located in the center of the canvas. Unlike the telephone whose context seems more intimate, even domestic, the machines in Upper Deck are integral parts of a large and complex ocean liner's power system.

There are a number of factors which moved Sheeler towards his sense of machinery as a totality. One of the earliest of these is the paintings of machine subjects by Morton Schamberg, who was Sheeler's friend from the early years of the century, and one of his most important influences. Even as early as 1912, Schamberg had spoken with Sheeler about his plans for paintings of machinery, paintings that date from 1916.⁸ In works like Mechanical Abstraction (1910),

and Machine (1916), he showed machine parts for their clean lines and beautiful geometric shapes, a reverential treatment tending towards a frontal and centralized placement of the image which is somewhat iconic.⁹ Machine parts are precious objects in Schamberg's work, cut off from the outside world, suspended like jewels in surrounding fields of white or pure color. Sheeler's industrial images of the 1930's expand the range of Schamberg's imagery in that they take in the world of the factory in addition to individual machines.

It is the idea of the isolated image, characteristic of Schamberg's work which is important for Upper Deck. The ocean liner subject is, per se, a self-contained world. Sheeler also singles out a special view of machinery isolated in a close-up image. It may be due to Schamberg's influence that, in Upper Deck, the sea is invisible, and the ship's machinery is silhouetted against an empty sky. Further, Upper Deck is reminiscent of Schamberg's work because the ventilator fans form a wall of machinery; this results in the most overtly iconic and hieratic of his images of the 1930's. Sheeler's image differs markedly from Schamberg's paintings because it is made up of elements, including guy wires, which extend to the borders of the canvas (and thus give the impression they extend beyond it). Yet the boldness of the forms which combine both

squared off and circular shapes are references to lessons learned from Schamberg's art.

The influence of Schamberg's paintings is not the only instance of his importance for Sheeler's art. It was his enthusiasm for the Italian Renaissance painter, Piero della Francesca, which first brought Piero to Sheeler's attention.¹⁰ In 1909 the two visited Arezzo to look at Piero's murals. Thus the gestation period between that artistic pilgrimage and Upper Deck is nearly twenty years. Sheeler's statement assigning it a role in Upper Deck is additional evidence of the kind of synthesis the picture represents.

Schamberg and Sheeler were not alone in their enthusiasm for Piero della Francesca. Aspects of the art of Cezanne, as well as Picasso and Braque, led many early modernists¹¹ besides Sheeler to close observation of the piled up geometric shapes of the townscape in Piero della Francesca's murals in S. Francesco. But Sheeler built on his response to the Italian muralist in one particular way which is unique.

Sheeler wrote, "Piero della Francesca...was probably where I first got the clue...to Upper Deck. I reasoned for myself...Piero della Francesca didn't just set up a canvas and look up at the ceiling and then -- well, what shall I paint today? I mean he must have had his engineer plans for

the picture before he put brush to the canvas.¹² It is characteristic that another term Sheeler used for plans was "blueprint."¹³ The words hint at the nature of Sheeler's achievement in Upper Deck, which involves not only subject matter but style: as the concept of a "blueprint" suggests, Sheeler's decisions about form are mechanical in their principles of derivation. The working method of the "blueprint" is the first machine-like aspect of Sheeler's style. Typically, Sheeler's working method was to build from elaborate and finished-off studies, nearly identical to the finished oils. He considered them a necessity. Whatever studies which must at one time have existed for Upper Deck are lost (as previously discussed in Cpt. III, Sheeler had the practice of destroying preliminary sketches for his paintings).¹⁴ Yet, one trace remains of Sheeler's planning process. The "engineer plan" for Upper Deck is a photograph (Plate 23). Upper Deck is not Sheeler's first known work to have such a basis (Cpt. III). Yet it is the first painting in which the artist's intention seems to have been to make a near-replica of one of his photographs. Sheeler's decision to use a photograph as the study for a painting -- here the photograph is a shot Sheeler took on the ocean liner, the S.S. Majestic -- is the second machine-like aspect of his style. Sheeler's decision to use photography has its ultimate origin in his student days at the Pennsylvania Academy of the Fine Arts (1903-06). There, as we saw earlier,

he was a favorite student of the American Impressionist, William Merrit Chase. Later Sheeler abandoned his teacher's bravura, overwhelmed by his exposure to Cubism, a drier, more intellectualized style. He was embittered by the necessity he felt for "bailing out" from the overflow of Chase and those "slashing brushstrokes" he'd once considered "evidence of success." Upper Deck was, as Sheeler wrote, the picture specifically intended to demonstrate "precision of execution which would remove evidence of painting as such."¹⁵

Hence, photography's acknowledged potential for accuracy is machine-related where Sheeler's thinking about Upper Deck is concerned. It was with Upper Deck that Sheeler committed himself to a version of realism which he himself defined as machine-based optical accuracy. He said, "I began to find my preliminary drawings lacking in sufficient information," and declared that "no drawing can give you the actuality."¹⁶ With this recognition, Sheeler's subsequent dedication to photography became a necessity for his art.

Upper Deck's machine-like stylistic sensibility is grounded in Sheeler's willingness to efface anything that prevented a painting from as efficiently communicating with the viewer as possible. Earlier, in the Self Portrait, the telephone image had stressed the importance of communication and impersonality: in Upper Deck, Sheeler explicitly denied himself

artistic spontaneity and the freedom of on-the-spot decisions. In fact, in constructing the picture according to his "blueprint" the artist was operating like a machine of sorts. In applying paint as a uniform and smooth surface, Sheeler standardized the action of his hand. Then, in utilizing a photographic source, camera vision substitutes for the human eye. Sheeler even utilized the opaque projection as a translation device, perhaps one of the most mechanical links between hand and eye.¹⁷

If Sheeler's use of a photographic source is an expression of machinist principles, the similarities between the photograph and painting Upper Deck further emphasize this pictorial evolution. First, there is the matter of detail. For example, with the exception of a few bolts at lower right of the photograph left out in the painting, the painting Upper Deck takes over its detailing almost intact from its photographic source. In fact, the similarities between photograph and painting contradict public criteria Sheeler set for his art in the 1930's. Sheeler had written, "the identification of familiar objects comprising a picture is too often mistaken for an understanding of the work itself and a welcome cessation of investigation,"¹⁸ a statement which would seem to negate his respect for photographic accuracy. To attempt to resolve the contradiction, it is necessary to move a step backwards in Sheeler's creative process. Rather than centering on

the fact that Sheeler based paintings on photographs, one might ask a different question: There were three photographs taken on the S.S. Majestic. Is there any evidence which suggests why Sheeler chose the photograph he did to translate into paint? Deductions based on formal analysis in conjunction with major influences on Sheeler's style suggest part of an answer. For Upper Deck's photograph differs from Funnel 1927 (Funnel "a," Plate 57) in which a smoke stack is a dominating central focus and Funnel 1927 (Funnel "b," Plate 58), in which the stack is shifted to side, in order to act as a foil for the shapes of two ventilators. There is, first, the matter of composition. Funnel "a" is an image in which machinery seems isolated. The photograph edge cuts across the top of the smoke stack above, and across the bases of ventilating machinery below. Both cropped lines tend to suggest the broader context, the extensions, for all this machinery; yet the dominating form of the smoke stack tends to make the image seem almost too centered. This is not the case with Funnel "b." Here, as in Upper Deck, where the diagonal moves the viewer both into and beyond the picture's boundaries to give an image of machinery in the context of its surroundings; a close-up image gives emphasis to the forms both as forms, and as extensions into the surrounding space. These are characteristics similar to Upper Deck where the ship's ladder and smokestack stays are all extended forms whose length is cut by the picture edge.

Yet Funnel "b" has another characteristic which might have turned Sheeler away from using it as the basis for a painting. Especially at the lower right, the photograph shows areas where the machinery's paint has cracked and peeled; stains of rust have encroached on the fabric of the ship, protected in Upper Deck by a pristine white paint job. One could argue that this is a fairly small detail, of the kind which could be left out in the process of making the painting. Yet the very close parallels between Upper Deck and its photograph suggest Sheeler's unwillingness to make such changes (especially such a symbolically significant change as cleaning off rust). The third photograph, the one from which Upper Deck derives exactly, is a balance between Funnel "a" and Funnel "b," for it is not marked by Funnel "a's" almost too-centralized focus, or Funnel "b's" rust, seen almost too close up.

There is another possible reason for Sheeler's apparent lack of interest in making a painting based on Funnel "b." This is the photograph's startling similarity to a photograph by the German photographer Hans Finsler, The Breman, a photograph dating from around 1927 (Plate 59), which Sheeler may have seen at the Stuttgart Film und Foto exhibition in the summer of 1929.¹⁹ By all accounts, Sheeler painted Upper Deck before he left on his European trip.²⁰ Seeing Finsler's photograph may have dissuaded him from translating other

nautical photographs into paintings. (As we saw above, Sheeler never specifically denied basing paintings on photographs, but did tend to side-step the issue philosophically.)²¹

The role of Sheeler's German trip in shaping his art of the 1930's is somewhat ambiguous. On the one hand, Sheeler drew back somewhat from European culture. As he said, "A prolonged residence abroad has never seemed desirable. It remains a persistent necessity that I should feel a derivation from the country in which I live and work."²² There is also his refusal of an invitation from the Russian government to visit the Soviet Union in order to photograph Russian factories and machinery.²³ These actions suggest that, at least as he grew older, Sheeler's sense of nationality grew stronger and excluded the possibility of new, foreign influences. But there is also the fact that Sheeler's Stuttgart visit had a surprising result. The Film und Foto exhibition had, in his own words, been "a very stimulating show... splendidly presented."²⁴ Yet, following Sheeler's visit to an exhibition which displayed together in one place a great deal of the best work of nearly all the avant-garde photographers of his generation,²⁵ he concentrated not on photography, but on painting for more than ten years. The fact that the painting is photographic in style suggests that the influence of the Stuttgart exhibition was an indirect one. Sheeler returned from Europe with a great need

to paint, yet was discouraged. The memories of the Surrealist painter, Peter Blume, with whom Sheeler became friendly on his return from Europe, bear this out. Blume remembers that Sheeler returned after seeing paintings by the Van Eycks and by Holbein feeling as if, Blume recalled, there was "nothing else to paint."²⁶ But, had Sheeler not felt the need to express himself as a painter, he might have been willing to seek for analogous results in photographs.

All this gives some suggestion why, it would seem, there are no Sheeler paintings based on the Funnel photographs. There are also clues which might suggest why Sheeler based Upper Deck on the particular photograph he did. To a larger extent than either of the Funnel photographs, Upper Deck contains visual metaphors which are machine-like. First, in rejecting a large monolithic form as in Funnel "a" and choosing instead to represent machines which are assemblies of smaller parts, Upper Deck's photograph hints at the complexities of machine systems, as well as a machine's complicated and numerous internal working parts. The assembly of four disparate components (electric motor, 'squirrel cage' fan, intake and exhaust mechanisms) which make up each intake/exhaust unit literally illustrates one of Sheeler's ideals for pictorial and mechanical efficiency; it was to be based on "the working of the parts for the consummation of the whole."²⁷

Basing the composition of the painting Upper Deck on techniques of duplication, mirror imagery, and the utilization of the diagonal, expands the work's potential to include machine processes and to express a vision of machine values. Duplication gives the machinery an industrial context. The presence of two intake/exhaust mechanisms instead of one suggests the mass production process. Further, the majority of the objects in Upper Deck are in duplicate (motors, vents), in triplicate (smokestack stays, pad eye attachment loops, electrical wires on the right side of the left hand motor as well as three bolts seen in side view at the bottom of the slanted exhaust vent to the far right), or in multiple (the shadowed outlines of bolts on the intake mechanism on the right and on the fan casing to the far left). They are standardized parts, and therefore their repetition is a reference to interchangeability which is characteristic of both the products and processes of mass production.²⁸

The two intake/exhaust units are mirror images. This arrangement is the basis for other machine metaphors which express Sheeler's vision of the machine as a coherent whole. Sheeler constructed the mirror symmetry so that the exhaust vents, the tallest components in each machine unit, are located at or close to the sides of his picture. Together they act as flanking or framing devices which direct attention to the self-contained compositional unity of the picture as a whole, while also giving the machine grouping its own built-in frame.

Thus, in principle, Upper Deck's composition itself has the self-contained compact appearance that many machines have. For example, the smooth curves of the electrical motors' casings at the circumference contrasts with the complexity at the center of their frontal faces. Each contains access doors, hinges, covered bolts and the protruding housing for the shaft-end bearing. The contrast between the motors' smooth exterior circumference and complex center is Upper Deck's compositional structure in microcosm. Because of the mirror imagery, too, Upper Deck is most complicated at its center, paralleling the complex centers of the electric motors' faces. The center of the picture is the point at which duplicated parts (fans and intake mechanisms) and disparate parts (shadows) are closest together. The life-boat brace, railings and smokestack stays which attach centrally add to the complexity. The center is flanked by the simpler smooth verticals of the exhaust vents which are analogous to the smooth curve of the electric motor casing. The complex external structure of the electric motors tells that their internal works are also complex. Exterior and hidden interior are parts of the same whole. Upper Deck compares to the motors on this level as well. The picture's composition introduces other works of the 1930's in which complex repetitive sequences of regularized smaller parts suggest the inner works of machinery; at the same time Sheeler retained the exterior view of factories and other subjects which gives his pictures the autonomy and complete-

ness he valued in the machine.

The obvious exceptions to Upper Deck's concurrent systems of duplications and mirror symmetries are Sheeler's treatment of shadow and the diagonal placement of his subjects. However, these asymmetrical elements also play a part in Upper Deck's machine vision. The shadows do not provide specific information about time of day, since there is no indication of the compass source of the light. Instead, the shadows define form. The light source parallel to the machine's alignment highlights a single face of the equipment while leaving the other visible face in shadow, thereby giving increased clarity to edges, curves, surfaces, and each object's separate identity. Most objects do not cast their shadows on other objects. Where there are exceptions, like the foremost shadow on the deck between the two motors, the shadow provides information about the profile of the right motor's hidden side. Diagonal alignment, Sheeler's second major asymmetrical element of composition, provides information about structure and structural relationships, because the diagonal gives the most complete view of an object which is possible from a single viewpoint.

Upper Deck is Sheeler's demonstration of the logic of machine structures. Because the machines are mirror images, their regular geometric shapes and Sheeler's use of the diagonal enable the viewer to mentally reconstruct many unseen parts

of the machinery. Mirror symmetry permits the viewer to deduce that the hidden side of the right exhaust vent is a flat metal sheet which slants upward towards the top and that it meets the frontal face at a right angle. The viewer can also deduce the appearance of the hidden side curves of the intake mechanism and squirrel cage fan on the right from their doubles on the left. An expert might guess that both machines are functionally complete. Through Sheeler's use of the mirror image others can also tell that the electrical box on the right side of the left unit has its unseen duplicate on the left side of the other unit.

Like Upper Deck's machine subject, machine-derived style and compositional devices which are metaphors for industrial processes, machine structures and machine logic, Sheeler's approach to the actual picture-making activity and his role in the picture-making process is mechanistic. As we saw earlier, beginning with Upper Deck, Sheeler decided to pre-plan his pictures completely before executing them, and called his preparations "blueprints" or "engineer plans." In fact, the importance of pre-planning was such that whenever Sheeler explained his painting method, he used as his example Upper Deck, the work which he felt introduced the process. Sheeler invariably compared it to the painting Spring Interior (1927): "In Spring Interior, the planning proceeded as the picture developed."²⁹ Sheeler may have been overstating his case. The consistency of Spring

Interior (Plate 60) makes it difficult to believe that there was no prior plan. However, Spring Interior does not contain information about structural relationships that Upper Deck and other paintings of the 1930's provide, because it is a study in shifting illusionistic contrast. In Spring Interior, mass is alternately confirmed and denied. The subject is a domestic interior in which the refracted images of forsythia branches in a glass pitcher are echoed by Sheeler's treatment of architectural elements; a mantle-piece, a brick wall above it, and a stairway are treated alternately as mass and surface. The lower two steps of the stairway recede; the upper ones are stripes. The point of transition between volumetric space and flatness occurs just at the point where the texture of the bricks above the mantle-piece is most stressed. Below, the shadow of the fireplace recess which falls on the front molding of the fireplace on the left merges with the recess on the right and seems to flatten it.

Sheeler said, "I believe that the term artist should have a wider application than is implied by reference to the fine arts."³⁰ The sources for Upper Deck which pivot on Sheeler's interest in machinery are an expression of this principle. With exceptions which can be traced in Sheeler's own early work, as well as the debt which all the Precisionist painters owe to Cubist and Futurist ideas, Upper Deck owes little to

conventional easel painting. We have seen its connection to photography. Beyond the precise mechanics of the tool lay one of the most important influences for Upper Deck, Sheeler's friendships within the Arensberg circle of artists, the group of New York Dadaists which included many Europeans in exile from the First World War (see Cpt. II). The radical concerns of the Arensberg group were dominated by iconoclasm, thus the interests in machinery as an art form. Especially for Francis Picabia and Marcel Duchamp, machines -- mechano-morphs -- were the embodiment of an obsessive sexuality.

Contacts between Duchamp and Sheeler constitute an influence of a special kind.³¹ From the beginning, Duchamp's activities were a lesson which legitimized Sheeler's progress towards an intellectualized and impersonal art. The relationship to Duchamp was a chancy departure for a Chase-trained student, yet Sheeler had been inspired by Duchamp's Nude Descending a Staircase (1912) from the time he'd first seen it at the New York Armory Show in 1913. He admired the painting because, as we saw above, "in it the statement was all important and the means by which it was presented skillfully concealed." Duchamp's influence is implied strongly in Upper Deck. The painting's smoothed and polished surfaces and crisp geometric forms are characteristics resulting from Sheeler's Duchamp-like desire to "conceal the means." The painting's content also recalls Duchamp's Large Glass,

as do Upper Deck's allusions to hidden things -- the ocean which is invisible, and the encased and hidden electrical motors, fan belts and other machinery. Both works, too, are thematic paradoxes. If the construction of the mechanomorphs of the Large Glass (dissected out on glass) is actually crystal clear, still, not even the notes of the Green Box really clarify their activities. Likewise Upper Deck has photographic clarity, yet its monolithic forms remain in the end mysterious. Upper Deck has the complex subject of interlocking machine forms. With the exception of Elsie Drigg's Pittsburg (1928), a work which represents the complex mechanism of a blast furnace, and a work which Sheeler knew from Daniel Gallery exhibits,³² the image is practically without precedent in Precisionist painting.

Pointing out these relationships is not meant to suggest that Sheeler methodically set out to recast the Large Glass in a Precisionist idiom. Yet Duchamp's influence permeates Upper Deck. Sheeler knew the Large Glass; as an Arensberg group habitue, he presumably knew of the Green Box notes for the Large Glass. The work had come to be part of his own thinking.

The ship's imagery, though, has other sources, even though one must finally rule out direct connections with the cluster of ship's images produced by American painters during the 1920's. Despite their iconographic similarities, paintings

by Stefan Hirsch, Oscar Bleumner and Peter Blume differ from Upper Deck because Sheeler's ship deck is isolated from its environment. Even Bleumner's ship's propeller is set in water, although it is simplified nearly to an abstraction. The painting also differs from others (Plate 61) with which it is more nearly identical, for example, Gerald Murphy's Boatdeck (1924).³³ Although Murphy's treatment of the smokestack is similar to Sheeler's treatment of curved and polished form, and both make machinery monumental, the two works are fundamentally unlike because Murphy's Boatdeck is ultimately concerned with Cubistic compositional discontinuities. Upper Deck is closer to Charles Demuth's Paque-bot Paris (1922), which Sheeler saw at the Daniel Gallery³⁴ (Plate 62). Subject and treatment -- the opposed curves and rectangles -- recall Demuth. The difference between the two is again Demuth's absorption of Cubism's decorative principles, so different from Upper Deck's realism. If Upper Deck does have a Cubistic source, a more likely one is Sheeler's own Yachts (Plate 30), produced in several versions between 1922 and 1924. Yachts, Sheeler's only other nautical theme, anticipates Upper Deck because its imagery departs from Cubism. Although Sheeler wrote that he'd learned from Cubism that paintings could be "deliberate deviations from the Nature as I knew it,"³⁵ he was early to substitute simplification of form for Cubism's more fractured shapes. Sheeler begins with whole objects, divides

them into their component parts, and then includes the parts in his pictures. This, at any rate, is the composition of Yachts, which can be seen particularly clearly in the lithograph version (Plate 63) of Yachts (1924). Yachts anticipates Upper Deck because it seems to give a great deal of factual information about sails, portholes and decking, within an abstract mode. The lithograph can be referred to contemporary analyses of Cubism, for example, Cubism (1912),³⁶ by Albert Gleizes and Jean Metzinger, because it is a series of pictorial episodes.

In spite of their differences, Demuth's and Murphy's treatments of oceanliners are important for Sheeler. They were accessible as influences because they were known in the art world of which Sheeler was part.³⁷ There is also a general shared sensibility involving the emphasis on geometric shapes and the use of large areas of white. Although color choice may well be drawn from actualities, still, the predominating whiteness does have a basic symbolism related to purity, which reinforces the cool and graphic qualities of Demuth's and Murphy's nautical visions.

Given all this though, major differences between Upper Deck and earlier paintings suggest that it is the actual oceanliner of the 1920's more than its image in contemporary paintings which is the context for Upper Deck. There is,

first, Upper Deck's realism. As we saw above, the painting was based on a photograph. And the expectations for realism play a more critical role even than was usual for Sheeler's sharp focussed photographic style, because the commission for Upper Deck's photograph was a commercial one.

In c. 1927, Sheeler took a photograph of the S.S. Majestic for the North German Lloyd Steamship Company publication, Seven Seas (Plate 23). Details of the commission have been lost.³⁸ However, the literary personality of Seven Seas gives a clue to the ambience created by Upper Deck. Published beginning in the 1920's and through most of the 1930's, Seven Seas was a magazine whose intent combines that of a discreet and high-class advertisement for luxury goods and life intended for steamship passengers. Its homey tone seems to have been typical of oceanliner advertisements: as an example at c. 1930 put it, "A certain inimitable air distinguishes the gayety of the big Cunarders...(they were) chosen by men and women whose enjoyment of a sea passage reflects the whole manner of their gracious living. As in their favorite club, they find a familiar authenticity."³⁹ Seven Seas' features included human interest stories, information on individual ships and about ports of call, and also -- and this is important for Upper Deck -- photographs both of the actual North German Lloyd ships as well as their images in "moderne" advertisements originating with shipping agents.⁴⁰ The photographs of ships often focussed on their

somewhat stripped-down symmetry, and give the nautical version of a machine aesthetic. Several Seven Seas photographs of ships under construction in the late 1920's hint at the functionalist sensibility of Upper Deck (although they are too late to have influenced Sheeler's photograph).⁴¹

A type of advertisement which directed attention to the upper deck, itself a particularly glamorous part of a ship, may also have shaped Sheeler's thinking (Plate 64). Increasingly during the 1920's, passengers grew exercise-conscious. To compete for passengers by responding to this new need, the top decks of liners were fitted out as places for promenades and exercise (miniature golf and shuffleboard were sports devised expressly for shipboard).⁴² The sensibility sought to suggest that exercise was more than a leisure time pursuit. It was healthy. At least this is what is suggested by a design for the sun roof of a hospital dating from c. 1931. The sun roof is, like an upper deck, painted white, decked and fitted out complete with non-functional models of a ship's characteristic horn-shaped ventilators.

By the late 1920's, the upper deck had been, as the term was, "Lido-ized." And in the process, an aesthetic deriving from the functionalism of oceanliners began to develop along side the more lush and opulent atmosphere of oceanliners' interior public rooms. Sheeler's painting thus documents the change from an opulence based on ornate period styles to what

Richard Oliver has called "le style Paquebot."⁴⁴

The Seven Seas connection is of interest because it brings in advertising. Thus, in addition to concentration on detail, it suggests that the need to create an image which would be in tune with other images drawn from popular culture might lie behind Sheeler's concept and realization of Upper Deck. Specifically, it suggests the influence of the enormous luxury liners which plied the Atlantic on the New York-Southampton-Cherbourg run, which stirred the public imagination. Throughout the 1920's and 1930's oceanliners' arrivals and departures, shipboard events, and the speed records they set were news.⁴⁵ An exhibition organized by the Grand Central Art Galleries in the lounges and libraries of the Majestic in November, 1927, suggests the excitement of an oceanliner setting (Plate 65). Gallery publicity referred to the exhibition as a "seaward expansion of activity."⁴⁶ Sheeler had shown work at the Grand Central Gallery in March of the same year (Multi National Exhibit: New York and Paris). One of his visits to the Majestic reasonably might have been to see the Grand Central exhibit, which was of modern American paintings.⁴⁷

The appeal of oceanliners like the Majestic is also reflected in posters for oceanliners, among the most lively expressions of applied design during the decade. Features of such adver-

tisements tended to be the smooth streamlined surfaces, and light colors which show up in a more developed fashion than in Seven Seas. Among the most well-known of these are celebrations of elegance by Cassandre, and also Willy Hanke's Norddeutscher-Lloyd poster for the Bremen in which the giant, sweeping hulls of the three Norddeutscher-Lloyd ships anchored in the Hudson River are juxtaposed with a dramatic and schematic view of the New York skyline. Similar features give a contemporary style to advertisements of the late 1920's for the White Star Lines in Vogue and Vanity Fair,⁴⁸ and other publications (Plate 66). All suggest the specific characteristic of the ocean-going liner subject which may well have represented a special part of its appeal for Sheeler, given his love of fine modern design. As Richard B. Oliver, author of The Oceanliner: Speed, Style Symbol (1980), has pointed out, the liner is totally a "designed object," one of the largest, in fact, in the world.⁴⁹

Verbal description of liners are also germane to Sheeler's painting: a New York Times account of the Majestic, the largest ship of its time, speaks of the ship as a "floating town," and continues, "the space in the great ship occupied by her engines and machinery is equal to that in 400 detached suburban residencies of eight rooms each...two New York subway trains could pass abreast through one of her three main smokestacks."⁵⁰ The account is -- like Upper Deck, itself --

at once a description of a world apart, and a grandiose image of industrialism's complexity.

Oceanliners were special topics of conversation in New York's art world in the late 1920's for other reasons. In 1927, Purist architect Le Corbusier's book, Towards a New Architecture, reached New York in an English edition. Response to Le Corbusier's ideas was immediate, widespread and favorable.⁵¹ The reviewer for International Studio (March, 1928) quoted from Le Corbusier and from translator Frederick Etchell's introduction to Towards a New Architecture to make an exciting case for Le Corbusier's brand of functionalism. The information in the review was, apparently, directed towards its American audience. It notes the fact that Etchells had singled out modern mechanical examples of functionalism and order over Le Corbusier's other examples drawn from ancient and Renaissance architecture.

Towards a New Architecture is of particular importance for Upper Deck, first because Le Corbusier was full of admiration for oceanliners and devoted a section of the chapter, "Eyes which do not see," to the subject. The chapter begins with a reprint from a Purist l'Esprit Nouveau tract which gives the basis for his point of view: "Nobody today can deny the aesthetic which is disengaging itself from the creations of modern industry."⁵² The analysis moves over into discussions of the oceanliner because, as Le Corbusier stated in a caption

to a photograph of the prow of the liner, the La Morcière, the liner was an example of the new aesthetic's "real origins."⁵³ The steamship was also one of the objects created by modern life; as Le Corbusier wrote, "the steamship is the first stage in the realization of a world organized according to the new spirit."⁵⁴ In addition to its philosophy, the chapter is also an effective pictorial essay for it includes photograph after photograph which emphasizing an oceanliner's enormous expanse of metal hulls and corridor walls (Le Corbusier remarked on "the miles of walking a tour of a steamship entails")⁵⁵, and the stripped-down lines of promenade decks, as well as the beautiful curves of funnels, prows and ventilators. Le Corbusier included other photographs which, seemingly, key directly into Sheeler's choices in Upper Deck. Sheeler most probably noticed the photographs of the upper deck of the Cunard line ship Aquitania⁵⁶ (Plate 67). The view includes Upper Deck's ventilators, singled out because Le Corbusier compares them to his favored motif, a "briar pipe." Other photographs (Plate 68) of the Aquitania and the La Morcière⁵⁷ give views of a ship's upper deck with its ventilators, seen from the ocean side, which is the viewer's angle of vision in Upper Deck. Other Le Corbusier photographs of single machines also are images which are important for Sheeler's aesthetic. His photograph (Plate 69) of a low pressure ventilating fan is a version of the squirrel cage fans of Upper Deck. Le Corbusier also illustrates a turbine and

and ventilators.⁵⁸ Sheeler later took photographs of and made paintings of turbines and other ventilators at River Rouge (a photograph of a turbine room), in the Brooklyn Edison Company plant and at the Boulder Dam in preparation for the Fortune "Power Series" of paintings of 1939.

Le Corbusier's photographs of single machines are in the minority in Towards a New Architecture, and so the echoes in Sheeler's art are all the more striking. Almost all this engineered material is painted white -- the aesthetic finds its echo in Upper Deck. Le Corbusier's use of the liner as an example to educate the public to the beauty of functionalism⁵⁹ is only half of Towards a New Architecture's importance for Sheeler's art. His analysis of classical architecture and ideas also illuminates general principles of Sheeler's painting as well as Upper Deck in particular: "Look at this," he says of the liner, France, "and think of some great building."⁶⁰ Elsewhere, he refers to a deck corridor on the liner, Empress of France as "an architecture pure, neat, clear, clean and healthy."⁶¹

All this may be a source for Sheeler's treatment of form in Upper Deck which is broadly architectural -- even classical in Le Corbusier's sense. As with Le Corbusier, color is a sign of Sheeler's classical vision of subject matter.

(Sheeler's admiration for Raphaele Peale's image discussed earlier may have involved his appreciation for the napkin form -- which magnifies a detail of classical drapery).

Sheeler certainly knew of the Platonic vision of an ideal beauty in the geometric forms of manufactured objects, and Upper Deck is clear demonstration of the geometric forms to be found in machinery. One particular statement expounded in Plato's Philebus was familiar to artists, including Oscar Bleumner and Francis Picabia, who were Sheeler's associates during the 'teens and early 1920's in New York City: "... understand me to mean straight lines and circles, and the plane or solid figures formed out of them by lathes, rulers and protractors...these I affirm to be eternal and absolutely beautiful."⁶²

The sentiment was shared by Le Corbusier. Although he never mentioned Cezanne, he used a version of the well-known statement by Cezanne in Towards a New Architecture: "the essentials of architecture lie in spheres, cones and cylinders...." He went on to speak of "simple masses: streets, factories... the tendency of engineers of today."⁶³ The extent to which classical symmetry was planned into Upper Deck from the beginning is suggested by the fact that, as revealed by studying a model of the Majestic (Museum of the City of New York), in selecting his subject for Upper Deck, Sheeler chose the one and only place on the Majestic where the configuration of duplicate, flanking units is to be found (Plate 70). This fact strengthens Upper Deck's connections to the columns of Greek temple architecture. In this sense, Upper Deck is preparation for such paintings of industrial architecture as

Classic Landscape, where there is a visual pun -- the columns are storage silos (Plate 44). Yet Le Corbusier's analysis contains several examples in which Greek architecture is compared specifically to machinery, in terms which Sheeler seems to have appreciated. Referring to the entablature of the Parthnon, for example, Le Corbusier states, "We are in the inexorable realm of the mechanical....All of this plastic machinery is realized in marble with the rigor that we have learned to apply in the machine. The impression is of naked polished steel."⁶⁴ Given all of this, though, there is one important ideological difference between Le Corbusier's and Sheeler's sensibilities. Le Corbusier wrote of oceanliners that, "If we forget for a moment that a steamship is a machine for transport and look at it with a fresh eye, we shall feel we are facing an important manifestation of...beauty...."⁶⁵ This is a distinction opposed by the message of Upper Deck, which is a painting about the beauty of machinery on its own mechanistic terms.

Sheeler may have become familiar with Towards a New Architecture because he had already become interested in other, earlier analyses of a machine aesthetic. He almost certainly read Fernand Léger's two-part article, "The Aesthetics of the Machine," which Jane Heap published in the Little Review (1923-24).⁶⁶ Léger's analysis begins with a statement about geometric order: "All human, industrial and mechanical creation

is dependent on geometric laws." Léger continues, "Every object," (and Léger includes manufactured objects), "may carry in itself an intrinsic beauty." Léger used examples of pots and pans, automobiles and airplanes to make his point that "Beauty is everywhere...Machine Beauty, without artistic intention is important because of its...organization."⁶⁷ He went on to talk of the inventor's Fair of Paris: "I was stupefied to see that all these men who have organized...these powerful costly machines, do not feel that they are the real artists."⁶⁸

Upper Deck satisfies Léger's criteria for beautiful metallic objects "hard, useful...steel in its infinite variety...."⁶⁹ Léger believed, though, that in the case of machinery, "Chance alone presides over the appearance of beauty."⁷⁰ Chance was not an issue in Sheeler's machinist aesthetic. As Sheeler said of the crucial 1927 visit to the Ford Automobile plant at River Rouge, Detroit, which inspired his factory subjects of the 1930's, "There I was to find forms which looked right because they had been designed with their utility in view, and in the successful fulfillment of their purpose, it was inevitable that Beauty would be attained (emphasis mine)."⁷¹

Had Upper Deck been painted in 1927 instead of 1929, it would almost certainly have been included with another Sheeler painting⁷² in an exhibition for which Léger's ideas

had been a catalyst. Léger did the catalogue cover for that exhibition, the Machine Age Exposition, which Little Review editor Jane Heap had organized in 1927. Heap had visited Paris in 1925 and she met Le Corbusier and Amedee Ozenfant, probably introduced by Léger. She saw the Pavillon de L'Esprit nouveau, Le Corbusier's project for the Exposition des Arts Décoratifs. Heap returned to New York with a mission: "the general public must be educated over and over again to the simplest new thing...it is unable to see that it is surrounded by a new beauty...the Machine."⁷⁵ She planned a Machine Age Exposition for the fall of 1925. The exhibition, when it was finally held in May, 1927, included an international assortment of painting and sculpture by Lachaise, Nadelman, Archipenko, Lipschitz, Man Ray, Zadkine, Demuth, van Doesberg, Lett-Haines, Pevsner, Gabo, Tchelichew, Storrs, Lozewick and Sheeler, himself. Also on exhibit were architectural plans and models by Ferris, Hood, Lescaze, Lurcat, Mallet-Stevens, Gropius, Meyer and Saarinen, as well as the first Russian Constructivist architecture to be exhibited in New York. All this would have been an almost total immersion in a machinist aesthetic, yet Heap also included another kind of exhibit. The Machine Age Exposition was noteworthy because it displayed, along with painting, sculpture and architectural drawings and models, actual automobiles, tractors, airplane engines, coffee grinders, meat carvers, gears, bearings and other machine parts.

Sheeler, as a member of the "Artists' Board" was more than just an exhibitor in Heap's exhibition. If the activities of Marcel Duchamp, also on the "Artists' Board" give any indication of the board's responsibilities (Duchamp created the installation for the works, an exhibition setting of hammers and saws hung on chains from the ceiling⁷⁴), Sheeler was involved with various stages of planning and execution. In particular, his experience with rooms of machinery on display in an exhibition setting would seem to anticipate Upper Deck, because it gave prominence to the aesthetic qualities of machinery.

Sheeler's six-week stay at the Ford automobile plant in River Rouge was an influence on Upper Deck and his art of the 1930's. Even though the painting's machine subject is not drawn from the plant, the relationship is direct because Upper Deck was the first oil to be finished after this visit, and it is the first in a machinist style with an industrial theme. (Two small water color sketches done on location at River Rouge were not turned into finished oils until after Upper Deck was painted, and these oils, American Landscape (1930) and Classic Landscape (1931) are like Upper Deck in style and attitude towards the industrial world.)

The River Rouge visit also had been the initial catalyst in Sheeler's decision to base paintings completely on photographs, as he was to do with Upper Deck. Sheeler had

said, "it was a mission of photography...I took the risk of opening the other eye."⁷⁵ One photograph in particular, Stamping Press, even anticipates Upper Deck, because the image takes in a field which is a wall of machinery (Plate 71). The image is rare for Sheeler in including the human figure, yet the figure, a man in work clothes, at first glance seems almost to be a machinery part. A slight form, smaller than some of the protruding machine components which tower over him, his stooped position repeats other arc forms described by the machine's fly wheels and the shaped stamped curves of automobile fenders to the right. Sheeler's presentation leaves it unclear whether he is operating the machinery or merely tending it. Almost inescapably, the figure's attitude is homage of sorts, a hint at religious ritual. In this sense, the photograph might be said to forecast the secularized spiritual hints of Upper Deck.

Jane Heap had written in 1927, "the superstition held by some that the dominance of the machine is threatening spiritual life...should be educated out of their reasoning."⁷⁶ A few years later, Upper Deck was Sheeler's demonstration of the proposition that beauty is everywhere -- if one looks at machines and fine engineering. In making the ideas his own, Sheeler turned inward transforming his own role in the art-making process into that of a machine-like set of operations. Outwardly the image he devised presents an encompassing view of machinery. Upper Deck combines camera-linked

realism, and the machine-like look of early 20th century abstraction with pictorial metaphors for industrial systems and mechanical logic.

Sheeler's vision of the machine's perfection -- an almost obsession -- is another response to machinery which is analogous to Heap's. (She went so far as to call the machine a new religion.) Upper Deck gives expression to religious implications latent in Sheeler's art. If the pictures seem like religious images, it is because their realist style gives added impact to scenes which depict an almost visionary separation from the reality of every day life, because, in presenting his statements, Sheeler concealed what he defined as the "means of arrival."⁷⁸ Upper Deck's nautical subject introduces Sheeler's vision of a beautiful separate world. As a self-sufficient floating world, the oceanliner is a world apart. The painting lacks references to location; as mentioned earlier, in Upper Deck the sea is invisible, and ship's machinery is silhouetted against an empty sky. In Sheeler's vision, beauty derives from human absence; he wrote of his work after 1929, "It is my illustration of what a beautiful world it would be if there were no people in it."⁷⁹ As a result, there are no human figures in Upper Deck. If Sheeler omitted human beings to concentrate on the machine, he emphasized the beauty he found in the machine world by picking subjects which represent an ideal, and by idealizing his subjects. The oceanliner is an enormous machine (to

Matthew Josephson, the oceanliner was "the most beautiful of machines").⁸⁰ In choosing it, Sheeler chose a subject which already carried associations of perfect order and functioning, and constant maintenance. As we saw earlier, visually, a ship's appearance tells of the order within; it is scrubbed and repainted constantly. And in Upper Deck, the machinery Sheeler depicts is painted white; this is a common color for ships but not the only one. Sheeler chose a color which connotes spotless purity. Later, in his factory subjects, Sheeler also painted forms white and chose scenes with no signs of dirt or decay because, he said, "Our factories are our substitutes for religious expression."⁸¹

Mystery is another aspect of spiritual wholeness. If Sheeler's imagery hints at spiritual secularized religious content, it is because the information he provides is about the exteriors of his subjects. He depicts the product and not the process of human activity. Because their works are hidden, how the electric motors convert electrical energy to mechanical energy or how the fans operate remains mysterious. In this sense, Upper Deck is a statement which can be compared to Henry Adams' response to the dynamo. To Adams, the dynamo was the religious symbol of a new age: it was religious or "occult" because its workings were "imperceptible to his senses."⁸² Because he chose the subject of encased machinery, in Upper Deck, the mechanical process remains a mysterious phenomenon. It is no accident that in Upper Deck, everything

is about Sheeler's intent to 'conceal the works' in all the ways that he could. As mentioned, the painting was intended to demonstrate "precision of conception and execution which would remove evidence of painting as such."

In 1916 Sheeler had written, "I venture to define art as the perception of universal order...to communicate...sensations of some particular manifestation of cosmic order -- this I believe to be the business of the artist."⁸³ Later, in 1939, Sheeler said of his choice of subjects during the 1930's, "Forms created for the best realization of their practical use may in turn claim the attention of the artist who considers the working of the parts towards the consummation of the whole a primary consideration in the building of a picture."⁸⁴ The two statements are a continuity. Beginning with Upper Deck, the message of the machine subject is carried by pictorial components -- parts "working...towards the consummation of the whole" -- which were machine-based manifestations of order. The memories of Matthew Josephson are additional clues to Sheeler's intent. "Sheeler," recalls Josephson, "was obsessed by structure and mathematics...Beautiful workmanship gave him an authentic shudder...(which was) the thrill of a religious devoté...the beauty of modern machinery...the Ford plant as a series of cathedrals...was Sheeler's profession de foi as an artist."⁸⁵

Footnotes.

- ¹Interview, Elsie Driggs, April, 1978.
- ²See Constance Rourke, Charles Sheeler, Artist in the American Tradition (New York: Harcourt Brace and Co., 1938), p. 183, and also Charles Sheeler, Autobiography, New York, Archives of American Art, Nsh 1, frame 124.
- ³Sheeler, "Notes on an Exhibition of Greek Art," The Arts, March, 1925.
- ⁴See Susan Fillin Yeh, "Charles Sheeler's 1923 Self Portrait," Arts Magazine, LII, No. 1 (January, 1978), p. 106-109.
- ⁵Sheeler, "A Brief Note on the Exhibition," Charles Sheeler Paintings, Drawings, Photographs, New York, Museum of Modern Art, 1939, p. 10.
- ⁶Duncan Phillips, A Collection in the Making (New York: Wehye, 1926), p. 65.
- ⁷The phone hook-up is outside of the picture. The artist's reflection which appears in the windowpane indicates that he, too, is outside the Self Portrait.
- ⁸See Constance Rourke, op. cit., p. 37.
- ⁹For a recent discussion of the iconic qualities of Schamberg's art, see Earl A. Powell, III, "Morton Schamberg: The Machine as Icon," Arts Magazine, LI, No. 9 (May, 1977), p. 122-124. The standard text for Schamberg is Ben Wolf, Morton Livingston Schamberg (Philadelphia: University of Pennsylvania Press, 1963).
- ¹⁰See Charles Sheeler, Autobiography, frame 60-63.
- ¹¹Among other Americans is Elsie Driggs.
- ¹²Martin Friedman, Transcript of an Interview with Charles Sheeler, New York, Archives of American Art, 1959, p. 2, 6.
- ¹³Ibid., p. 2.
- ¹⁴Interview, Mrs. Charles Sheeler, October, 1976. See also Rourke, p. 144.
- ¹⁵Sheeler, "A Brief Note...."
- ¹⁶Sheeler, Autobiography, frame 110, 112, and also Friedman, op. cit., p. 11.

- ¹⁷ Sheeler's use of the opaque projector has been discussed by the poet William Carlos Williams in "Introduction," Charles Sheeler Paintings, Drawings, Photographs, New York, Museum of Modern Art, 1939. In Williams's opinion, Sheeler's use of photographic sources for paintings took courage. Matthew Josephson described a process by which details from one side of the canvas were traced through in a drawing on the other side (Interview, August, 1974). Sheeler also had the habit of making studies on glass, later on plexiglass, which could be positioned on top of material he wished to transpose.
- ¹⁸ Sheeler, Autobiography, frame 75.
- ¹⁹ Sheeler, Autobiography, frame 99, 103. Finsler's photographs were no's. 201-307 in the Film und Foto catalogue, Stuttgart, 1929. Finsler's Bremen is unlisted. For illustrations and an article on Finsler, see Dr. A. Bernhard, "The Photographer Finsler," Gebrauchsgraphik, VII, No. 4 (April, 1931), p. 5, 16.
- ²⁰ Rourke, op. cit., p. 143.
- ²¹ See Sheeler, "A Brief Note...." p. 11.
- ²² Sheeler, Autobiography, frame 102.
- ²³ Rourke, op. cit., p. 129.
- ²⁴ Sheeler, Autobiography, frame 103.
- ²⁵ The exhibition included work by Abbott, Atget, Brandt, Feininger, Gerson, Baumeister, H. Bayer, I. Bayer, Beaton, Bierman, Cunningham, Grosz, Heartfield, Hoch, Hoynigen-Heune, Outerbridge, Renger-Patzsch, Schwitters, Steichen, Steiner, and the Westons.
- ²⁶ Interview with Peter Blume, February 10, 1974.
- ²⁷ Sheeler, Autobiography, frame 92.
- ²⁸ For a discussion of standardization and interchangeability of mechanical parts, see S. Giedion, Mechanization Takes Command (New York: W. W. Norton & Co., 1969), p. 47-50.
- ²⁹ Rourke, op. cit., p. 131.
- ³⁰ Rourke, op. cit., p. 97.
- ³¹ For Sheeler's memories of Duchamp, see Autobiography, frame 77-80.
- ³² Sheeler showed at Daniel between 1922 and 1929, Driggs from 1926.

- ³³ Sheeler most probably knew about Murphy's Boatdeck through Marius de Zayas, who was in Paris in 1923. Boatdeck's discontinuities include combination of two and three-dimensional forms; the rounded forms of the smokestack contrast with the curves of the intake manifolds which are rendered flat. Murphy also combined the anthropomorphic and the geometric in describing them as "pure-circle mouths." See G. Murphy as quoted in W. Rubin and C. Lanchner, The Paintings of Gerald Murphy (New York: Museum of Modern Art, 1974), p. 24. Unlike Upper Deck, Murphy's contrasts create ambiguous spatial references. Although the smokestack and the other machinery are contiguous in actuality, the block-like forms and blockhouse windows of the hatchways and cabins seem separate. As a result, the impression is of a skyline, silhouetted against a background of smokestacks. The disjunctions extend to the two black valve handles which look like ship's wheels.
- ³⁴ Paque-bot was at the Daniel Gallery during 1922 to March, 1923; Sheeler was given a show by Daniel in March-April, 1922.
- ³⁵ Sheeler, Autobiography, 63, 70-73.
- ³⁶ For discussions of these issues in Cubism, see L. Steinberg, "The Algerian Women and Picasso at Large," Other Criteria (New York: Oxford University Press, 1972), and C. M. Rosenberg, "Cubist Object Treatment: A Perceptual Analysis," Artforum, IX, (April, 1971), p. 30-37.
- ³⁷ For a discussion, see Katherin Lockridge and S. Fillin Yeh, The Precisionist Painters, 1916-1949, New York, Hechscher Museum, 1978.
- ³⁸ Letter from Lee Marks, Gilman Paper Company (owner of Upper Deck, photograph), January 17, 1980. "[the previous owner] Mr. Richard Pratt, a former editor of Seven Seas, died some time ago."
- ³⁹ KcKnight Black, Oceanliner advertisement, as cited in Frederick Closs, McKnight Black, unpublished Ph.D. dissertation, University of Pennsylvania, 1964, p. 172.
- ⁴⁰ For an example of the image-type, see "Advertising Exhibit, Berlin, North German Lloyd display," Gebrauchsgraphik, VI No. 8 (August, 1926), p. 17.
- ⁴¹ See Seven Seas (March, 1928), cover (September, 1928), p. 12, 13 (February, 1929), p. 6, 14-15 (May, 1929), p. 10-15; Ernest Fiene (March, 1931, inside cover), Yasuo Kuniyoshi (April, 1931, inside cover), Lee Ward, (June, 1932, inside cover), also photographs by Hanns and Schira (July, 1932), and by Sidney Shurcliff (December, 1932, and September, 1933).

- ⁴²Richard B. Oliver, The Ocean Liner: Speed, Style, Symbol (New York: Smithsonian Institution, 1980), p. 17, 24, 26, and illustrations, frontispiece and p. 8, 27, discusses these ideas.
- ⁴³"Roof Terrace for Convalescents, New York Polyclinic Medical School and Hospital," Architectural Record, LXX, No. 4 (October, 1931), p. 309.
- ⁴⁴Oliver, op. cit., p. 3.
- ⁴⁵See for examples, The New York Times, June 27, 1923, p. 14, col. 2; September 28, 1923, p. 1, col. 2; September 9, 1925, p. 1, col. 7; November 18, 1926, p. 2, col. 3.
- ⁴⁶See "Exhibition of Paintings and Sculpture," The Grand Central Art Galleries Year Book (June 5 - September 29, 1928), and also, The New York Times, Sunday, November 27, 1922, Section II (2), p. 17.
- ⁴⁷See Grand Central Art Galleries Year Book, 1928.
- ⁴⁸See House and Garden (March, 1928), p. 53, and (April, 1929), p. 52.
- ⁴⁹Oliver, op. cit., p. 3.
- ⁵⁰"Largest Ship Nears Completion Abroad," The New York Times, August, 22, 1921, p. 6, col. 1.
- ⁵¹See for example, International Studio, II, Sect. 3 (March, 1928), xxv, and also Edwina Park, New Backgrounds for a New Age (New York: Harcourt Brace, 1927), p. 94-96.
- ⁵²Le Corbusier, Towards a New Architecture (New York: Holt, Rinehart and Winston, 1960, Reprint of 1927 English edition), p. 83.
- ⁵³Ibid., p. 88.
- ⁵⁴Ibid., p. 97.
- ⁵⁵Ibid., p. 86.
- ⁵⁶Ibid., p. 90.
- ⁵⁷Ibid., p. 92.
- ⁵⁸Ibid., p. 93.
- ⁵⁹Sheeler may have known Horatio Greenough's idea of functionalism in clipper ships. For a review of Greenough literature appearing in the 1920's and 1930's, see Harold A. Small (ed.), Horatio Greenough, "Form and Function,"

- ⁶⁰Le Corbusier, op. cit., p. 91.
- ⁶¹LeCorbusier, op. cit., p. 94.
- ⁶²This issue is discussed by Reyner Banham, Theory and Design in the First Machine Age (New York: Praeger, 1970), p. 203, and George Hamilton, "John Covert: Early American Modern," College Art Journal, XXI (Fall, 1952), p. 37-42.
- ⁶³Le Corbusier, op. cit., p. 40-41.
- ⁶⁴Ibid., p. 211, 217.
- ⁶⁵Ibid., p. 102-103.
- ⁶⁶Little Review (Part 1, Spring, 1923), (Part 2, Fall-Winter, 1924).
- ⁶⁷Little Review (Spring, 1923), p. 45, 46.
- ⁶⁸Little Review (Fall-Winter, 1924), p. 56.
- ⁶⁹Ibid., p. 58.
- ⁷⁰Little Review (Spring, 1923), p. 47.
- ⁷¹Sheeler, Autobiography, frame 101.
- ⁷²The catalogue for the Machine Age Exposition is not complete: Louis Lozowick remembered Sheeler's Church Street El (1920) to be in the exposition (Interview, Louis Lozowick, August, 1972).
- ⁷³Jane Heap, "Machine Age Exposition," Little Review, Spring, 1925.
- ⁷⁴Interview, Louis Lozowick.
- ⁷⁵Sheeler, Autobiography, frame 100.
- ⁷⁶"Jane Heap," (obituary), New York Times, June 23, 1964, p. 33.
- ⁷⁷Jane Heap, "Machine Age Exposition."
- ⁷⁸See Sheeler, Autobiography, frame 89, for his discussion of Van Eyck's "concealment of means."
- ⁷⁹Martin Friedman, Transcript of an Interview with Charles Sheeler, New York Archives of American Art, June 18, 1959, p. 14.

- ⁸⁰ Interview with Matthew Josephson, August, 1974.
- ⁸¹ Sheeler, Autobiography, frame 101.
- ⁸² Henry Adams, The Education of Henry Adams (New York: The Modern Library, 1931; copyright 1912), p. 381-383.
- ⁸³ Sheeler, "Statement," Catalogue of the Forum Exhibition, New York, Anderson Galleries, 1916.
- ⁸⁴ Sheeler, Autobiography, frame 92.
- ⁸⁵ Interview, Matthew Josephson.

Chapter V: Charles Sheeler's Vocabulary for a Machine Age.

Sheeler's paintings of the 1930's, along with a special image (the skyscraper) which was realized in the 1920's, take on added meanings for us now when discussed as a group, for they are the vocabulary of Sheeler's machine aesthetic. Characteristic of this vocabulary is Sheeler's specialized sense of time. Compared to the work of the 1920's, particularly the timeless and anonymous items of the still lifes, the thirties paintings are locked into specific references, an iconography which, when the paintings were produced, denoted a certain up-to-the-minute modernity. This time sense gives Sheeler's work its unique quality: Sheeler's paintings merge characteristics of painting and photography. Thus, the iconography of Sheeler's paintings includes documentary characteristics derived from Sheeler's commercial photographs (Cpt. III). For example, there are paintings of unpopulated interiors which seem timeless, but which tended to include objects which were very consciously "modern" in reference and which would have been recognized as such by Sheeler's public. Sheeler's time sense is also expressed in his composition (Cpt. III, IV): His tendency to compose paintings with cropped subjects emphasizes their affiliations to the 'real' world beyond the canvas.

Comparing works with similar themes gives a background for the change to topicality of Sheeler's work of the 1930's. About Flower Forms (Horter Coll., 1917) (Plate 72), Sheeler wrote that he had wanted to give the viewer the sense of "forms suspended in a vacuum."¹ Two decades later, Sheeler returned to the image of a suspended form in Suspended Power, (Coll. Beauchamp Smith, 1939), where, in contrast to the smooth and generalized abstract shapes of Flower Form, Form, the image is of a very specific object, a hydroelectric turbine being lowered into place (Plate 73).

Sheeler's choice of subjects, invariably either utilitarian or industrial) also defines his aesthetic: his subjects include factory scenes, machines and machine-made consumer goods. A related subject is the interior, which has its prototypes in designed interiors illustrated in contemporary popular magazines. Sheeler's only other subjects were early American interiors, a choice that sheds an interesting light on his thinking. While in general 19th century Americana was valued for its historic qualities in the 1920's and 1930's, for Sheeler, such objects were the pre-industrial examples of a machine aesthetic. He wrote, "I don't like these things because they are old, but in spite of it. I'd like them still better if they were made yesterday, because then they would afford proof that the same kind of creative power is continuing."² The 19th century subjects are, invariably, a special kind of antique. Sheeler always selected country furniture and Shaker articles -- all objects with connections

to the utilitarian world of the farming community.

As seen above, everything about Sheeler's other decisions -- including style, and even the paintings' visual sources, was an expression of the machine age. In addition, almost without exception, there is a special consistency to Sheeler's painting in the 1930's compared to other stages in his career. Compared to 1930's paintings, paintings and drawings produced in the 1920's tend to be conventional in subject, or to look like preparations, such as his floral studies -- about 24 between 1920 and 1927. Works like Tiger Lilies (Musuem of Modern Art, 1920), Still Life (Howald Collection, Columbus, 1921), Tulips and Etruscan Vase (Museum of Modern Art, 1922), Amaryllis (Cleveland Museum of Art, 1924), Roses (Arensberg Coll., Philadelphia, 1925), and other similar subjects have a common iconographic theme (Plate 79). Cut flowers in vases are artistic subject choices. The subject is symbolic of civilized comfort in daily life. The flowers themselves tend to be ordinary garden flowers, probably chosen because they are long-lasting blooms, a necessity in light of Sheeler's careful and time-consuming painting techniques. But when such subjects appear in paintings in the 1930's, there is a special twist. The plants in Cactus (1931) or the drawing Tulips (1931), are streamlined shapes (Plates 75, 76) and thus fit a particular category for organic form, one sought by contemporary designers like Norman Bel Geddes, Donald Desky, Paul Frankl, Buckminster Fuller and others. Bel Geddes in particular cited the fact that the streamline

was to be found in nature in order to justify his redesigned steamlined objects, which ranged from pencil sharpeners to automobiles and heavy machinery.³

Sheeler's still lifes of the 1920's are preparations for his style of the 1930's, in part because he gave his subjects -- vases, glassware pitchers and fruit -- an unusually sparse and pared-down treatment. Utilitarian objects became monumental, and their geometric shapes are crisply outlined. Such works as Still Life (Plate 5; 1922) (Coll. Mr. and Mrs. Gordon Hartslet), Still Life, Pitcher (c. 1922, once owned by Alfred Stieglitz), Siphon (1923, Nunson-Williams-Proctor Institute), Still Life with Pitcher and Peaches (1923, Santa Barbara Museum of Art), and Apples (1924, Columbus Gallery of Fine Arts, Howald Collection) pay hommage to Cezanne in investigating the nature of matter (Apples was inspired by a Cezanne owned by Walter Arensberg⁴). The approach to subject in those works is cubical rather than Cubistic. The same sensitivity to the arrangement of solids dominates the factory subjects of the 1930's, and the connection was also an important one in earlier and contemporary work by Charles Demuth, Louis Iozowick, Niles Spencer and Georgia O'Keeffe. The still lifes of the 1920's hint at the future in another way. None are in oils; all are in pastel, charcoal or watercolor, which leaves sizable areas of paper bare, and look a little like sharp-focus photographs.

If 1920's work is iconographically diffuse as well as stylistically experimental (as seen in Chapters II and IV), the paintings Sheeler produced during the late 1940's on until the end of his career in the 1960's are stylistic and iconographic reprises. All repeat iconographic themes of the 1930's and iconography is secondary to formal considerations. The paintings of this period are semi-abstract. As in works like Skyline (Wichita Art Museum, 1950), Aerial Gyration (Biogon Coll., 1953), their derivation is from photographic technique. These are patterned compositions which repeat the effects of double or triple exposures in photography, reproducing in paint the effect of transparent planes overlaid off-register on other identical forms. The series, characteristic of the 1950's, departs from Sheeler's machine-related interests in camera accuracy and realism.

Discussing Sheeler's 1930's paintings as a group can clarify other aspects of his work. Sheeler was not the first artist to paint many of the subjects for which he achieved his reputation. Many of the images have earlier expression in the work of well-known or lesser-known Immaculate or Precisionist contemporaries including Demuth, Lozowick, Spencer, O'Keeffe, Driggs and others. However, Sheeler was immersed in an individual vision of mechanistic or machine-derived harmony and order. Sheeler's paintings derive from two sets of sources. Important precursors can be found in earlier paintings by contemporaries. There are also other less conventional

sources, including Sheeler's photography, which Sheeler himself only hints at in his Autobiography and other statements on his life work: many of Sheeler's images are to be found in a reservoir of images drawn from outside the art world. Thus, Sheeler's experiences producing photographs for the fashion industry, where he worked behind the scenes in an atmosphere highly conscious of style both in clothing and interior design, suggest that his art might have been influenced by popular magazines (House Beautiful, Harper's Bazaar, and others including the Conde Nast publications, Vogue and Vanity Fair). Discussions of contemporary style and of a machine aesthetic in interior design in such periodicals had an important effect on Sheeler's ideas in an era which was so design conscious. Sources for Sheeler's interiors with early American subjects can be found in the ideas of Lewis Mumford, in the attitude of mind (which Sheeler and his art helped to foster) exemplified by Henry Mercer's museum (Cpt I), in the early American furnishings chosen by the Arensbergs⁵ and even in the period rooms assembled in east coast museums in the 1920's. Sheeler's industrial subjects had preparations in trade journals, while the cityscape paintings of the 1920's have as counterpoint discussions of skyscrapers and set-backs in architectural journals, especially in the early to mid-1920's.

It is part Sheeler's willingness to use unconventional material which makes his art so much the expression of a Machine Age.

He had said, "I eventually discovered that life...is not something one stuffs into the nooks and crannies surrounding art to keep out the draught."⁶ Sheeler's images appeared in painting at the same time that industrialization generally was changing the appearance of the world. And just as mechanical things were increasingly intruding into every aspect of daily life and altering the look of even the most banal and unconsidered things, they were having their effect on Sheeler's thinking. By combining the Machine Age subject and the camera image, Sheeler was producing a special, industrialized iconography.

The earliest of Sheeler's machine age subjects are his skyscrapers, which span the period between 1920 and 1927. Such subjects had also been given strong treatment, although with a different, Futurist orientation in the art of Lozowick and Stella, and in the paintings of O'Keeffe. Beginning with Church Street El (1920), the subject of the skyscraper initials Sheeler's machine style. The image is topical. Along with the telephone of the 1923 Self Portrait, it differs from Sheeler's other images of the 1920's in this topicality. Sheeler's image of the telephone, a mechanical apparatus (Cpt. II), follows the skyscraper as part of his Machine Age vocabulary. The next subject is the ocean liner (Cpt. IV). The factory paintings which follow beginning in the 1930's, which are accompanied by the interiors, complete Sheeler's roster of subjects.

A. The Skyscraper.

Between 1920 and 1922, Sheeler made three nearly identical images of New York City in different media: New York, 1920, a photograph (Plate 78), a drawing of the same year, and the painting, Offices (1922, Plate 10). The works introduce Sheeler's machine iconography in several ways. There is, first, the subject, which was to be repeated throughout the 1920's. During that time, it was common to refer to the skyscraper as a product of American technology. The skyscraper, wrote designer Edwina Park in 1927, is the genius of its day. In its steel skeleton, Park saw "the modern soul."⁷ Another aspect of Sheeler's skyscraper image which is of importance for his incipient machine aesthetic is his emphasis on repetitive window shapes. This patterning, though hardly unusual, was singled out for comment by contemporaries who looked carefully at Offices. For Duncan Phillips, who bought the painting for his collection, the windows were one element which made the painting more than a "handsome pattern." They were "apertures of escape out of the steel-bound canyon."⁸ Phillips's ideas may have been triggered by comments on a related image which also emphasized windows, a still photograph from the movie Manhatta, filmed by Sheeler and Strand in 1920, discussed in Vanity Fair of April, 1922 as one of "mechanical monotony," "The photographers were interested in the...repetition of windows and other utilitarian details which give so forceful a sense of the vast

scale and mechanical precision of the skyscraper."⁹ The idea was later to be the subject of a witty painting by Glen O. Coleman (Plate 79) which establishes a parallel between the numerous windows of hive-like office buildings and skyscrapers, and the gears of an ordinary office machine (The Arrangement, Whitney, 1923). There are reasons for assigning primary authorship of the film image of offices to Sheeler, even though Manahatta was a collaboration.¹⁰ The choice was of a relatively close-up view which cuts off both the lower and upper floors of the architecture and heralds a composition type characteristic of Sheeler's industrial subjects of the 1930's.

Manahatta is the important source for Offices. Aside from the film, there were hardly any visual prototypes in 1920 for Sheeler's treatment of the subject. A photograph of an aerial view of mid-town Manhattan in Robert Coady's The Soil (December, 1918) is one of the few.¹¹ The point of view of this and other photographs Coady published was one sympathetic with Sheeler's and Strand's purposes. It was Coady's crusade to encourage his readers to understand that their most ordinary surroundings were interesting, exciting and even aesthetically noteworthy. "Who will paint New York, Who?"¹² ran a rhetorical question Coady had printed in the magazine's margins, an unconventional and attention-getting placement for printed type. That the photograph of Manhattan was taken not by a pictorial photographer but by a commercial establishment, Brown Brothers, was

an expression of Coady's beliefs and also presented in Manahatta. In both there is an interest in the most ordinary sights and the most unpretentious material. As Sheeler and Strand said, they were not "presenting places of value to the sightseer."¹³ The movie's heavy debt to Walt Whitman in title, quotations which are subtitles and sensibility is also a link with Coady's ebullience. Coady's intense interest in skyscrapers is also a direct source for Sheeler's paintings. As the decade of the 1920's moved on, the tall buildings of New York were to become almost emblematic. They were symbols for Europeans of the epitome of Americanism. For example, in the official French catalogue of the Paris exhibition of Arts Decoratifs et Industrielles Modernes in 1925, the American contribution was represented not only by designed objects but also by a newspaper photograph-service view of midtown New York.¹⁴ A special issue of the German magazine Gebrauchsgraphik, devoted to the theme of Europeans in the United States, was even more specific. The cover for the October 1926 issue is a photograph of New York's skyscrapers: it is titled, simply, Amerika.¹⁵ The skyscraper for Americans was the sign of technological and mechanical prowess -- a self-image Americans enjoyed and which was both for home-grown and foreign consumption. Edward Rush Duer commented, in an article, "The Skyscraper in New York," in Architectural Forum (February, 1926), "The attention of the man in the street is entirely focused on the spectacular adding of story on story. His admiration and the intense pride

which still inspires the question put to every visiting foreigner -- "What do you think of our high buildings?" -- mean ...admiration of the engineer's performance...something 'American.'"¹⁶ Later, in 1928 Paul Frankl was to write, "Our skyscrapers are our monument." Speaking of the 1925 Paris Exposition des Arts Decoratifs, Frankl continued, "At that very date, if it had been possible to have sent an entire modern building abroad, it would have been a more vital contribution than all the things done in Europe added together."¹⁷

Offices is the only one of Sheeler's skyscraper subjects of the 1920's. Another early Sheeler composition of importance for later works is Church Street El (1920¹⁸), a painting (Plate 80) which, like Offices, is based on a still from the movie Manhatta (Plate 81). Church Street El differs from the other picture in its composition; it is based on the steep diagonals and plunging vista of a view down from an office building, the Empire Building, to other neighboring offices and an elevated train tracks below. The dynamic vision of architecture was discussed in its day as a new way to look at Manhattan. Vanity Fair's editors commented in 1922¹⁹ on the artists' discovery of "dynamic patterns" which, (as mentioned above), replaced a concern for "presenting places of value to the sightseer." The painting is also special in Sheeler's work, because it is one of the first to give the sense of the height of a skyscraper by showing a

view of the street seen from the top. Church Street E1 thus presents a reverse version of the abrupt scale changes and diagonal line of vision of the view looking up at a skyscraper. Unlike Offices, it had earlier expression with the painting of C. R. Nevinson (1920), and had parallels with later cityscapes of Jan Matulka (1923-25), Georgia O'Keeffe, especially in work of c. 1925 like City Night, and by Louis Lozowick, in Backs of Broadway (1926), all as well as the architectural drawings of Hugh Ferriss, illustrated in Vanity Fair as early as 1924. Ferriss's drawings present the city as an awesome, overwhelming experience. However, although they look visionary, they give a view of New York which was fast becoming a reality, the result of a building boom taking place in mid-town in the mid-1920's. Such drawings suggest how topical skyscrapers were in the 1920's. The Shelton Building, for example, subject of O'Keeffe's Shelton with Sunspots (1926), was in the news as a newly completed building at the time when O'Keeffe painted it.²⁰

All of this is background for Sheeler's lithograph, Delmonico Building (1926-29), which depicts a skyscraper, seen in a dramatic angle from below. Sheeler chose to give prominence to the building's nearly windowless and unadorned wall, planned by the building's architects who apparently expected it to abut some future building, nearly as large and towering, which might someday replace the low buildings which can be seen in the lower third of the lithograph. The prominence

given to the stark side wall is a clue to the meaning of Delmonico Building, an indication of the artist's taste and predilections, and of the attitudes of contemporaries, both painters and architects. Sheeler's choice is more than a statement of attraction for simple geometric forms. The view gives maximum prominence to a specific feature of the New York skyscraper when the set-back law went into effect. The law sought to increase the possibilities for natural light on the lower storeys as building heights shot up. Although the set-back law had been on the books since 1916, it was particularly during the 1920's that its effect on the look of the city was generally commented on. Discussions of the set-back were frequent in architectural journals in the mid-1920's. As De Witt Clinton Pond wrote in Architecture in 1926, "The treatment of set-backs is one of the most interesting developments in New York today."²¹ Design historian Edwina Park referred to the zoning laws which "crystallized the skyscraper" in 1927.²² As with O'Keeffe's skyscraper paintings, Sheeler's image suggests that he was in the know about a contemporary issue. The stark, unbroken lines of the angle of vision also make the image an early example of a vision of the skyscraper that was later to become the rule. As Walter Darwin Teague was to put it, describing the sleek and unbroken surfaces of such later buildings as the Daily News and McGraw Hill buildings, vertical emphasis and unbroken lines were to become nearly a cliché for the skyscraper design.²⁸

Sheeler's choice of angle also minimizes the building's rudimentary cornice, and the cornice was another issue of interest to contemporary architects. During the mid-1920's the cornices of tall office buildings began to shrink, and new buildings began to take on a look that was different from buildings of the 'teens. Getting rid of the cornice was a crusade of architect Frank Lloyd Wright. As he stated, "the cornice...is the image of a dead culture." It was to be replaced by an architecture with "clean significant lines."²⁴

The Delmonico Building lithograph, based on a photograph, should be discussed in connection with a group of Sheeler skyscraper photographs published without text in Cahiers d'Arts in 1927.²⁵ Of these one is the photograph of 1920 on which Sheeler based Offices. The others, based on internal evidence, date from c. 1926. Offices is important for Delmonico Building because it heralds the artist's decision to depict the building's unadorned rear facade. As with Delmonico's, where what faces the viewer is a plain brick party wall never intended to be on permanent view, Offices, too, gives the utilitarian view. The two other photographs of the Ritz Tower (Plate 82), emphasize the soaring height of the building unit. And as with the Delmonico Building, the Ritz was a building much discussed when it was finished in 1925 as a fine example of the set-back style. With New York, Berkley Apartment Hotel (Plate 83), Sheeler gives us the image of a building under

construction. Its tower scaffolding, still in place, and central in the Berkley image, is also a note in Delmonico's, where Sheeler's photograph and lithograph alike include a small scaffold, because the finishing touches are still being put on the new building. The construction theme is another clue to the meaning of the Delmonico image. The title is an ironic comment, for what is depicted is not the famous old restaurant, Delmonico's, but the building replacing it. The caption in Vanity Fair tells the real story: "A new skyscraper towering above Fifth Avenue replaces New York's once most famous restaurant."²⁶ The image, which keys into the situation of New York ripped down and rebuilt in the 1920's is also Sheeler's decision opting for machine age modernity.

B. Industrial Objects.

Katherine Grant Sterne wrote in 1931, in a review of an exhibition, American Photographs, at the newly-opened Julien Levy Galleries, "Young men who, twenty years ago, might have collected Hokusai prints and Whistler etchings go about with cameras taking angle shots of smokestacks, stairways and giant turbines." This activity was, as Sterne noted, part of "a hall mark of chic."²⁷ Sterne's comment is suggestive where Sheeler is concerned. Whether or not she had Sheeler in mind (she was shortly to write about the Ford Plant subjects²⁸), the statement locates Sheeler's factory and indus-

trial subject within a history of taste, and in doing so, gives some sense of their importance for contemporaries. One reason for their appeal is that they touched bases with so many aspects of American and European culture. Sheeler's industrial subjects have their sources in paintings, in advertising images, and in non-commercial and commercial photographs. His use of his own photographs, taken at the Ford Plant in 1927, as sources for his paintings has been documented by Mary Jane Jacob (discussed in Cpt. III). The paintings are an expression of ideas dealing with the nature and appearance of beautiful objects which began in the 'teens and continued throughout the years when Sheeler was painting. Critics, historians and architects, including Henry Adams, Paul Frankl, Phillip Johnson in America, as well as Le Corbusier in France, made analogies between Gothic architecture and modern industrial culture. Sheeler was well aware of these ideas, since in his Autobiography he wrote about the parallelism between Gothic ideals and the modern mechanical world.²⁹ In addition to his writing, his subject choice demonstrates the extent to which he made that aesthetic sense his own. A counterpoint to his industrial subjects occurs in photographs and a drawing of Chartres cathedral, the structure which Sheeler visited in 1929 and of which he was to write that it was "one of the outstanding experiences of a lifetime."³⁰ In particular, the photograph of the buttresses of Chartres documents a sense of architectural structure which is almost mechanistic. The photograph, taken at

roof level, shows the point at which the buttresses intersect to lend support to the wall. This image, a graphic description of the workings of Gothic architecture, has a source in Sheeler's past art, and the hub-like, almost gear-like configuration in Doylestown Staircase (1925), in which the stair treads radiate out of a center post. The image heralds the choice of angle in Chartres; both Sheeler and Matthew Josephson, the painting's former owner, considered this composition "machine-like."³¹ The composition of the Chartres photograph also is prepared by Lhasa (1916), where the image is of a town which is the center of a cluster of ridges, although the forms could also be generalizations for fortification walls.

Despite differences between Sheeler's factory paintings and drawings and earlier paintings and drawings by Precisionists (Cpt. IV), the works of Louis Lozowick, Preston Dickinson, Charles Demuth, Georgia O'Keeffe, Elsie Driggs, Stefan Hirsch, and Katherine Schmidt are the groundwork for Sheeler's industrial subjects. There is, first, the fact that such works present industrialization in the image of the factoryscape. In choosing the factory scene over the representation of machines as single objects, such paintings are steps away from Dadaism. In the art of Picabia and Duchamp, machines, like the human beings for which they are often the mechanomorphic alter-egos, had been singled out as individual objects. Sheeler did not deal with the factory scape until long after

he had seen paintings by Demuth, Driggs, Dickinson, O'Keeffe and Hirsch.³² The telephone subject of 1923 -- the Self Portrait -- had been a single Dadaist mechanomorph. Sheeler's exposure to paintings like Demuth's Lancaster, Aucassin and Nicolette or My Egypt (Plate 84) which he could have seen at Charles Daniel's gallery, represent important steps on the way from the image of the single machine to the factory scape. Demuth's representation of the utilitarian buildings and storage tanks of the industrial side of town and the silos in My Egypt was echoed in Classic Landscape. Yet Demuth's habit of pushing industrial architecture into the foreground of his canvasses where it becomes almost a wall of architecture, rarely was echoed in Sheeler's paintings. If photographs like Stamping Press (Plate 71) or even paintings like Upper Deck (Plate 22) have similar impenetrable-looking walls of machinery in the foreground, still, most of Sheeler's factory scapes are vistas, and in this sense, depart from Demuth. The case is nearly the same with Dickinson's paintings, although works like Industry (1928) or Grain Elevators tend to open up on the diagonal to give a hint at the spatial treatment Sheeler was to present in Classic Landscape or American Landscape. Early prototypes for the factory scape in Sheeler's sense come from O'Keeffe's art. There is, for example, East River from the Shelton (Plate 85), in which a vista provides space around the factory buildings. Although the buildings are treated as a frieze, O'Keeffe shows the viewer an expanse -- a whole factory scape. The same is true with Stefan Hirsch. Particularly

in Milltown, the factory scape, punctuated by a river, is the image Sheeler later developed. The factories, railroad tracks and machinery of both American Landscape and River Rouge Plant are situated on the Rouge River. The closest parallel to Sheeler's art, though, is in the drawings and lost oils by Elsie Driggs, who, like Sheeler, Demuth and Dickinson was one of the so-called "Daniel Moderns." Her art is particularly relevant for Sheeler because she worked at the Rouge plant in May of 1927, a few months before Sheeler. Driggs's Criss-Crossed Conveyors is the direct prototype for Sheeler's photograph (Plate 86). And -- what is particularly important -- both artists have a similar sense of space. In Sheeler's photograph and Driggs's drawing alike, the striking and impressively oversized image of the conveyors is embedded in the complex fabric of the factory scape as a whole.

Driggs's example suggests the importance of a gallery milieu in creating an artistic sensibility. Charles Daniel, by all accounts, was a silent individual who hid both his shyness and a genuine love of painting behind a somewhat brusque exterior.³³ Yet the image of Daniel as an unsophisticated ex-saloon-keeper is a misleading one because it is incomplete.³⁴ Daniel had a specific sense of the artistic, one which he later discussed with critic Sam Kootz, and which he passed on to the artists whom he represented and encouraged. He valued industrial images and made an analogy in describing

them which was a strategy similar to 1920's comparisons of the industrial world and Gothic culture. Daniel went back to classic architecture for his reference, speaking of contemporary industrial subjects as the "new Classicism." The reference is geometric and Platonic. As seen above, the reference to Plato's Philebus had been familiar in Dadaist circles. The idea continued to be popular well into the 1940's. The frontispiece of Walter Darwin Teague's Design This Day in 1940 is the same quotation from Philebus.³⁵

Apprehending machinery as geometric form became almost a philosophical cliché in the 1920's as the Platonic definition spread. As designer Edwina Park described it in New Background for a New Age, "Machines cause to shine before our eyes discs, spheres, cylinders of polished steel, cut with a precision of theory and accuracy nature never has shown us."³⁶ Elsewhere, Park described "the stamp" of the machine, "patterns are made with straight lines." She continued, "Here is a perfectly mechanical pattern, made by a machine, and few will dispute that the result is beautiful."³⁷

Daniel's involvement with a machine aesthetic was practical as well as philosophical. He made it possible for Elsie Driggs to visit Pittsburgh and Detroit. All of this was well known to Sheeler during the 1920's. Along with Sheeler's friendship with Matthew Josephson (Cpt. III), which was an introduction to Henry Ford and the Rouge plant, Driggs and

Daniel are responsible for the appearance of the factory scape in Sheeler's art.

The criss-crossed conveyor motif is one of the few specific images in Sheeler's art which can be traced to a specific source outside his own work. This may be in part because the scene is such an unusually striking one; one which had already been adopted as an artistic image of sorts before 1927. It appears in Ford Company advertising photographs by unknown photographers in which automobiles are shown against the background of the criss-crossed conveyors (Plate 50). Because of his connections with Ford, Detroit and advertising, Sheeler probably knew such photographs which were intended to be distributed as publicity material to Ford dealers. Aside from the conveyor with its early appearance in Driggs's drawing, the storage silo which appears in Demuth's My Egypt, as well as in photographs Le Corbusier chose to illustrate Towards a New Architecture (to be discussed below) individual motifs in Sheeler's factory scenes cannot be traced back specifically. Mostly, they go back no further than Sheeler's own photographs.

If American Precisionist paintings of the 1920's provide one step in the transition of Sheeler's machine images from individual machines to the whole industrial landscape, they are only part of the story. Sheeler's factory scapes also have their sources in a special genre -- in a special type

of industrial landscape in existence far back into the 19th century. Forerunners of Sheeler's images are to be found in photographs of machines and factories in engineering trade journals (Plates 87, 88, 89, 90). Photographs like these are among the few in which one finds the vistas punctuated by railroad tracks, or canals as in Sheeler's River Rouge photographs and paintings. In these photographs, too, the industrial landscape, is tidy and deserted. In Sheeler's art, human beings are only rarely, marginally in evidence. They are machine tenders, not workers, and even so, they tend to be tidied out of the photographs so as not to obscure the readers' (presumably engineers, since these are engineering magazines) view of the machinery.

There is evidence which suggests that Sheeler may have been familiar with photographs such as these at an early date. As mentioned above, Sheeler's first project involving the industrial subject was a plan to take photographs of industrial subjects during the last few months of World War I. Whether or not actual photographs were ever taken, preparations for the project may well have brought Sheeler into contact with photographs like the engineering magazine photographs, which are a high quality performance according to their own conventions. Like Sheeler's work to come, they are sharp focused for accuracy, and are wide angle views in order to be as informative as possible about the factory site. There is one other reason why Sheeler may have been familiar with publica-

tions like Engineering and Excavating Engineer. They were listed in The Soil by editor Robert Coady. He recommended them to readers who might have enjoyed the unpretentious photographs of locomotives, drilling and stamping machines, and other similar subjects which Coady reproduced³⁸, obviously drawn from engineering magazines.

Sheeler's art has important sources in the theoretical writings of the 1920's. As seen above, in the discussion of Upper Deck, Le Corbusier's Towards a New Architecture (1927 in English) is implicated in Sheeler's choice of an ocean-liner image as the preeminent example of a machine aesthetic. Le Corbusier's ideas find direct parallels in Sheeler's treatment of factory subjects as well. The title for one of Sheeler's drawings of an industrial subject, Ballet Mecanique suggests that one should also look closely at the art of Le Corbusier's fellow Purist, Fernand Leger, as a source of inspiration for Sheeler.

As with Upper Deck, the influence of Le Corbusier's ideas on Sheeler's industrial themes is visual as well as intellectual. Towards a New Architecture abounds in images of factory buildings (Plate 91). These photographs, especially some of the group entitled American Grain Stores and Elevators³⁹ are startlingly like the River Rouge photographs and paintings (Plate 92). In one especially we see the assembly of elements which makes up Classic Landscape, the railroad tracks cutting

back into the distance, the storage silos on the left; conveyor belts and a smokestack to the right. The all over scene has elements which are important for Sheeler. Many of the photographs Le Corbusier chose are unsigned commercial work which stress art as engineering. They are images of the type which had been appearing for years in trade magazines like Engineering and Excavating Engineer. Whether or not Sheeler saw Towards a New Architecture before he went to Detroit to make his photographs, seeing them in the context of Le Corbusier's somewhat messianic presentation may have had its effect on his thinking. Both American Landscape (Plate 40) and Classic Landscape (Plate 44) include as an important element a special subject given great emphasis by Le Corbusier. This is the columnar form of the industrial silo which appears in each of the photographs illustrating the section, "Reminders to Architects I." Sheeler may have found the motif appealing because the photographs Le Corbusier choose are so impressive. They are among the most striking and monumental of industrial images in Towards a New Architecture.

Others besides Le Corbusier seem to have found the silo an interesting subject. Charles Demuth's bold and witty My Egypt (Plate 84), painted in 1927, just a little too early to definitively posit influence of Le Corbusier's ideas, depicts silos. Sheeler surely knew the picture, and Classic Landscape and also River Rouge Plant (1932), are tribute to

Demuth. Given all this, though, there is specific information which suggests that more weight could be given to Le Corbusier's industrial photographs than to Demuth's glowing transparencies and Cubistic treatment. As seen above, even before 1927, Sheeler has been referred to as a Classicist. In Classic Landscape, the image is of Le Corbusier's classicism. The silos of a cement plant on the left, the smokestacks of a powerplant in the distance at the center, and the single smokestack (of the Slag Screen House) at the right make up a counterpoint of classic references. The oil is from one of the first water color studies Sheeler did at the Ford Plant. One special idea of Le Corbusier's may have been important for Sheeler. He compared the Greek temple form not only to machinery but to the mechanical process. "The Greek temple," he wrote, "is standardized in all of its parts."⁴⁰ Sheeler may also have appreciated that Le Corbusier went on to elaborate his point by juxtaposing photographs of Greek temples with photographs of automobiles. In its own way, Classic Landscape is about the aesthetic shared by automobiles and Greek architecture. There also are close parallels between Sheeler's Forum Gallery statement (1916) and Le Corbusier's neo-Platonism in the discussion of the harmonic and aesthetic resonance between the viewer and architecture.⁴¹ Sheeler may well have been prepared to be responsive to Le Corbusier's classicism because of other experiences. Living above Gertrude Vanderbilt Whitney's Studio Club in the 1920's, he was involved in 1925 in arranging a

Whitney Studio Club show of Greek pottery, sculpture and bronzes. Sheeler reviewed the exhibition in terms which closely predict some of the ideas in Towards a New Architecture. Like Le Corbusier, Sheeler spoke of Greek art -- "the Greek miracle" -- as he called it, as the perfect adjustment of concrete form to abstract thought.⁴² The ideal was later to be the goal of his own work. In the same review Sheeler wrote knowledgeably about the Greek geometric system for "determining the desired proportions and the relation of the parts to the whole." It is interesting, too, that Sheeler singled out the popular art of "the humble koro-plasts."⁴³ They were the equivalent of the modern artisan, whose creations were admired by Le Corbusier's associate, Fernand Leger.

Louis Lozowick wrote of Fernand Leger's art in 1925, "The influence of mechanical industrial civilization on art is indirect, and therefore, all the more subtle. The economy in the use of materials, the logic of their coordination, the precision of their functioning, the abstract geometric contour of their mass fill our environment, affect our vision, enter our consciousness, fashion our taste."⁴⁴ He went on to state, "Leger is one of the very few whose work pleads with American artists for an American orientation, a closer contact with their industrial civilization, so rich in possibilities." Lozowick's statement is practically a paradigm for the influence of Leger on Charles Sheeler.

It would have been possible for Sheeler to know of Leger's work from an early date. It was discussed by William Huntington Wright in Modern Painting as early as 1915.⁴⁵ And, as seen above, Leger's analysis of a machine aesthetic, published in the Little Review in 1923 and 1924⁴⁶ was an influence on Sheeler's machinist sensibility in Upper Deck. Those ideas about the beauty of utilitarian things are important for the factory subjects as well. The River Rouge subjects, especially those which, like Classic Landscape, are industrial architecture, are Sheeler's responses to statements such as those of Leger's that "every machine, every constructed object may be beautiful when the relation of lines which register volumes are balanced in an order corresponding to that of preceding architectures."⁴⁷ One aspect of the relationship between Sheeler's art and Leger, though, which is the most tantalizing, is the hint provided by the title Sheeler gave to an important industrial subject, Ballet Mecanique (1931). There are affiliations between Leger's film and Sheeler's drawing which suggest that the drawing was, on some levels at least, homage to Leger. The influence is, in Lozowick's words, "subtle and indirect."⁴⁸ Yet, Sheeler's drawing, which represents the scaffolding supports for one of the River Rouge plant's "high lines" or railroad tracks, as well as a set of mammoth ducts leading to a building containing one of the plant's blast furnaces in the background can be compared to the film in the delineation of structure, in elements of composition and also in

general point of view.

There are also relationships which can be drawn between the drawing and things Leger wrote in describing his film. He wrote in a Little Review issue (Autumn, 1924), "No scenario -- reactions of rhythmic images, that is all."⁴⁹ The point of view is that of Sheeler's factory subjects -- in general, "without scenario," since, as with others like them, they represent unconventional and unesthetic scenes, which up until the 1920's had rarely been identified as subjects for art. Further, Sheeler's drawing is, like Leger's movie (and what Leger said about it), a collection of "rhythmic images." A large part of the drawing's meaning has to do with the strong relationships established among repetitive elements of metal scaffolding and its parts which form a diamond pattern, and also a counterpoint of the curved and extended shapes of the ducts, as well as the more staccatto intervals of the railroad guard rail. The divisions within a dominant vertical orientation (four major verticals and a secondary one of a building in the background) suggest a dominant motif of Leger's movie. In many places the film is organized vertically. Also, both in motion and in stills, the movie retains its segmented frame divisions. The divisions of the scaffolding and railing in Sheeler's drawing are a visual analogue. The composition as a whole, which explores the functional juxtaposition of similar structures constructed out of similar modular units corresponds to another aspect of

Leger's film, as he described it, the fact that "Each of the parts expresses its own unity due to the groupings of similar objects...."⁵⁰ In writing about his movie, Leger also included a diagram of the film organization in his Little Review article, in which a set of vertically oriented rectangles is punctuated by a strong diagonal (Plate 43). The visual image is like the composition of Sheeler's Ballet Mecanique.

Lozowick had written "Leger's work is charged with the rhythm of the present industrialized world."⁵¹ Sheeler's Ballet Mecanique in its subject -- anonymous factory architecture -- and in its compositional motif -- the intervals of scaffold structure -- are a demonstration both of Leger's film and Lozowick's ideas about it. With all this, though, there is one circumstantial bit of evidence which may point specifically to Leger, that is, language. Sheeler spoke no French, and Ballet Mecanique is his one work with a French title. Given his deliberation with title choices, there is an obvious connection to Leger's film, which was shown in New York in the 1920's. Sheeler's familiarity with the Little Review and the magazine's editor, Jane Heap, who admired Leger, makes the affiliation all the more likely. There is one other tie to Leger. Sheeler may have known Leger's sets for the ballet.⁵² (The elongated 'legs' of the scaffolding could be interpreted as an allusion to dancer's legs, especially in the art of a man like Sheeler, whose early

knowledge of mechanomorph images of dancers in the work of Picabia and Man Ray might have made such an image seem a familiar one.)

As with Leger's art and ideas, the ideas of Jane Heap have an important place in the process by which Sheeler formed a machine aesthetic. As seen above (Cpt. IV), Heap was an important intermediary. Her enthusiasm for the Purists, especially Leger, and the Machine Age Exposition which she organized in New York in 1927 gave concrete expression to the proposition that machinery was beautiful. As a review of the Machine Age Exposition put it, "Modern mechanical contrivances as immense as steam shovels or turbines, as delicate as Jacquard looms or automatic telephone switchboards, or as small as watch movements or microscopes, ... taunt [the] imagination...."⁵³ The review continued, "In nations of machine age, the imagination of artists is being stimulated by the abstract simplicity and innate decorative unity of mechanist design. Emotions of these individuals lead them to associate the machine with the spirit of the age. The Machine Age Exposition, ... has been the first large aesthetically intended opportunity of seeing this new inspiration in process of development." The impact on Sheeler may have been particularly strong because of the force of Heap's personality, as well as due to his involvement in mounting the exposition (Cpt. IV). As a friend remembers, Heap felt that "no one up to that time realized that elements

of machines had a beauty of their own...that came precisely from their perfect functioning...the components of many mechanical things had shapes and forms that were absolutely right and because of this quality they had an aesthetic beauty and vitality. She revealed these qualities and the relationship to the creations of artists of the time."⁵⁴

Heap was a good propagandist and crusader, although her statements are an exaggeration.

Heap published photographs of machine subjects in the Little Review as early as 1925.⁵⁵ One, which looks like electrical apparatus, possibly a distributor cap, is the kind of image Sheeler most certainly knew already. The others find echoes in his work, particularly in photographs like Stamping Press (1927), and later, in Suspended Power, which was part of the Fortune Power series of 1939. Although, as seen above, there was a tendency generally in the 1920's and throughout the 1930's to compare the modern industrial world with the Gothic era, Heap was particularly insistent on the fact that, as she wrote, "The Machine is the religious expression of life today."⁵⁶ Heap was in a position to be a direct influence on Sheeler's art which presents several examples of the possibilities of spiritual content in machinery.

If in general, Sheeler's experience of what he felt was perfect functionalism, and perfect harmony occasionally produced

photographs and paintings with a quasi-religious tinge (for example, the golden tonality and temple motif in Classic Landscape), there are also works, as in the Ford plant photographs, where the spiritual implications seem specific. These include Stamping Press (Plate 71), and also Ladle Hooks (1927), in which the vision of a world of machinery has a religious content (Plate 12). This, at any rate, is one meaning hinted at by Sheeler's treatment of light. It streams in through windows framed by (metal) piers on the right. The settling a long space with side lighting and light in the background resembles a church nave, an impression which is deepened by Sheeler's treatment of the human figure. It would be hard to find less usual images of factory workers than Sheeler gives us. They are tiny in relationship to the machinery and the architecture. In Ladle Hooks, for example, the proportions of the lone worker to the architecture are those of a figure in a church nave. This is an improbable worker, also, because Sheeler chose to photograph him in an attitude of meditation. It is no accident that Ladle Hooks was referred to as the photograph of a "cathedral of industry" when it was published in the Ford trade journal, Ford News, in 1929.⁵⁷

Sheeler was to write in his Autobiography in 1929, "In a period such as ours when only a comparatively few individuals seem to be given to religion, some form other than the Gothic cathedral must be found. Industry concerns the

greatest numbers -- it may be true that our factories are our substitute for religious expression."⁵⁸ The statement sums up not only his religious sensibility, but also the underlying purpose of his art, which he forged out of the art and ideas of Coady, the Precisionists of the 1920's, Le Corbusier, Leger and Heap. And as their example and Sheeler's vision demonstrate, the goal of speaking to the "greatest numbers" is, finally, the key to Sheeler's machine aesthetic.

C. A World of Designed Objects.

In 1928, designer Paul Frankl published a photograph by Rudolph Steiner in New Dimensions, a book in which he analyzed modern design. The photograph, Study of Light and Shadows, depicts, in a deep window niche of a stark interior, the elongated and bulbous forms of a tall cactus plant, outlined against the light (Plate 94). The caption reads: "The cactus has established a very definite place for itself in modern art because of its simplicity of line, its interesting silhouette, and its relationships to modern form."⁵⁹ Along with Frankl's commentary, the photograph was prophetic. When, in 1931, Sheeler produced the photograph Cactus (Plate 95) and the painting based on the photograph (Plate 75), his images, too, had the special flavor which had led Frankl to include the subject in New Dimensions. For Sheeler's image is topical. It is not only the inclusion of the stark pedestal for

the cactus (black and white Art Deco in the photograph), or the photographer's lamps. Sheeler's treatment of his image suggests that up-to-the-minute modernity was at least one quality of the cactus which made it attractive to him.

Cactus is an important work. It presents a special variant of the machine aesthetic. If in the factory and machinery subjects of other paintings and photographs of the 1930's, Sheeler explored the inorganic world of steel, iron, brick and glass, with Cactus, he cast his eye onto the organic world. There is a possibility that Sheeler may have had Steiner's photograph in mind when he produced Cactus. For there are similarities between the two. In both, for example, the cactus is shown in association with heat and light. Steiner had chosen to place the cactus in a window embrasure. Sheeler replaced sunlight with electricity in Cactus. The blinds are drawn, and a file cabinet blocks the window (see photograph). But the photographer's lamps, one turned on in the painting, provide both heat and light, if only for a while. Sheeler may have known Steiner's photographs from the Julien Levy Gallery. Both men showed photographs there in 1931. Earlier, in 1930, both had work in U.S.A. Magazine, a publishing venture organized by Sheeler's friend and former employer, Vaughn Flannery of N. W. Ayer.⁶⁰

It is not necessary, though, to posit a relationship between

Sheeler's and Steiner's images as an explanation for Sheeler's subject choice in Cactus. For Cactus is as machine-like in form and spirit as any of Sheeler's depictions of industrial subjects. Cactus verifies the suggestion made by the expansive compositions of Sheeler's factory paintings, that is, that the industrial world dominated modern life. In the industrial paintings, the major compositional elements had tended to be expanded forms cut by the picture frame, which suggested the world beyond the painting's borders. In Cactus, suggestions implicit in the form of the plant are mechanistic. The cactus's appearance perhaps suggests machinery, because the leaves are so flat and paddle-like. (The shape of the shadow they throw on the wall to the left is like a propeller). They are duplicates, and they interlock to give the plant its characteristic structure. Because of the emphasis on structure, it should not be surprising that Cactus has analogues in the industrial subjects. Like Cactus, the scaffolding in such works as Ballet Mecanique (1931) and Industrial Architecture (1931) is the duplication of a module, and in each, the underlying structure is unconcealed (Plates 9, 39). There are other closer parallels with the photograph, Blast Furnace and Skip Bridge, popularly called the "Henry Ford" (Plate 37).⁶¹ In both Cactus and Blast Furnace we see the repetition of groups of similar forms which lock together on a diagonal. The photograph is a closeup of the machinery: the scale is monumental. Yet, because the cactus, too, dominates its

surroundings, it presents in microcosm the formal and functional relationships of the factory subjects. There are other ways in which Cactus keys into Sheeler's machine aesthetic. These are associations which Sheeler's painting emphasizes, because placing the plant in the enclosed environment of the studio de-emphasizes its life in nature; this is a man-made world in which the photographer's lamps create harsh conditions. The plant itself is almost machine like in its suggestions of toughness and durability. Sheeler's treatment of the cactus leaves even gives them a sheen which suggests metal. The cactus is a streamlined form. As seen earlier, streamlining formed a part of Sheeler's machine aesthetic in the encased machinery of Upper Deck. The term, and an explanation of its principles turn up in literature circulated in the art world. Although Siegfried Giedeon places the origin of the practice at around 1925,⁶² already by 1916, F. Vos, author of a letter to Robert Coady's The Soil in which he stated his preferences for beauty in machinery had written about "the streamline."⁶³ Paul Frankl dealt with the idea in 1928. As Frankl put it, "Simple lines are modern. They...tend to cover up the complexity of the machine age. If they do not completely do this, they at least divert our attention and allow us to feel ourselves master of the machine."⁶⁴

One last detail about Cactus provides evidence which suggests how aware Sheeler seems to have been about streamlining and

its implications, and with literature which discussed the functional basis for streamlining.⁶⁵ In the photograph on which Cactus was based, the plant had prominent spines (Plate 95). They are completely omitted in the painting. Sheeler seems to have wanted nothing to mar the smoothed surfaces of the cactus leaves.

Editing out the cactus spines is an obvious piece of painterly censorship. There are other apparent departures from Sheeler's usual practices which also operate to make up a special iconography for Cactus. Sheeler was to write in 1939, in his preface to the Museum of Modern Art retrospective, that it was "desireable to remove the method from being an obstacle in consideration of the content of a picture."⁶⁶ The reference was to the process and techniques of making a painting. Cactus breaks this rule. The painting contains references to method in the form of the two photographer's lamps, which are positioned so that they point to the plant. Shadows of plants and lamps alike on the wall behind the cactus indicate the probability of a third photographer's lamp, or at any rate a third light source. Although one of the lamps which shows in the picture is not turned on (we see the plug of the lamp on the right neatly hanging from a hook on the lamp pole), the inference is clear. What we have here is a studio set-up -- also suggested by the cactus's pedestal -- for taking a photograph. Thus, even if we did not know that there was a photograph for Cactus, the

itself hints at it.

Cactus is a rarity in terms of the information about his painting method Sheeler usually was willing to present in his work, even though its hard-edged accuracy in general suggests photography. In the lamps and covered dry mounting press, Sheeler has included important pieces of equipment. Painting the studio setting has other implications. Cactus might be compared to two other studio subjects which Sheeler almost certainly knew. He surely saw Velazquez's The Maids of Honor in the Prado in 1905 when he was on one of William Merritt Chase's study tours, especially since Velazquez, a favorite artist of Chase's, was a major reason for visiting Madrid.⁶⁷ The other painting, Thomas Eakins's William Rush Carving the Allegorical Figure of the Schuylkill River, could have been seen in both its 1877 and other versions in the Philadelphia and Brooklyn Museums. In these studio scenes, the setting marks the artist's concern for presenting information about the process of making art. Cactus shares this theme. Sheeler's painting differs because of the emphasis on the impersonalized skill of technology -- here, not only photography but electricity. The subject reminds us that he had once said, "We are as the parts of electrical systems -- designed to carry the current on."⁶⁸ Unlike the other studio paintings, the artist is not present. If anywhere, he is somewhere out in front of the picture, peering at the scene through the ground glass lens of his large

bellows camera customarily used for studio work. The studio image has additional meanings. If Sheeler departs from norms he himself had established in showing the viewer process as well as product, all the same the setting is an unpopulated work-place of sorts. In this sense, Cactus could be said to be Sheeler's own personal factory scape. The ambience of Cactus differs from New York View (1931), another Sheeler painting which most probably has a studio setting.⁶⁹ In New York View there is also photographic equipment -- an unlit lamp on a boom overhead, and what is presumably a dry mounting press or a camera on the right (Plate 14). But the equipment is hidden under a protective drop-cloth; the painting's emphasis is on the sky seen through the window. For this reason, New York View might be said to be a different kind of commentary on photography, but one which compliments Cactus. Sheeler was to say, "Light is the great designer."⁷⁰ Natural as well as electrical light will trigger the photographic process.

Given all this, though, both paintings share a particularly topical quality which is also that of the other interiors of the 1930's. Each painting contains some prominent object which makes it an up to the moment statement. And it is this quality of Sheeler's 1930's interior scenes which makes them into his vocabulary for a machine-age iconography. As we saw above, the cactus was a fashionable plant after the mid-1920's. The motif appeared not only in the literature of applied design, but also in book illustration

(Keith Henderson's illustrations for Green Mansions by W. H. Hudson, 1926), and in popular magazines and trade journals which dealt with the trappings of a modern life style. Working for Conde Nast, it would have been easy for Sheeler to see the magazine House and Garden. It featured Bradley Walker Tomlin's rendition of a cactus in an interior furnished with shiny and angular 'moderne' furniture. The scene, in its way, echoes the Steiner photograph in its consciously designed quality. The cactus was also discussed as a particularly up to date motif in such trade publications as Western Advertising,⁷¹ and was the subject of an article there by Marian McLean Finney in 1930.

The appearance of material relating to Sheeler paintings in journals like these suggests how important his advertising experience was as a source for his images. Advertising images are in themselves creatures of the machine age for they are part and parcel of the process by which high-style Art Deco or 'moderne' objects proliferated in America after the mid-1920's. In this country in particular, such objects were mass-produced, and had shiny metallic looking surfaces and streamlined shapes.

These products appear in Sheeler's paintings. There is, for example the chair whose canvas back, straps and supports Sheeler delineated so carefully in New York View. Such chairs were a form of simple, machine-produced mobile out-

door furniture which began to appear in magazines in c. 1930. A chair which is nearly identical to the one which was illustrated in Florence Brobeck's "Furniture-out-of-Doors" in the April 1931 issue of Good Furniture and Design (Plate 97). Magazines like Good Furniture and Design, whose names are forgotten today, were nearer to the center of fashionable sensibility than one might guess, as is shown by articles like Donald Desky's "Style in Summer Furniture,"⁷² published in 1930 in the same magazine which discusses the influence of Mies van der Rohe and Marcel Breuer in chair design. Sheeler was certainly interested in chairs specifically as examples of good design before he painted New York View. It is characteristic of Sheeler's sensibility that a modern chair appears in one of Sheeler's rare portraits of the 1930's. In Portrait, 1931, Katherine Sheeler (Plate 98) is seated in a Breuer chair, which is delineated so carefully that one might even locate it among Breuer's production chair models, all of which are slightly different. Sheeler had brought the chair home from Germany after his 1929 visit, and prized it highly.⁷³ The portrait is a sad one. Katherine Sheeler looks tired and was in fact probably ill. She died less than a year after Sheeler made the drawing of her. The combined image of a beloved person and a special piece of furniture gives a glimpse into Sheeler's thinking process, which hints at both the overwhelming impact of his aesthetic sense in his daily life, as well as his up-to-the-minute sensibility. The shiny chrome finish and tubular supports

of the Breuer chair were seen in their day as exemplary forms of a machine aesthetic.

Similar self-consciously up-to-the-minute material appears in other Sheeler paintings. Such inclusions, for example, turn such paintings as Home Sweet Home (1931) from seemingly ordinary interiors to sly comments on a machine age (Plate 99). Home Sweet Home depicts part of a room in which can be seen the corner of a table, a bench, a slat back arm chair, and rugs on the floor. At the left, the lower treads of a staircase lead up out of the picture. Taken in combination, the staircase and one other object in the painting, an oil burner, suggest a setting for Sheeler's painting. The room seems to be one converted from basement space. Rooms of this kind began to appear in American homes after developments in the home heating field produced the oil burner. With this change, cellars were no longer given over to the storage of coal, and large parts could be reclaimed for living space. Books and magazines dealing with industrial design give evidence that the recreation room came into being with the change to oil burners in the early 1930's. This is an idea spelled out specifically in Martha and Sheldon Cheney's Art and the Machine, in illustrations of cellar reconversions.⁷⁴ Although the Cheneys' book post-dates the painting, the photograph, included as part of a study of past developments, is very similar. The image is of a comfortably, informally furnished room with polished

floors, and in the background is the oil burner (Plate 101), with sleek surfaces and rounded edges. Their rectangular form was compact. Such burners were contrasted with the old awkward looking burners in which compressors, tubing and other mechanical parts were visible to the eye in numerous 'Before and After' articles about redesigned products in the 1920's and 1930's.⁷⁵

Sheeler's image may or may not be a basement room (a photograph of a similar Shaker table appears in a photograph of what seems to be a ground floor dining room, illustrated in the Museum of Modern Art Sheeler retrospective catalogue of 1939).⁷⁶ Yet whether or not this is the basement, Sheeler chose to locate the furniture in a way which gives an added twist to his image. He placed an arm chair flanking the oil burner, as if it were a chair drawn up to a fireplace, an image conventionally signifying the cozy comforts of home. In Sheeler's modern world, though, the modern home owner draws a chair up to an oil burner which has replaced the fireplace we see closed off behind it. The image is an illustration of Edwina Park's discussion of the domestic variant of a machine aesthetic in New Background for a New Age (1927). Park wrote, "If we have fireplaces, they are liable to be little unused-looking things, outgrown in our existence like our tails, but in the cellar you will be sure to find a practically perfect furnace."⁷⁷

The topicality of Cactus, New York View and Home Sweet Home makes them part of Sheeler's machine age vocabulary. This quality also extends to Sheeler's early American subjects in which the sensibility might seem at first to be anti-quarian or anti-mechanistic. Americana (1931) is a case in point (Plate 102). The painting is in large part about geometry -- the simple shapes of furniture and patterned textiles with geometric designs. In spite of their impeccable early American and Shaker geneology Sheeler's subjects seem to have been appealing to his contemporaries because of the associations which could be made with more up-to-date furnishings. At least this is the impression given by Frank Crowninshield, who discussed Americana in Vogue (October 15, 1939). Crowninshield described as modern "figured linoleum" what is actually an early American floor covering. The language elsewhere in the review suggests that the similarities the reviewer saw between Sheeler's Ford plant subjects and his other themes are the source of his mistake. In both, there was a "feeling for harmony and order...and the purity of...aesthetic quality."⁷⁸ Others who commented on the painting made the same error Crowninshield did,⁷⁹ in part because the Shaker furniture like the table looks modern. Even an object like the stool in the left background which looks to be some 'moderne' piece, turns out to be a Shaker music stand -- an unfamiliar and specialized form.⁸⁰

Paintings such as Americana form a special sub-group in

Sheeler's art of the 1930's. They fit with the machine themes, in part because of subject. All were of objects which were functional. A Sheeler drawing title is a clue: the drawing of 1933 which depicts such items as a pitcher and firewood is called Of Domestic Utility. The subjects of Stove (1931), Interior with Stove (1932), and American Interior (1935) seem obviously to have been chosen as the pre-industrial counterparts to Home Sweet Home's oil burner. The antique stoves Sheeler chose as images in these paintings and drawings are stark shapes which also make them notable exceptions among other 19th century highly decorated stoves. The fact also, that Sheeler chose a Shaker stove pattern in American Interior (Plate 103) suggests a special meaning at least to the artist personally. Given Sheeler's familiarity with Shaker life and artifacts, he was depicting a stove which was an exemplar of functionalist beauty and efficiency.⁸¹

The same is true in paintings of barn subjects and Shaker and Moravian architecture of the 1930's which are testimony of the importance to Sheeler of a functionalist definition of beauty, reflecting ideas of Horatio Greenough, and also the Kindergarten Chats of Louis Sullivan.⁸² Such images may also come out of Sheeler's Pennsylvania heritage. They fit into a tradition of paintings of utilitarian buildings in the first third of the twentieth century shared by Hopper and O'Keeffe.

The Shaker connection is a particularly important one. Sheeler, who was knowledgeable about the principles and interconnections between life and religion of both the Shaker and Maravian sects, also shared their crafts aesthetic. He wrote, "The Shakers would seem...to have had a mathematical basis for their crafts, so knowingly and with such exactitude were their designs planned and realized. With knowledge of the tenets of their religion welfare we are led to believe that beauty apart from utility was not desired.... All must be done equally well."⁸³ Thus the calm and balanced harmonies of the architecture in Ephrata (1934) and Shaker Buildings (1934) may hint at religious undertones. The theme of functionalism in architecture connects Bucks County Barn (1932) with the white clapboarded buildings which are a part of the factory scape of River Rouge Plant done in the same year. Given all of this, though, the works are somewhat of a departure from other 1930's paintings in the nature of their dependence on photography. The attention to the patterns of shadow, especially in the stone walls of Ephrata (Plate 104), the pine trees of Shaker Buildings, and in Bucks County Barn, where trees cast shadows on the barn sides, Sheeler has substituted the formal elements of what is now called photorealism for details which enhance structure or topicality and the image of reality becomes the image of the photograph.

This is not the case with Sheeler's images of early American

subjects which can, like the more contemporary interiors, be traced to fashions in home furnishings of the late 1920's. Particularly in 1929. there were articles featuring discussions of the suitability of colonial and other early American furnishings to modern life (Plates 105-108). House and Garden showed photographs of Early American interiors which were given modern floors in figured designs, much like the modern looking floors of Americana.⁸⁴ An earlier book Beauty in Home Furnishings (1928) included photographs of country furniture with the caption, "Farmhouse Furniture and Hearth Equipment add a Homely and Pioneer note to Modern Interiors."⁸⁵ Other articles discussed designs for patterned linoleum, very much like the patterns of an advertisement for Goodyear Linoleum in magazines like House and Garden,⁸⁶ in which as with Americana and American Interior (1934) there are high-contrast geometric designs, or squares, diagonals and bar shapes. Sheeler, in choosing to paint the combination of elements he did, was not only demonstrating that his personal tastes in furnishings were fashionable. As seen above, his interests in early American furniture and objects go back at least to the 'teens, living in Doylestown. As Morton Schamberg's then-young cousin remembers, the cottage was full of country furniture; she said, "The whole area was like going to the Salvation Army."⁸⁷ Sheeler's painting is an expression of an interest in the past for the sake of its modernity, which was becoming timely in the late 1920's. And in this sense, both Sheeler's sense of taste, and its

sources in contemporary life are similar as expressions of a machine age aesthetic.

Footnotes.

- ¹ Charles Sheeler, Autobiography, c. 1937, New York, Archives of American Art, Nsh, frame 92.
- ² Constance Rourke, Charles Sheeler, Artist in the American Tradition (New York: Harcourt Brace & Co., 1938), p. 136.
- ³ Norman Bel Geddes, Horizons (Boston: Little, Brown & Co., 1932).
- ⁴ See Fiske Kimball, The Louise and Walter Arensberg Collection: 20th Century Section, Philadelphia, Philadelphia Museum of Art, 1954, no. 31, Paul Cezanne, Still Life with Apples, o/c, c. 1890-1885.
- ⁵ In an undated letter (before 1919) to Walter Arensberg, Sheeler Files, Arensberg Collection, Philadelphia Museum of Art, Sheeler wrote, "We might inquire of Mr. Mercer if he can tell us where any early American furniture is to be found."
- ⁶ Rourke, op. cit., p. 29.
- ⁷ Edwina Park, New Background for a New Age (New York: Harcourt Brace, 1927), p. 154, 10.
- ⁸ Duncan Phillips, A Collection in the Making (New York: Weyhe, 1926), p. 65.
- ⁹ "Manhattan - 'The Proud and Passionate City,'" Vanity Fair (April, 1922), p. 51.
- ¹⁰ This is the opinion of Dr. Naomi Rosenblum in "Paul Strand," Unpublished Ph.D. dissertation, The Graduate School and University Center, CUNY, 1979.
- ¹¹ Robert Coady, The Soil, I, No. 1 (December, 1916), preceding p. 17.
- ¹² Ibid., p. 7.
- ¹³ Charles Sheeler and Paul Strand as quoted in "Manhattan - 'The Proud and Passionate City,'" (April, 1922), p. 51.
- ¹⁴ Rapport General, Exposition Internationale des Arts Decoratifs et Industriels Modernes, Paris (1925), plate XC.
- ¹⁵ Gebrauchsgraphik, III, No. 10 (October, 1926).
- ¹⁶ Edward Rush Duer, "The Skyscraper in New York," Architectural Forum, XLIV (February, 1926), p. 105.

- 17 Paul Frankl, New Dimensions (New York: Payson & Clarke, 1928, p. 61.
- 18 Church Street El could not date from before 1920; during that year the movie Manhatta, on which it was based, was filmed. An illustration of the painting, titled "Above the Turmoil of New York," appears in the April, 1921 Vanity Fair magazine, p. 47. Given a magazine's lead time, the date for Church Street El could not be much after January, 1921.
- 19 "Manhattan - 'The Proud and Passionate City,'" Vanity Fair, April, 1922, p. 51.
- 20 Duer, op. cit., p. 108.
- 21 DeWitt Clinton Pond, "Treatment of the 'Set-Back'," Architecture, LIV, No. 4 (October, 1926), p. 293.
- 22 Park, op. cit., p. 147.
- 23 Walter Darwin Teague, Design This Day (New York: Harcourt Brace & Co., 1940), p. 76.
- 24 Frank Lloyd Wright, "The Passing of the Cornice," Modern Architecture (New Jersey: Princeton University, 1931), p. 45.
- 25 See Cahiers d'Arts, Deuxieme Annee (1927), p. 180-182.
- 26 "On the Site of Historic Delmonico's - A Photograph by Charles Sheeler," Vanity Fair (November, 1926), p. 72.
- 27 Katherine Grant Sterne, "American Photographs: A Retrospective Exhibition," Parnassus, No. 7 (November, 1931), p. 7.
- 28 Katherine Grant Sterne, "American vs. European Photography," Parnassus, IV, No. 3 (March, 1932), p. 16.
- 29 Charles Sheeler, Autobiography, frames 99-101.
- 30 Ibid., frame 99.
- 31 Interview, Matthew Josephson, August, 1974.
- 32 There is a single industrial scene of 1911. See Rourke, op. cit., p. 38.
- 33 See Elizabeth McCausland, "The Daniel Gallery and Modern American Art," Magazine of Art, XLIV, No. 7 (November, 1951), p. 280-285; "Daniel's Return," Newsweek (December 25, 1942), p. 64, and also "Daniel Gallery, 1913-1932," Newsweek (December 28, 1942).

- ³⁴ See William Zorach, Art is My Life (Cleveland and New York: World Publishing Company, 1967), p. 39, 84, for Zorach's memories of Daniel.
- ³⁵ Walter Darwin Teague, Design This Day (New York: Harcourt Brace, 1940).
- ³⁶ Park, op. cit., p. 96.
- ³⁷ Ibid., p. 129.
- ³⁸ The Soil sold subscriptions to The Excavating Engineer (.10 copy; \$1.00/year) and The Blast Furnace and Steel Plant (.15/copy; \$1.00/year), I, No. 1 (December, 1916), p. 53.
- ³⁹ See Le Corbusier, Towards a New Architecture, New York, Praeger, 1960, p. 25-33.
- ⁴⁰ Ibid., p. 123.
- ⁴¹ For Sheeler's statement, see Barbara Rose, Readings in American Art Since 1900 (New York: Praeger, 1970), p. 96. See Le Corbusier, ibid., p. 192, 193, 204, 205.
- ⁴² Charles Sheeler, "A Brief Note on the Exhibition," Arts Magazine, March, 1925.
- ⁴³ Ibid.
- ⁴⁴ Louis Lozowick, "Art: Fernand Leger," The Nation, CXXI, No. 3154 (December 16, 1925), p. 712.
- ⁴⁵ Willard Huntington Wright, Modern Painting (New York: John Lane, 1915), p. 256-257.
- ⁴⁶ Fernand Leger, "The Esthetics of the Machine Manufactured Objects Artisan and Artist," Part I, Little Review (Spring, 1923), p. 45-49, and Part II, Little Review, (Autumn-Winter, 1924-25), p. 43.
- ⁴⁷ Leger, "Esthetics of the Machine," Part I, p. 46.
- ⁴⁸ Lozowick, op. cit.
- ⁴⁹ Leger, "Film by Fernand Leger and Dudley Murphy, Musical Synchronism by George Antheil," Little Review, (Autumn-Winter, 1924-25), p. 43.
- ⁵⁰ Ibid.
- ⁵¹ Lozowick, op. cit.

- ⁵² See the Little Review (Fall, 1921), p. 47-48; (Winter, 1926), p. 55-57. Leger had an exhibition at the Anderson Galleries in the Fall of 1925, see footnote 45.
- ⁵³ Herbert Lippman, "The Machine Age Exposition," The Arts, XI, No. 6 (June, 1927), p. 324.
- ⁵⁴ Letter, M. H. Curren-Briggs (executor of estate of Jane Heap and long-time friend) to S. Fillin Yeh, (June 18, 1979).
- ⁵⁵ Little Review (Spring, 1925), p. 22-24.
- ⁵⁶ Jane Heap, "Machine Age Exposition," Little Review (Spring, 1925), p. 22.
- ⁵⁷ See Mary Jane Jacob and Linda Downs, The Rouge: The Image of Industry in the Art of Charles Sheeler and Diego Rivera (Detroit: Detroit Institute of Arts, 1978), p. 29.
- ⁵⁸ Sheeler, Autobiography, frame 101.
- ⁵⁹ Paul Frankl, op. cit., p. 122.
- ⁶⁰ See USA, I. No. 1 (1930).
- ⁶¹ See Jacob and Downs, op. cit., p. 42.
- ⁶² Siegfried Giedeon, Mechanization Takes Command (New York: Norton & Co., 1948), p. 609.
- ⁶³ See The Soil, I. No. 1 (December, 1916), p. 17-18.
- ⁶⁴ Frankl, op. cit., p. 17.
- ⁶⁵ See Geddes, op. cit., for an example.
- ⁶⁶ Sheeler, "A Brief Note on the Exhibition," Charles Sheeler, Paintings, Drawings, Photographs, New York, Museum of Modern Art, 1939, p. 10.
- ⁶⁷ Rourke, op. cit., p. 22
- ⁶⁸ Sheeler, Autobiography, frame 110.
- ⁶⁹ Interview, Gordon Wilbur (formerly of N. W. Ayer), January 12, 1973.
- ⁷⁰ Sheeler, as quoted in Rourke, op. cit., p. 109.
- ⁷¹ Marian Maclean Finney, "The Cactus -- A Modern Motif," Western Advertising, CXVI (June 5, 1930), p. 44-45.

- ⁷²Donald Deskey, "Style in Summer Furniture," Good Furniture and Design (April, 1930), p. 206. See also The Upholsterer and Interior Decorator, LXXXIV, No. 4 (April, 1930), p. 104.
- ⁷³Interview, Gordon Wilbur, January 12, 1973.
- ⁷⁴Martha and Sheldon Cheney, op. cit., p. 225, 233.
- ⁷⁵Ibid., p. 71, 233.
- ⁷⁶Charles Sheeler, Paintings, Drawings, Photographs, New York, Museum of Modern Art, 1939, p. 12.
- ⁷⁷Park, op. cit., p. 73.
- ⁷⁸Frank Crowninshield, "Charles Sheeler's 'Americana'," Vogue Magazine (October 15, 1939), p. 106.
- ⁷⁹See also W. B. McCormick, "Machine Age Debunked," New York American, November 26, 1931, and also undated newspaper clipping, Sheeler Files, New York, Whitney Museum of American Art.
- ⁸⁰Sheeler Files, New York, Whitney Museum of American Art. I am indebted to Patterson Sims, Curator, Whitney Museum, for this information.
- ⁸¹Sheeler, as quoted in Rourke, op. cit., p. 133-136.
- ⁸²See footnote 59, Cpt. IV.
- ⁸³Sheeler, as quoted in Rourke, op. cit., p. 133-136.
- ⁸⁴See "New Designs in Linoleum," House and Garden (January, 1930), p. 71. See also, "A Portfolio of Primitive American Interiors," House and Garden (April, 1929), p. 113-119.
- ⁸⁵Walter Rendell Story, Beauty in Home Furnishings (New York: Rae D. Henkle Co., Inc., 1928), p. 83.
- ⁸⁶See, for an example, House and Garden (August, 1929), following p. 48.
- ⁸⁷Interview, Mrs. Jean Whitehill, niece of Morton Schamberg, September 9, 1974.

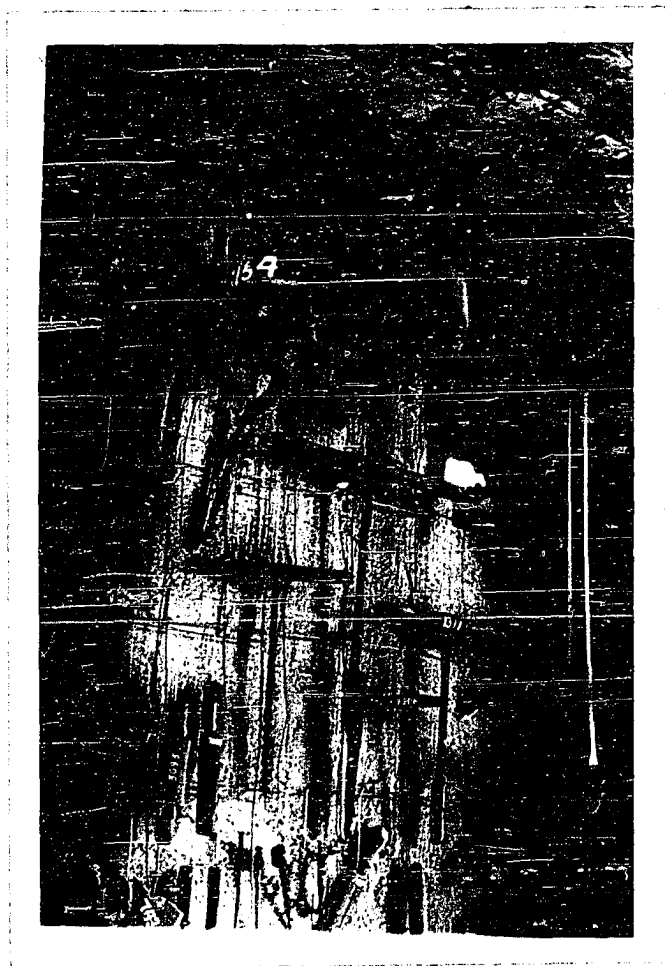


Plate 1. Interior, The Mercer Museum, Doylestown,
Pennsylvania.



Plate 2. Charles Sheeler, Interior, Bucks County Barn, Whitney Museum of American Art, 1932, conte crayon, 14 1/8" x 18 1/8".



Plate 3. The Mercer Museum, Doylestown,
Pennsylvania.



Plate 4. Charles Sheeler, Landscape with Waterfall, Merton Shapiro, Philadelphia, Pennsylvania, 1911-14, o/c, 14" x 12".



Plate 5. Charles Sheeler, Still Life, Mr. and Mrs. G. Gordon Hertslet, c. 1922, w/c, charcoal, 19" x 15".



Plate 6. Charles Sheeler, Nude 1920, Horter Collection (Dintenfass Gallery), 1920, pencil, 4" x 5 1/8" ▶

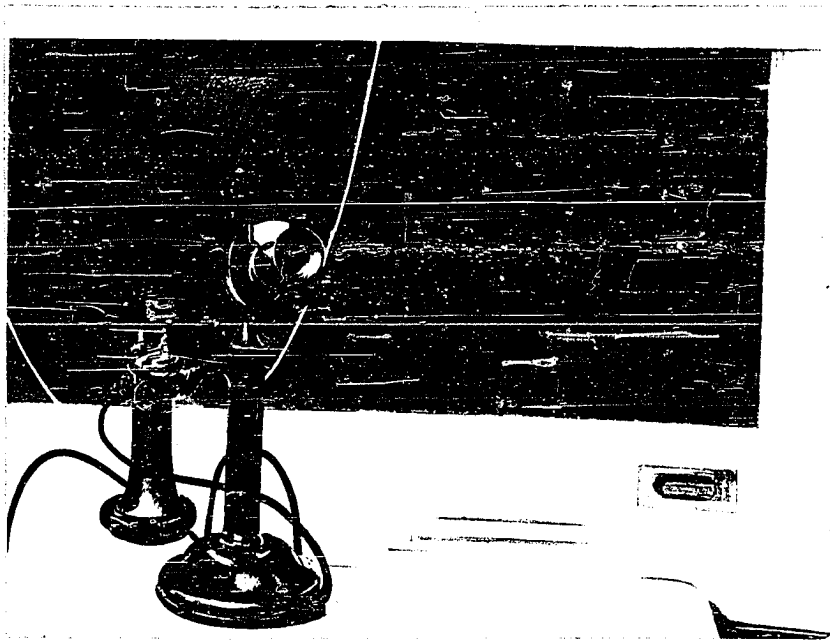


Plate 7. Charles Sheeler, Self Portrait, Museum of Modern Art, New York, 1923, pencil, conté crayon and water color, 19 3/8" x 25 1/2".

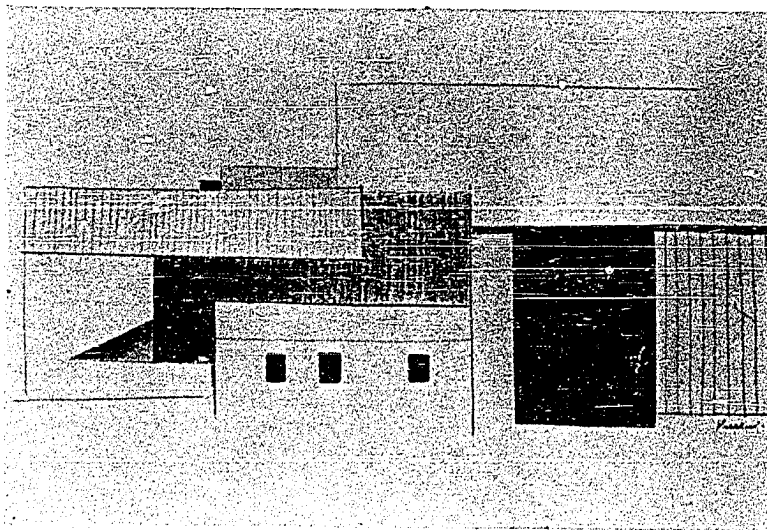


Plate 8. Charles Sheeler, Barn Abstraction, Philadelphia Museum of Fine Arts, Arensberg Collection, 1917, conté crayon, 14 1/8" x 19 1/2".

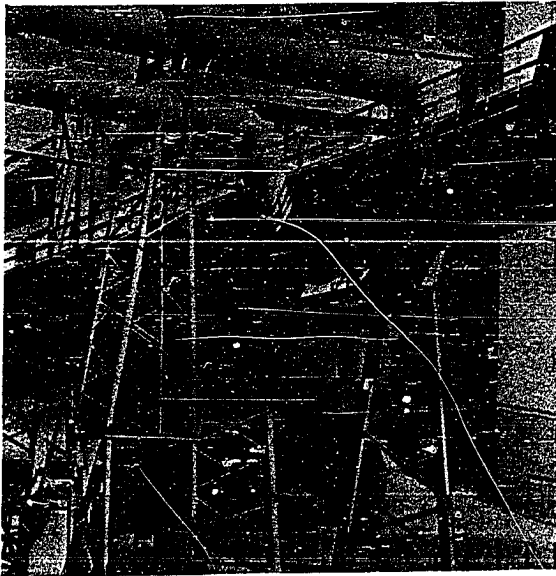


Plate 9. Charles Sheeler, Ballet Mecanique,
Memorial Art Gallery of the University of
Rochester, New York, 1931, conté crayon,
10 1/4" x 10".

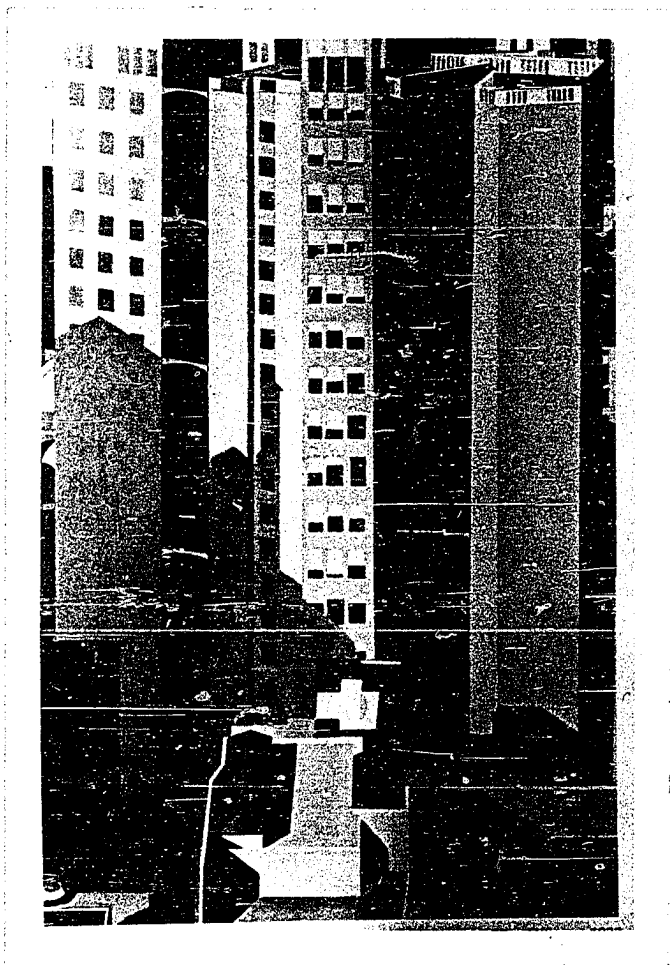


Plate 10. Charles Sheeler, Offices, Phillips Gallery, Washington, D. C., 1922, o/c, 20" x 13".

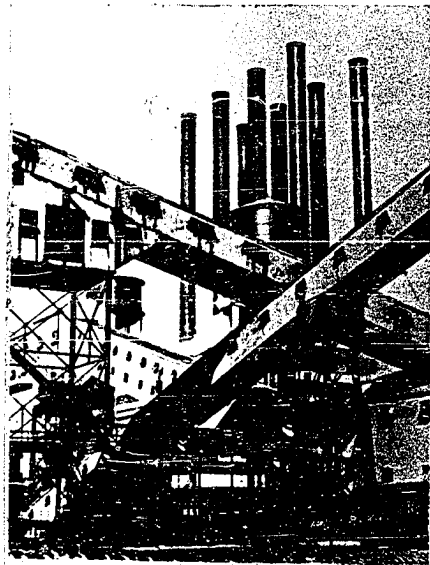


Plate 11. Charles Sheeler, Criss Crossed Conveyers (illustrated in Vanity Fair Magazine, February, 1928, p. 62), photograph.



Plate 12. Charles Sheeler, Ladle Hooks, Ford Archives, Henry Ford Museum, Dearborn, Michigan, 1927, photograph, 9 1/4" x 7 1/4".

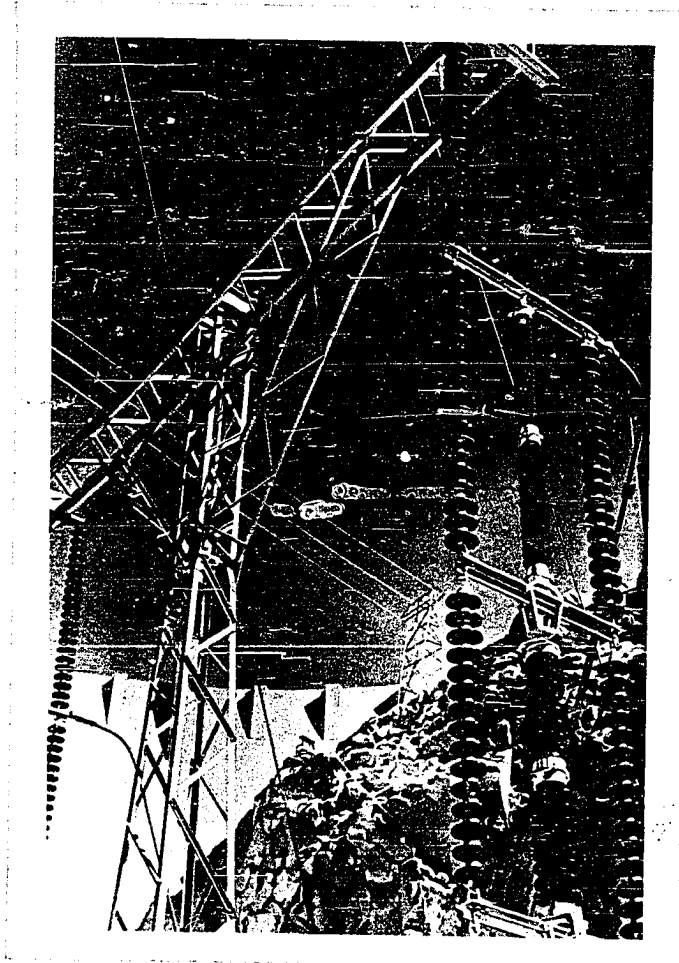


Plate 13. Charles Sheeler, Conversion. Sky and Earth (detail), Mrs. John D. Rockefeller, III, o/c, 28" x 23".



Plate 14. Charles Sheeler, New York View, Boston
Museum of Fine Arts, 1931, o/c, 47 3/4" x 36 1/4".

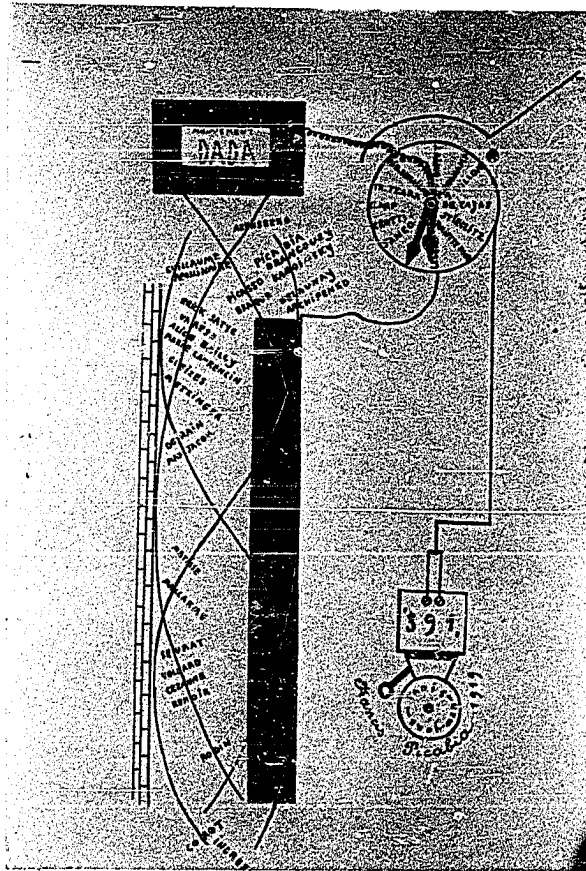


Plate 15. Francis Picabia, Dada Movement, Museum of Modern Art, 1919, pen and ink, 20 1/8" x 14 1/14".

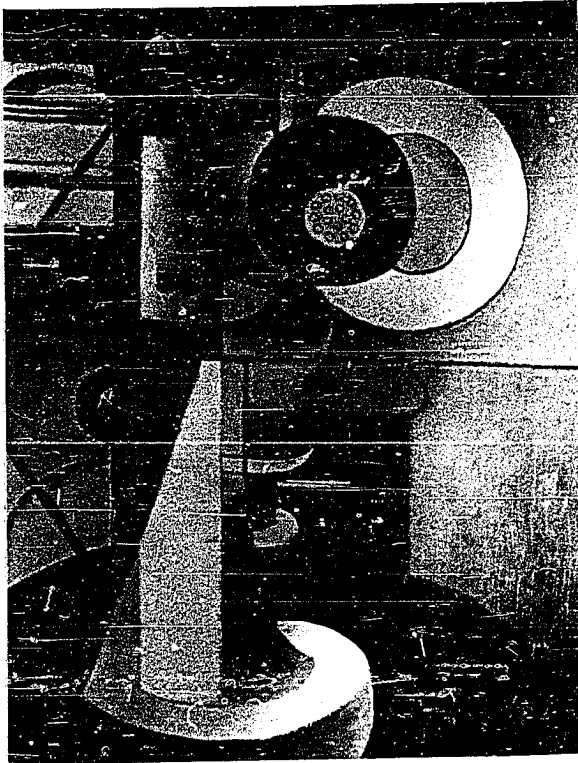


Plate 16. Morton Schamberg, Telephone, Columbus
Gallery of Fine Arts, Howald Collection, 1916,
o/c, 24" x 20".

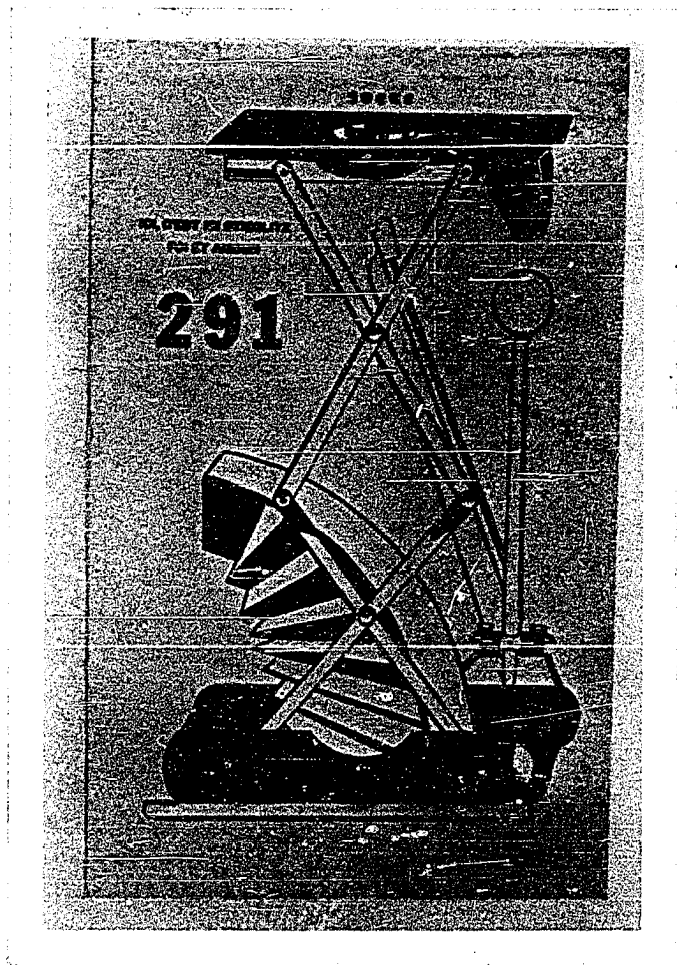


Plate 17. Marius de Zayas, Abstract Caricature of Stieglitz, Metropolitan Museum of Art, Stieglitz Collection, 1914, charcoal.

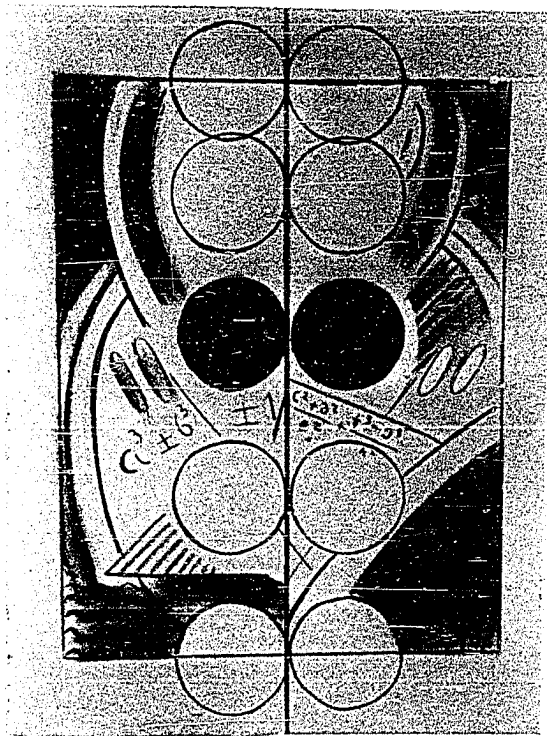


Plate 18. Francis Picabia, Ici, C'est Ici
Stieglitz, Philadelphia Museum of Fine Arts,
Arensberg Collection Archives from 291, nos 5-6,
July-August, 1915.

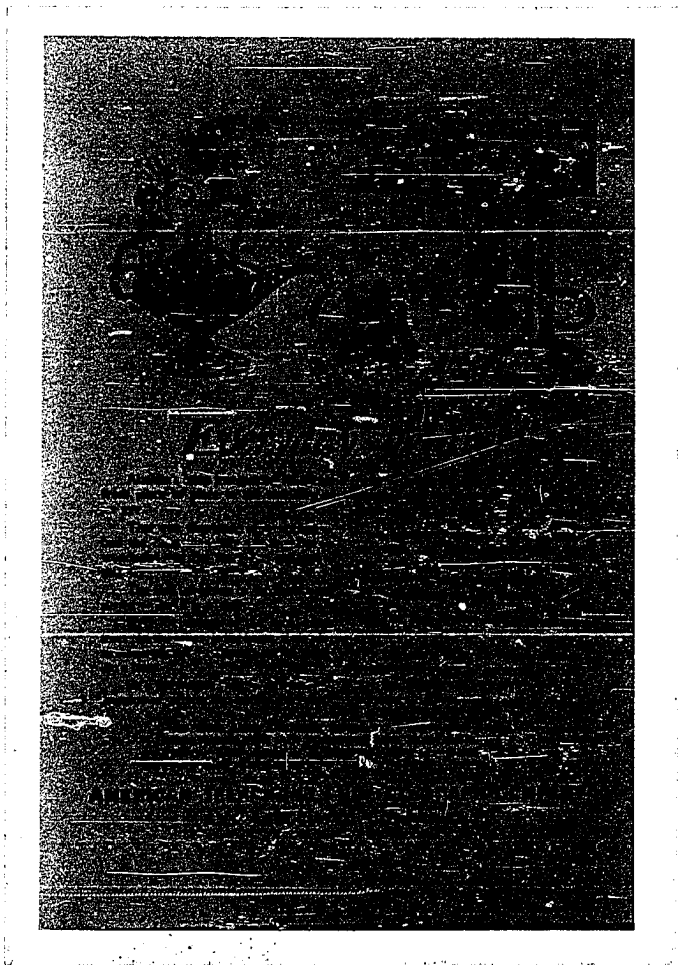


Plate 19. American Telephone and Telegraph
Company, Corporate advertisement, March, 1910.

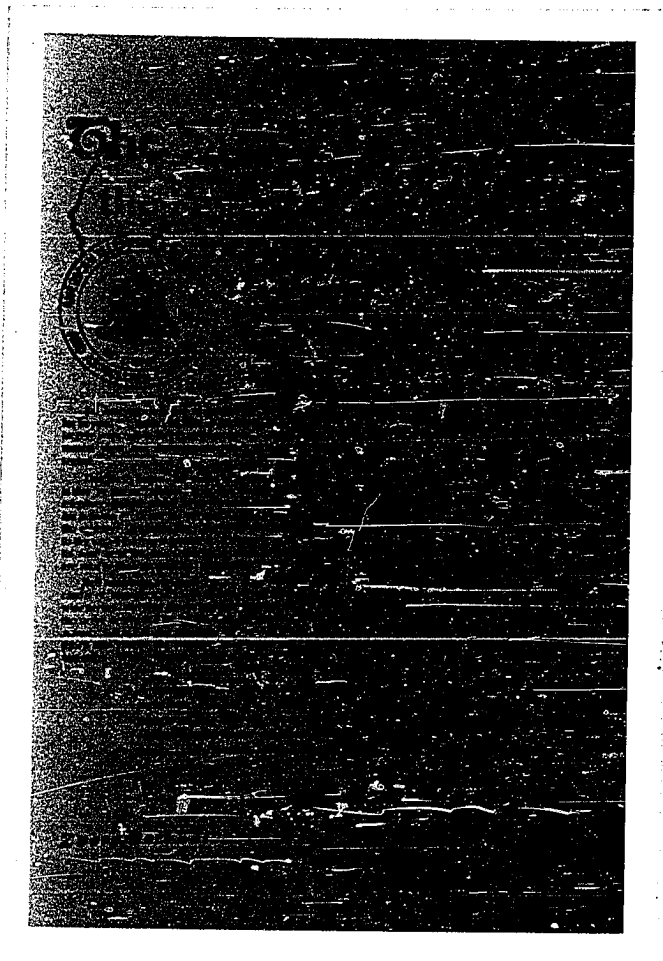


Plate 20. American Telephone and Telegraph
Company, Corporate advertisement, June, 1918.

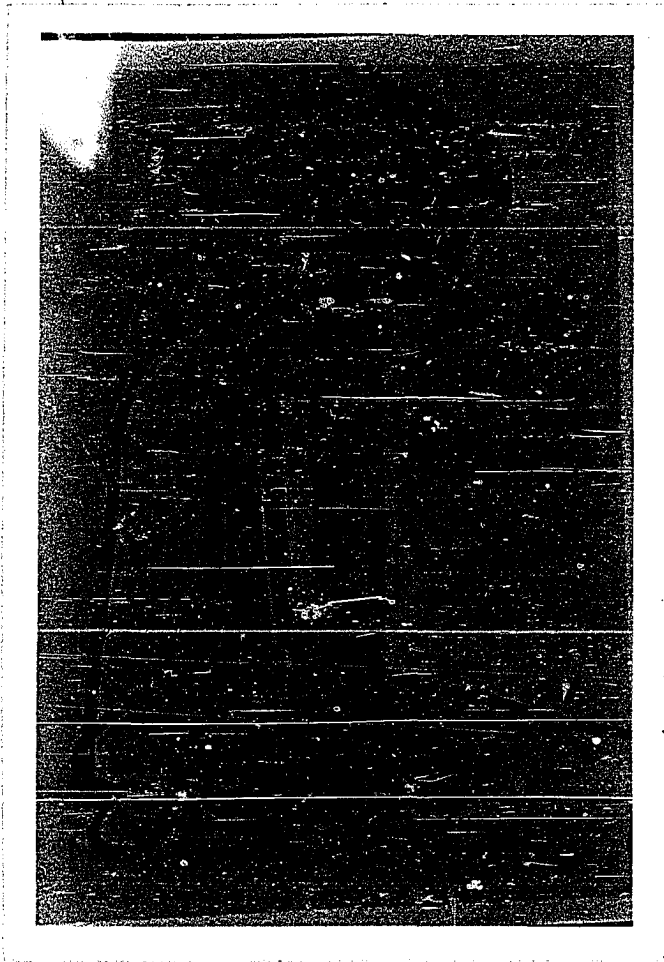


Plate 21. Candlestick type phone.

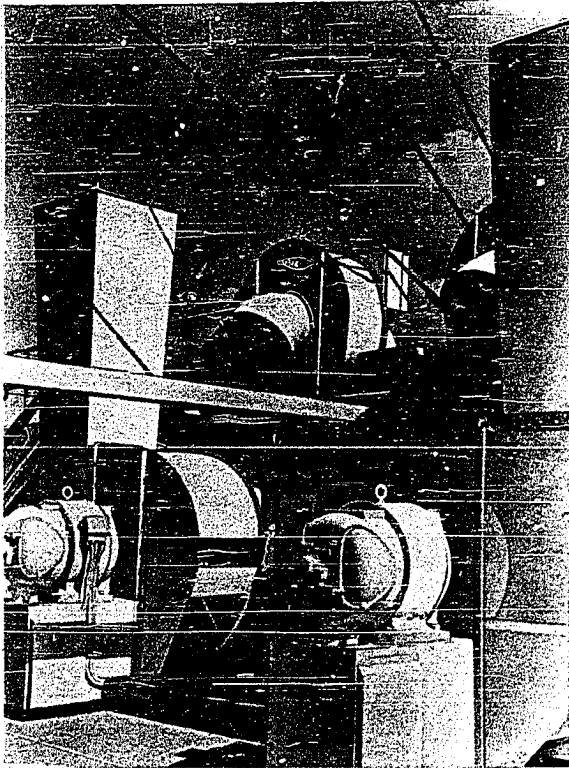


Plate 22. Charles Sheeler, Upper Deck, Fogg Art Museum, 1929, o/c, 29 1/8" x 22 1/8".

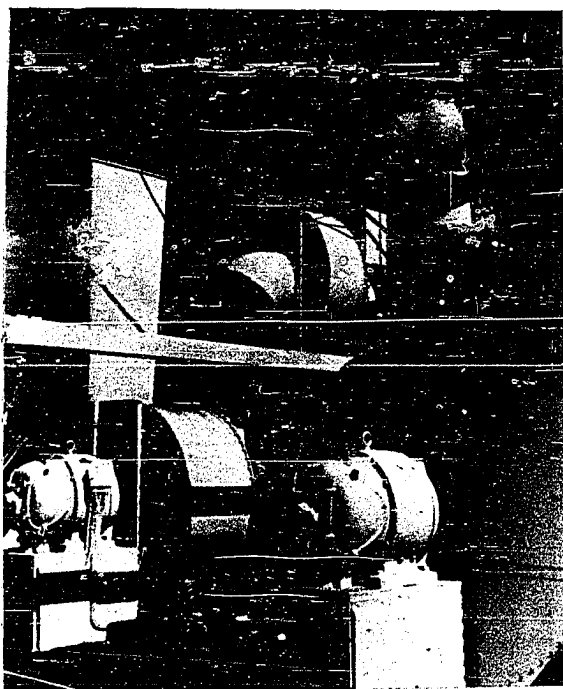


Plate 23. Charles Sheeler, Untitled (deck of ship), Gilman Paper Company Collection, c. 1927, photograph, 8" x 10 1/8".

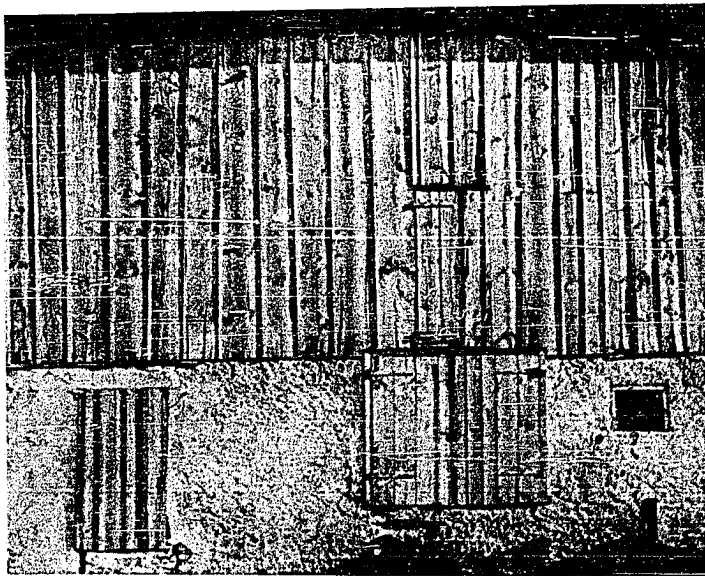


Plate 24. Charles Sheeler, White Barn, 1915,
photograph, dimensions unknown.

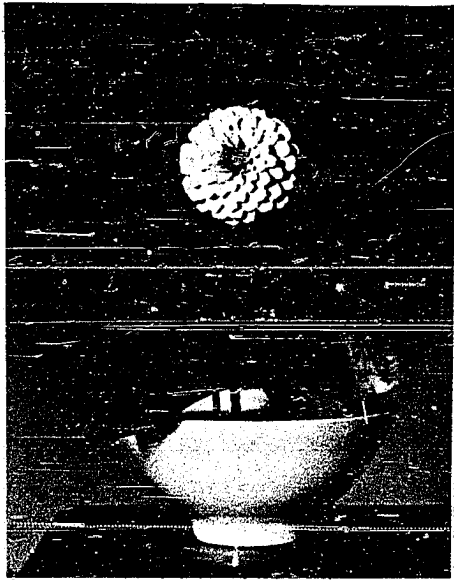


Plate 25. Charles Sheeler, Still Life: Zinnia
and Nasturtium Leaves, 1915, photograph,
10 1/2" x 8 11/16".

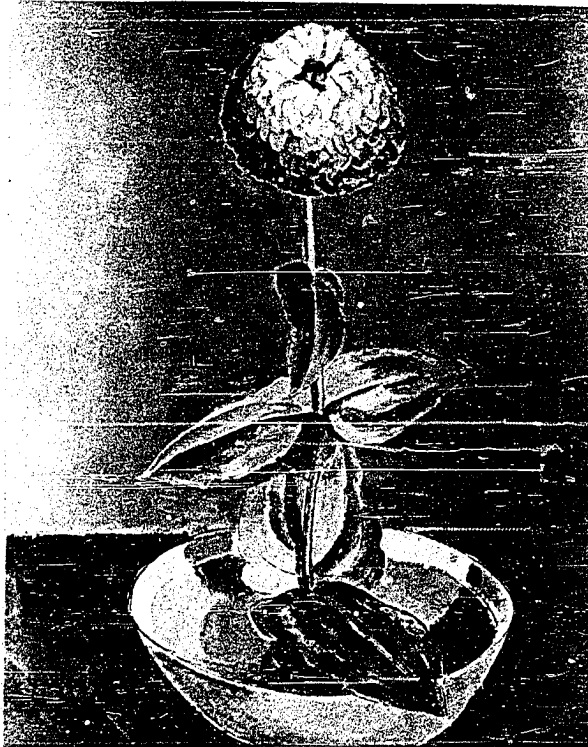


Plate 26. Charles Sheeler, Flowers in a Bowl,
Columbus Gallery of Fine Arts, Howald Collection,
1918, water color and gouache, 14 5/8" x 11 5/8".



Plate 27. Charles Sheeler, Bucks County House,
Interior Detail, Metropolitan Museum of Art,
Alfred Stieglitz Collection, 1917, photograph,
9" x 6 9/16".

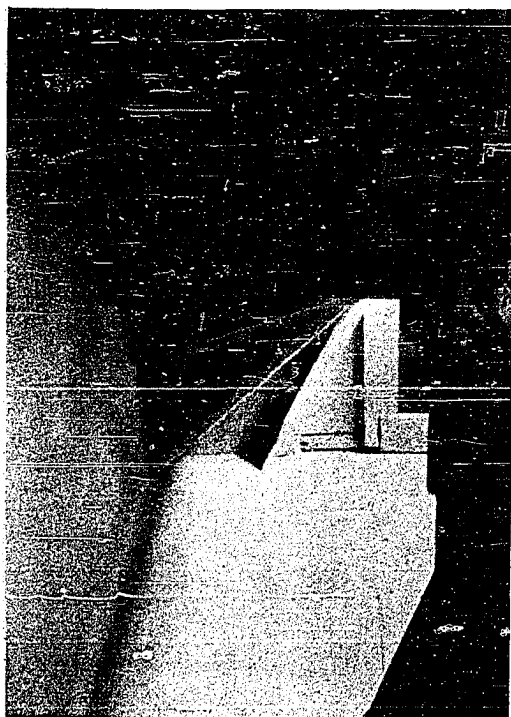


Plate 28. Charles Sheeler, Doylestown Staircase
(Bucks County House, Interior Detail), c. 1917,
photograph, 9 1/16" x 6 7/16".

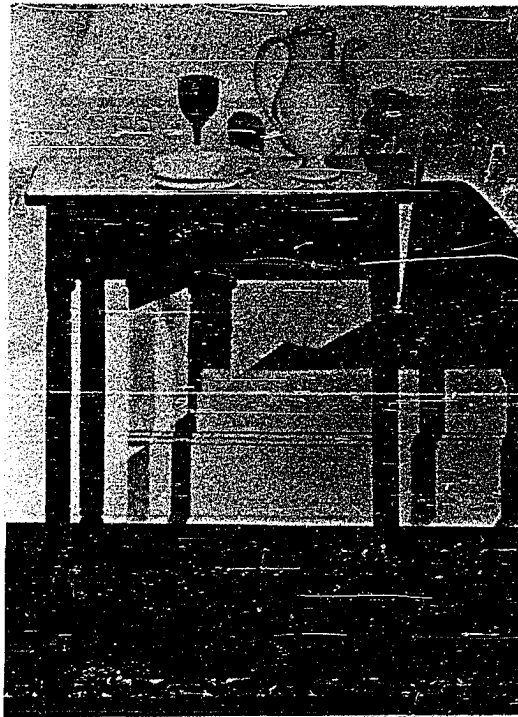


Plate 29. Charles Sheeler, Objects on a Table,
Columbus Gallery of Fine Arts, Howald Collection,
1924, water color, 31" x 31".



Plate 30. Charles Sheeler, Pertaining to Yachts
and Yachting, Philadelphia Museum of Art, 1922,
o/c, 20" x 24".



Plate 31. Charles Sheeler, Countess Teresa Rucellai, Vogue, August 1, 1926.



Plate 32. Charles Sheeler, West 40th Street
(illustrated in Cahiers d'Art, Deuxième Année),
1927, photograph.



Plate 33. Charles Sheeler, Blast Furnace and Dust Catcher, 1927, photograph, 9 1/2" x 7 1/2".

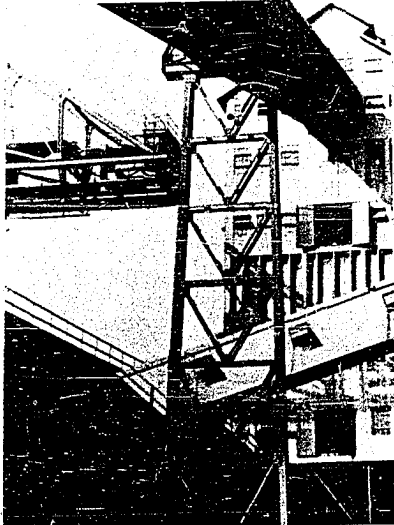


Plate 34. Charles Sheeler, Pulverizer Building,
Museum of Modern Art, gift of Lincoln Kirstein,
1927, photograph, 9 3/8" x 7 7/16".

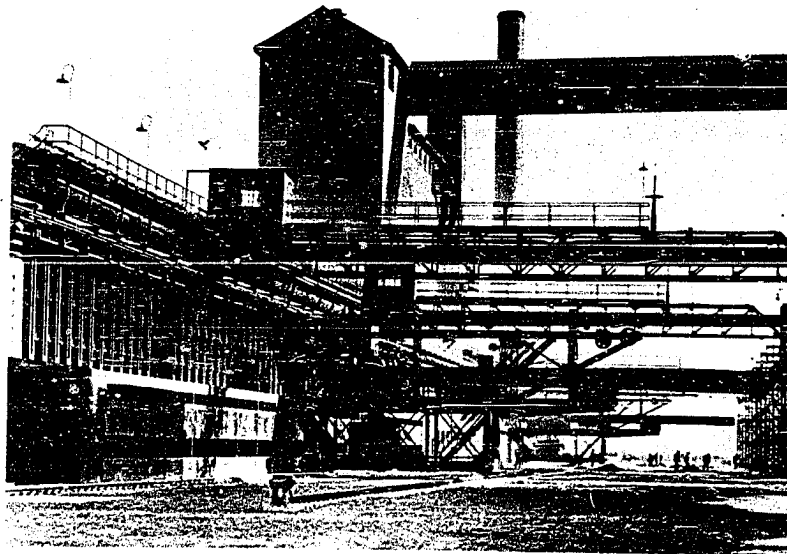


Plate 35. Charles Sheeler, Production Foundry,
Jay Moroney, 1927, photograph, $7 \frac{3}{8}'' \times 9 \frac{3}{8}''$.

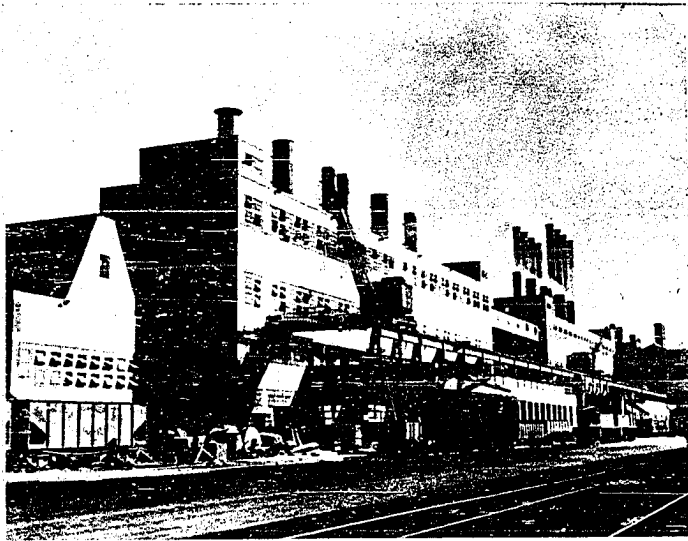


Plate 36. Charles Sheeler, Coke Oven Area, Ford Archives, Ford Museum, Dearborn, Michigan, 1927, photograph (copy negative), 6 1/8" x 7 1/2".

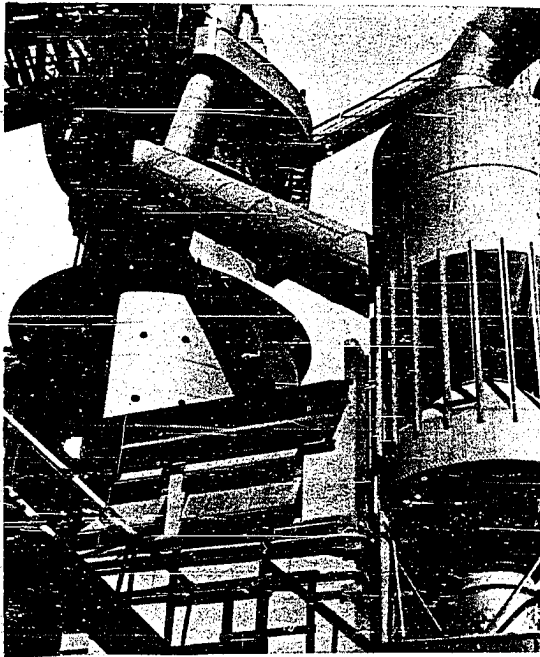


Plate 37. Charles Sheeler, Blast Furnace and Skip Bridge (illustrated in Edwin P. Norwood, "Where Two Nickels are No Dime," World's Work, vol. 60, p. 33), 1927, photograph.

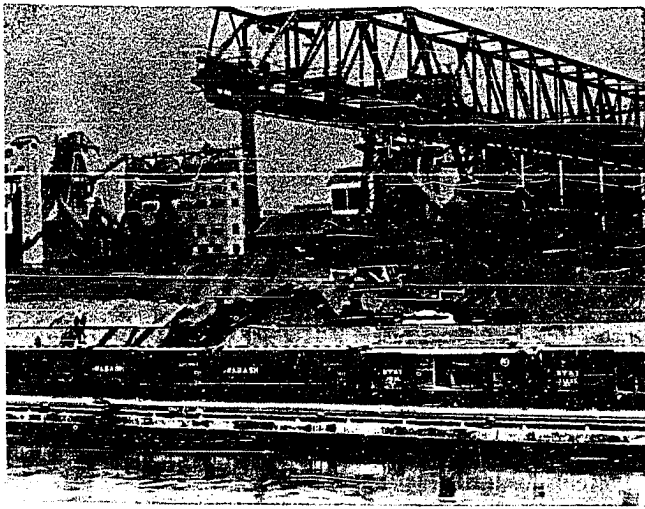


Plate 38. Charles Sheeler, Storage Bins at the Boat Slip, Ford Archives, Henry Ford Museum, Dearborn, Michigan, 1927, photograph, 7 1/4" x 9 3/8".

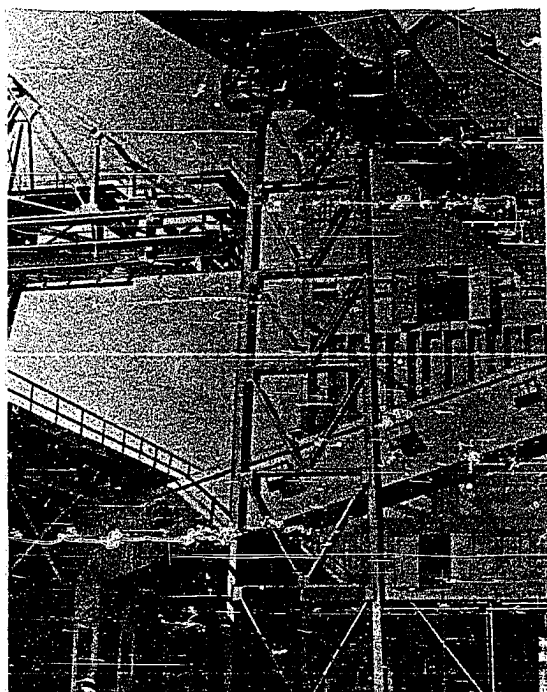


Plate 39. Charles Sheeler, Industrial Architecture,
Ruth Wittenberg, 1931, conte crayon, 9 1/2" x 7 1/2".

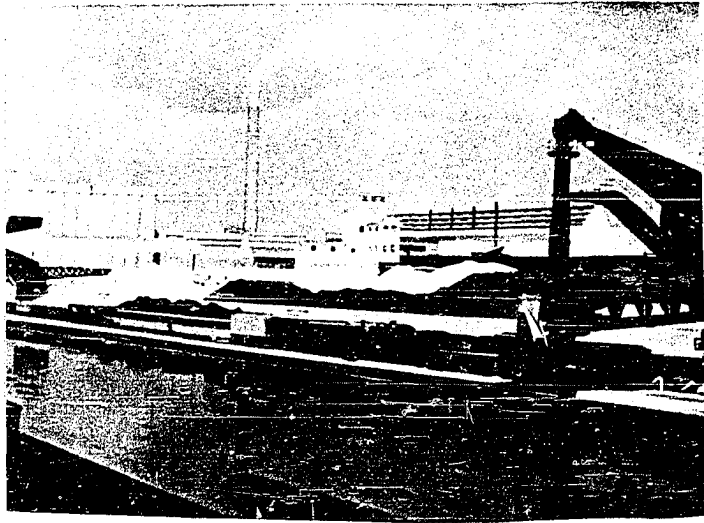


Plate 40. Charles Sheeler, American Landscape,
Museum of Modern Art, gift of Abby Aldrich
Rockefeller, 1930, o/c, 23" x 31".

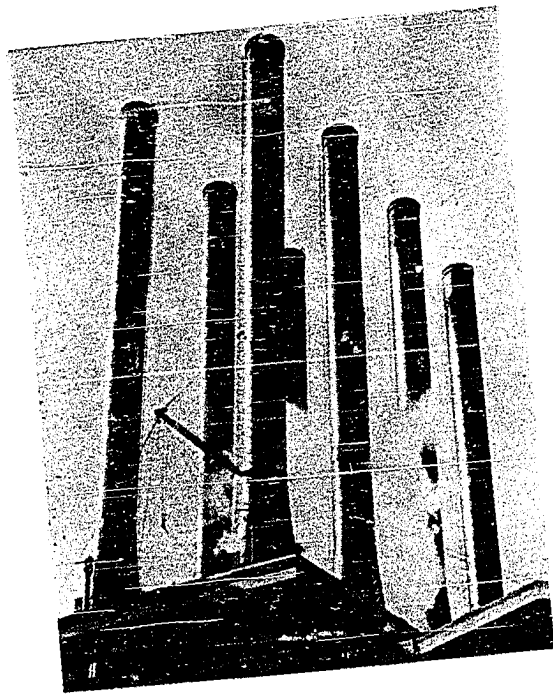


Plate 41. Charles Sheeler, Power House No. 1,
Art Museum, University of New Mexico, Albuquerque,
1927, photograph, 7 3/8" x 5 3/4".



Plate 42. Charles Sheeler, Smokestacks, William H. Lane Foundation, Leominster, Massachusetts, 1931, conté crayon on cardboard, 12" x 9".

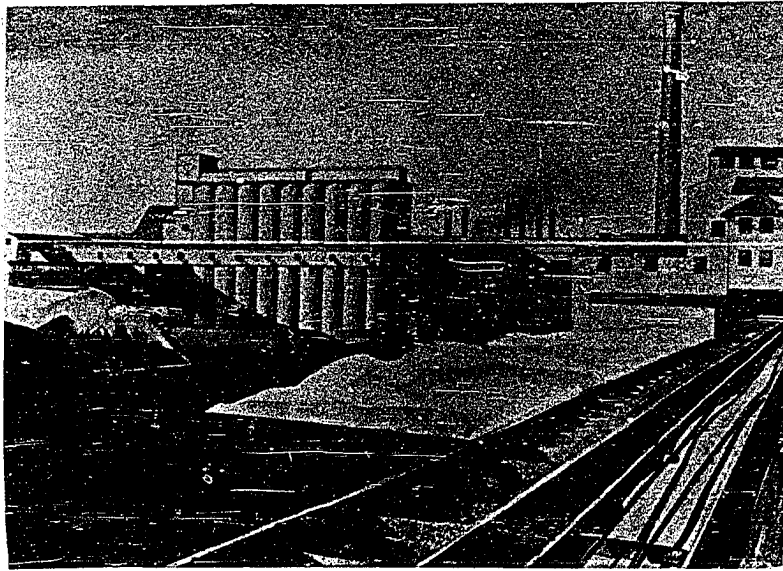


Plate 43. Charles Sheeler, Classic Landscape study,
Barney A. Ebsworth, St. Louis, Missouri, 1928,
8 1/4" x 11 7/8".

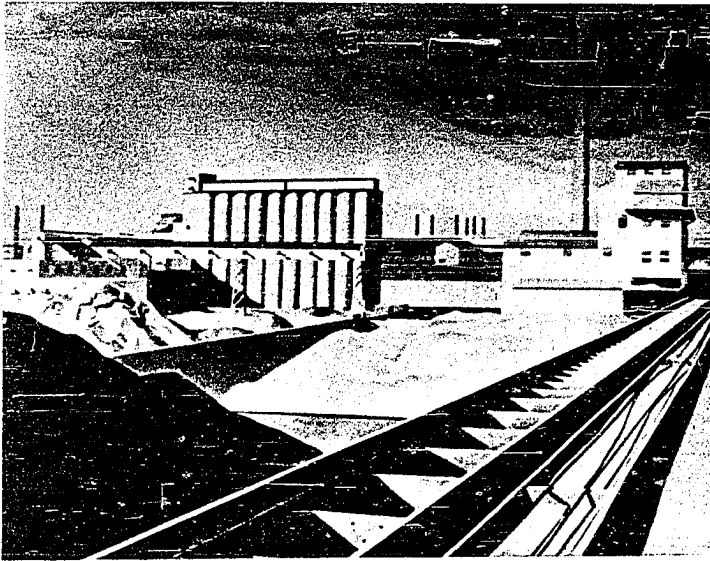


Plate 44. Charles Sheeler, Classic Landscape,
Mrs. Edsel Ford, 1931, o/c, 25" x 32 1/2".

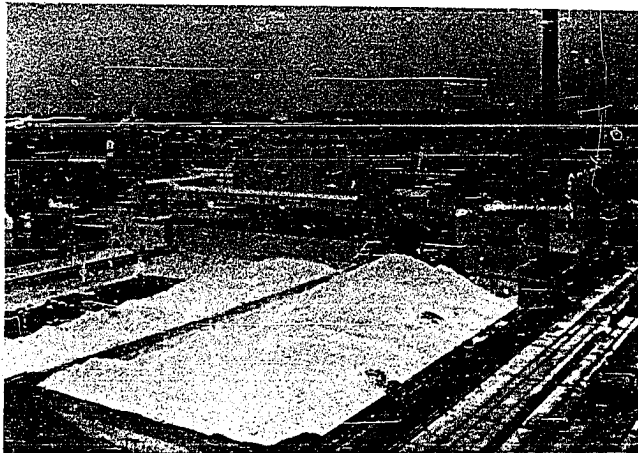


Plate 45. Anonymous Ford photographer, photograph related to Classic Landscape, Ford Motor Company, 1945.

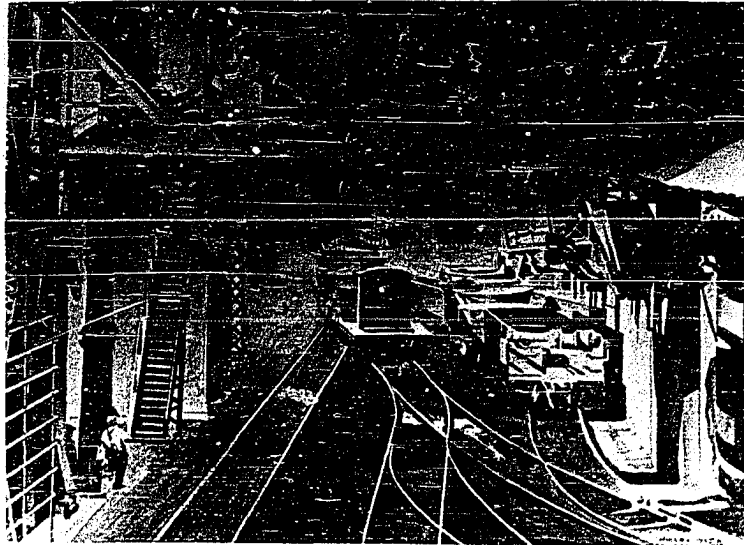


Plate 46. Charles Sheeler, City Interior,
Worcester Art Museum, Worcester, Massachusetts,
1936, oil on fiberboard, 22 1/8" x 27".

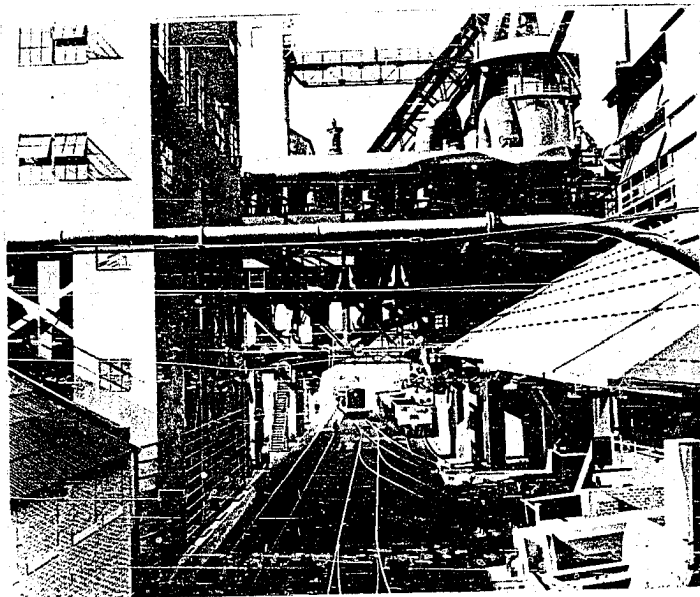


Plate 47. Charles Sheeler, 1935, City Interior,
William H. Lane Collection, 1935, tempera,
7 1/4" x 9 1/2".

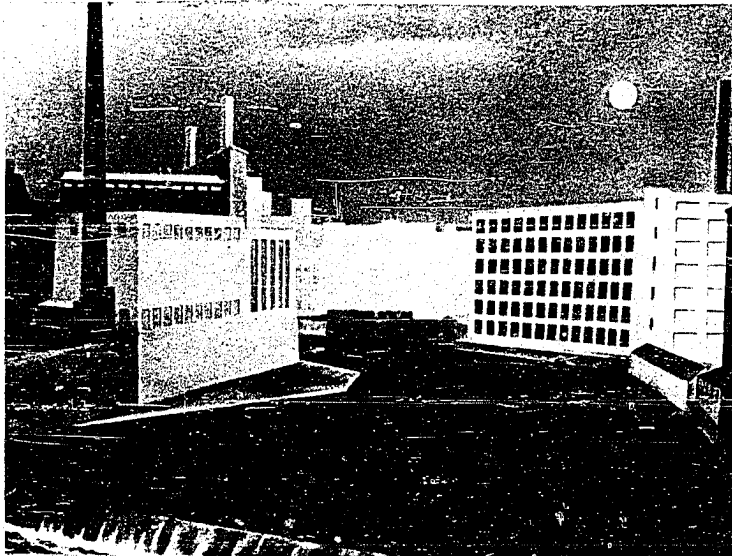


Plate 48. Stephan Hirsch, Milltown, The Phillips Gallery, Washington, D. C., c. 1925, o/c, 30" x 40".

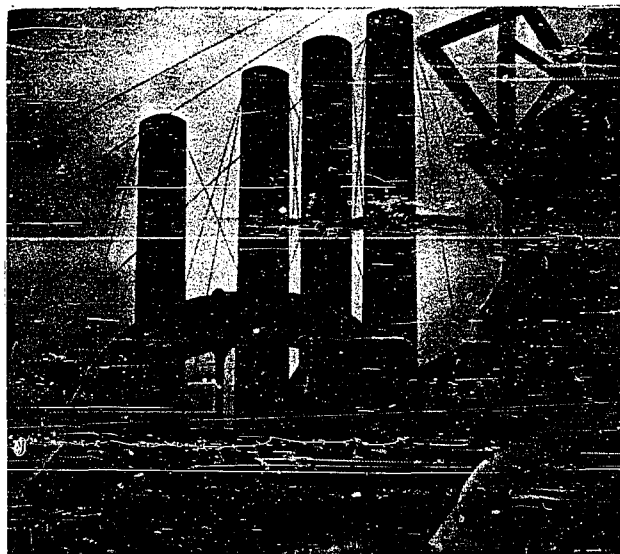


Plate 49. Elsie Driggs, Pittsburgh, Whitney
Museum of Modern Art, New York, 1927, o/c,
34 1/2" x 40".



Plate 50. Photograph Album. Lincoln, 1924,
Automotive History Collection, Detroit Public
Library.

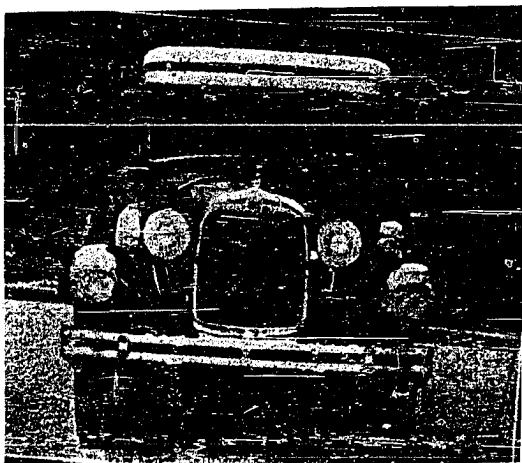


Plate 51. Charles Sheeler, Ford Photograph
(Model A), New York Times, December 18, 1927.



Plate 52. Charles Sheeler, Fashion Model (Joan Clement in a Callot Dress), Vogue, November 1, 1926.



Plate 53. Edward Steichen, Fashion Model (Paquin Dress), Vogue, November 1, 1926.



Plate 54. Charles Sheeler, Bassett Hall, Colonial
Williamsburg Collection, 1936, o/c, 21" x 25 1/8".

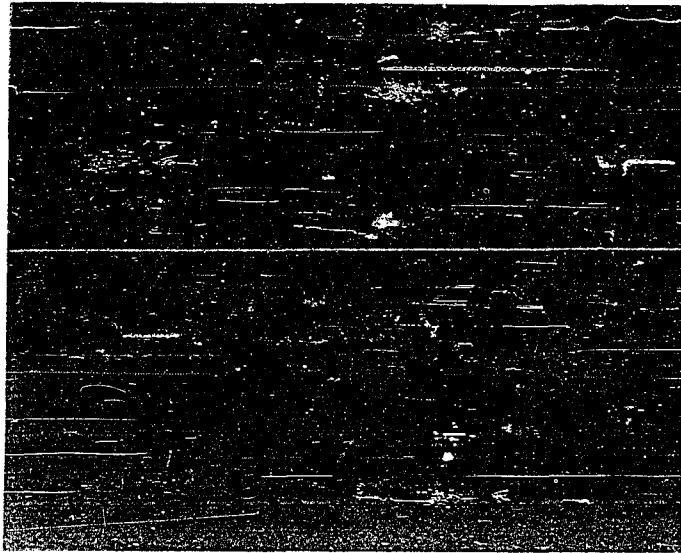


Plate 55. Charles Sheeler, Bassett Hall, William H. Lane Collection, n.d., photograph of lost drawing.



Plate 56. Raphaelle Peale, After the Bath,
William Rockhill Nelson Gallery of Art, Kansas
City, Missouri, 1823, o/c, 29" x 24".

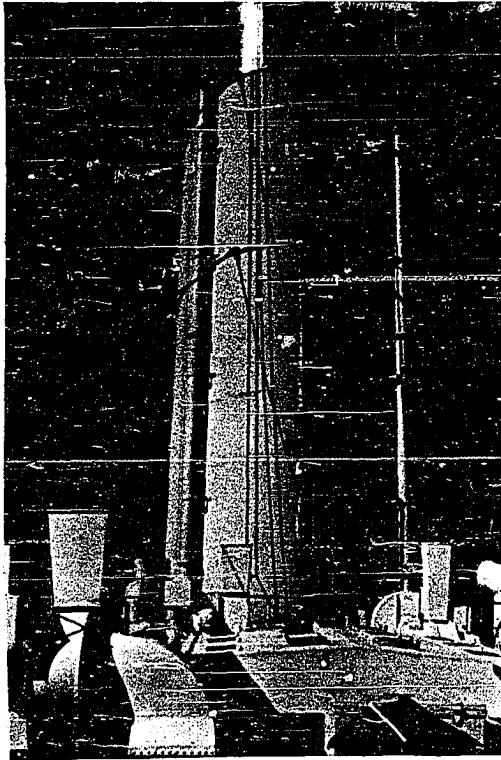


Plate 57. Charles Sheeler, Funnel ("a"), Lane Foundation, 1927, photograph, dimensions unknown.



Plate 58. Charles Sheeler, Funnel ("b"), George Eastman House, Rochester, New York, 1927, photograph, dimensions unknown.

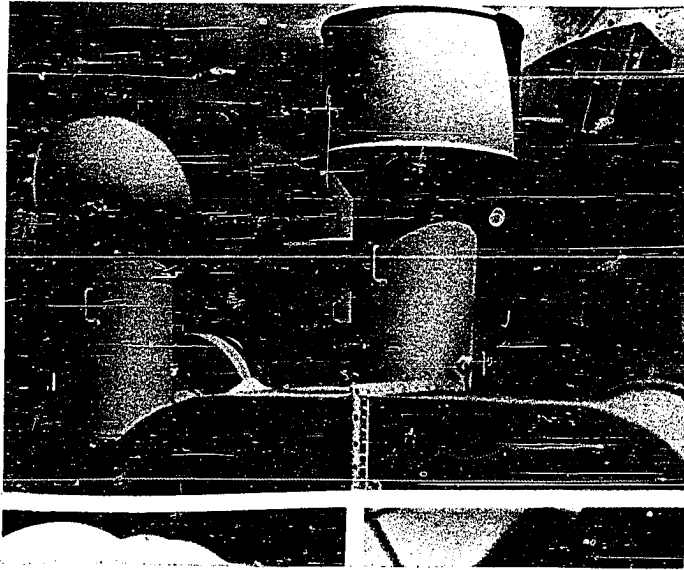


Plate 59. Hans Finsler, The Bremen (illustrated in Gebrauchsgraphik, vol. 8, no. 4, April, 1931), c. 1927, photograph.

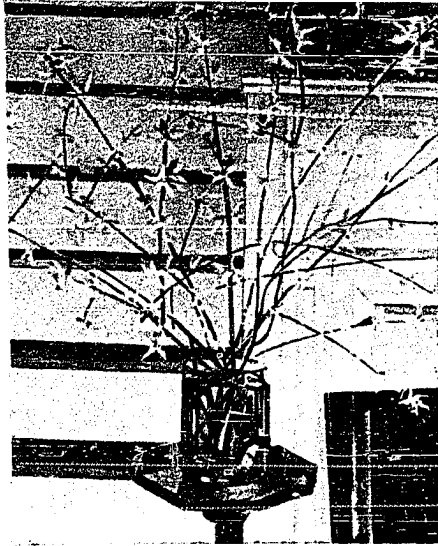


Plate 60. Charles Sheeler, Spring Interior,
William Lane Foundation, 1927, o/c, 30" x 25".

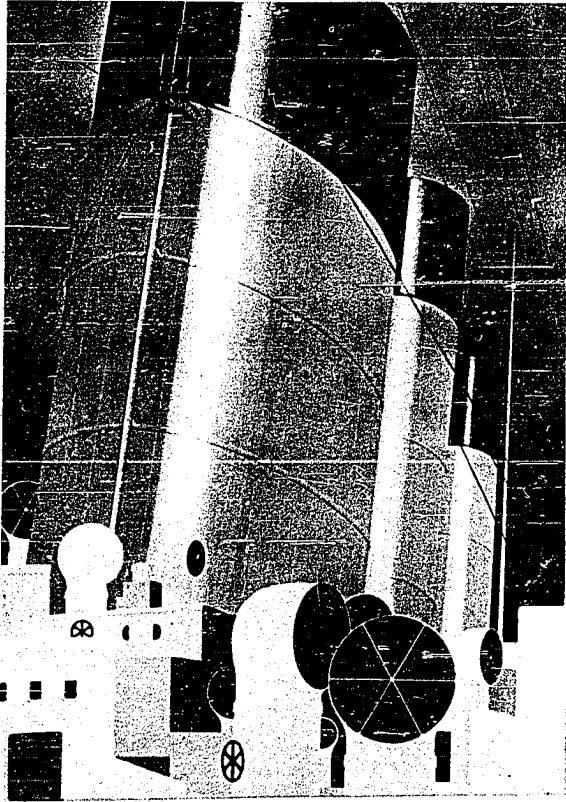


Plate 61. Gerald Murphy, Boat Deck, 1924, o/c,
18' x 12' (lost).

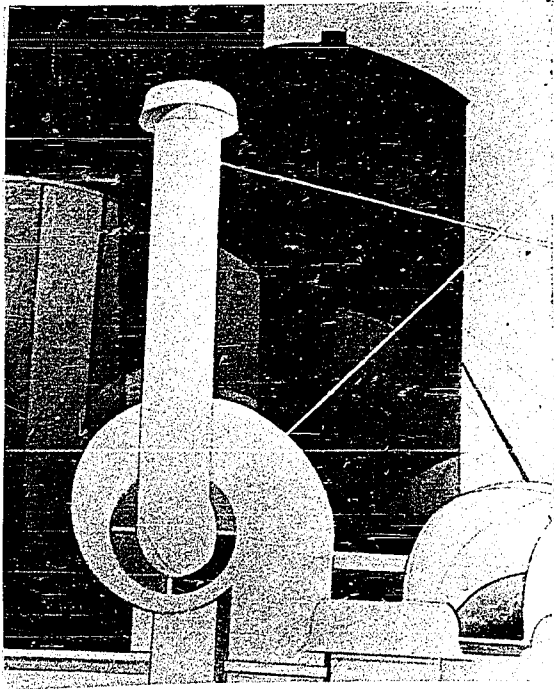


Plate 62. Charles Demuth, Paquebot Paris, Columbus Gallery, Howald Collection, 1922, o/c, 24 3/4" x 19 7/8".

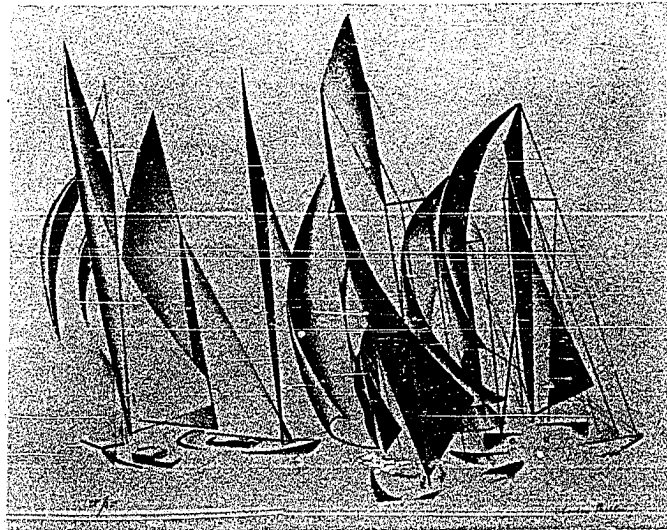


Plate 63. Charles Sheeler, *Yachts*, Philadelphia Museum of Art, lithograph, 8" x 10".

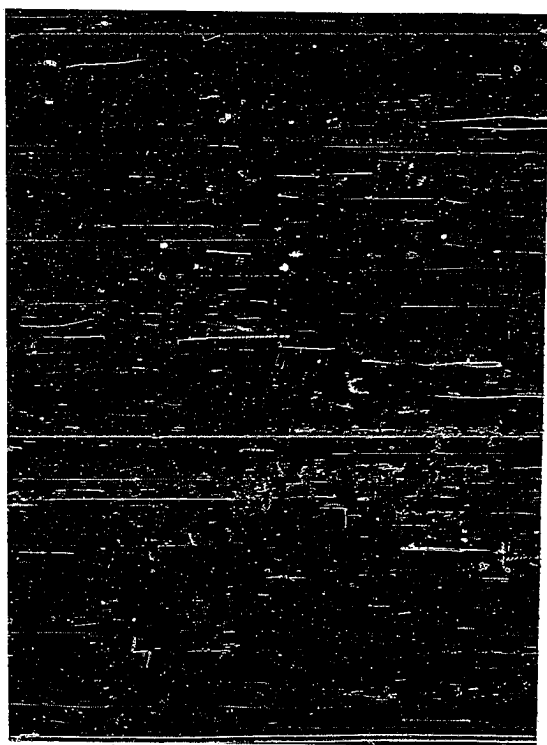


Plate 64. The open air promenade deck on the Rex
(from Richard B. Oliver, The Ocean Liner: Speed,
Style, Symbol, New York, Cooper Hewitt Museum, 1980).

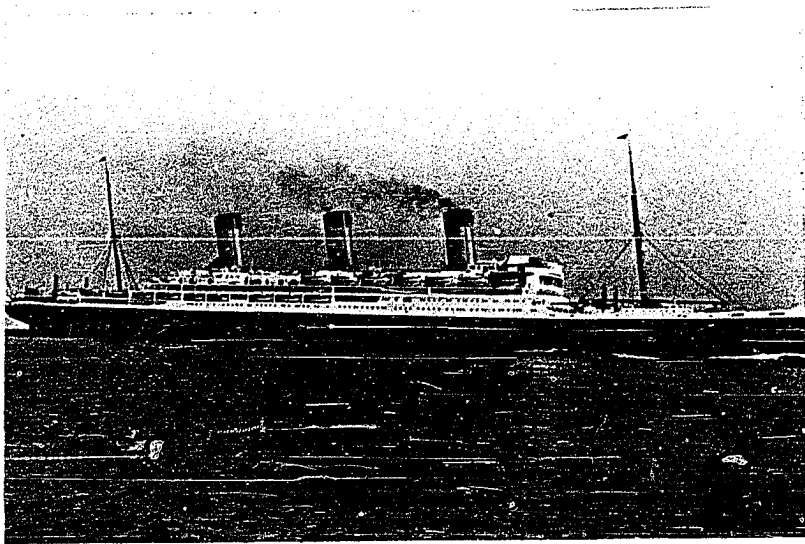


Plate 65. Publicity Photograph (S. S. Majestic),
Grand Central Art Galleries, 1927.

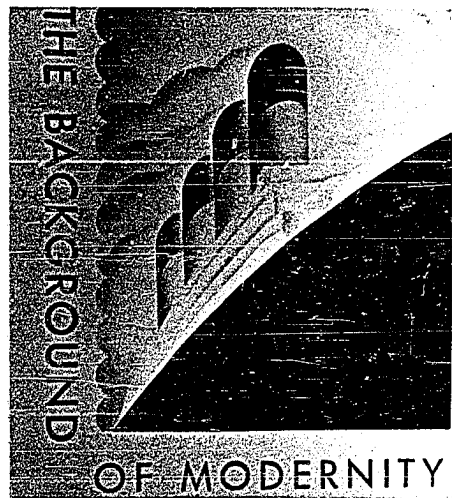


Plate 66. "White Star Line Advertisement," House and Garden, March, 1928, p. 52.

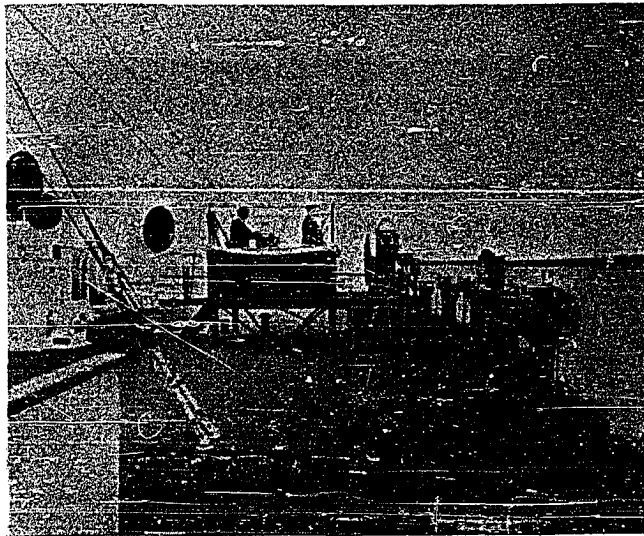


Plate 67. Le Corbusier, Towards a New Architecture,
1927, "The Cunarder 'Aquitania'," illustration,
p. 90 (New York Praeger Reprint, 1960).



Plate 68. Le Corbusier, Towards a New Architecture, 1927, "The 'La Morcière' (Cie Transatlantique)," p. 93 (New York Praeger Reprint, 1960).

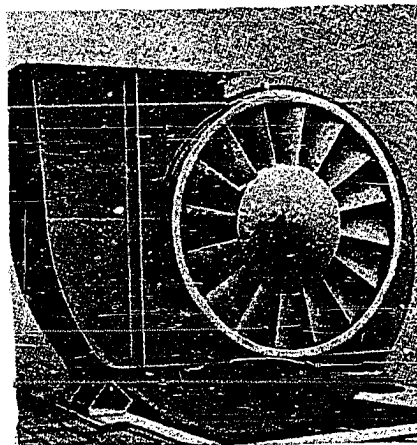


Plate 69. Le Corbusier, Towards a New Architecture,
1927, "Low Pressure Ventilating Fan," p. 247 (New
York Praeger Reprint, 1960).

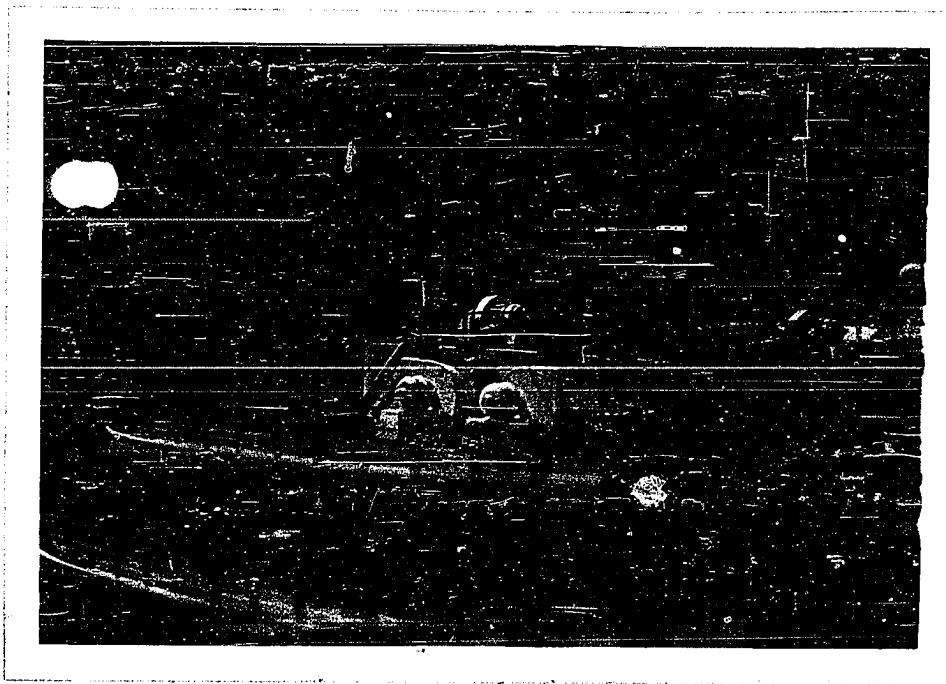


Plate 70. Model: The S. S. Majestic, New York,
Museum of the City of New York.

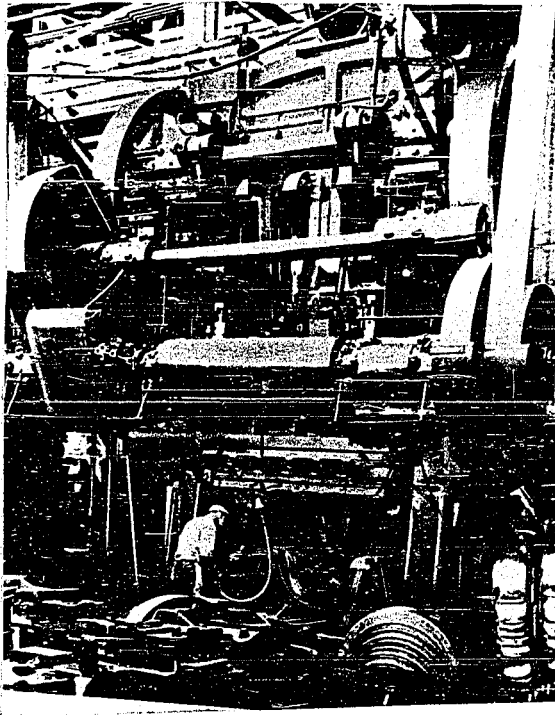


Plate 71. Charles Sheeler, Stamping Press, Lane Foundation, 1927, photograph, dimensions unknown.



Plate 72. Charles Sheeler, Flower Forms, Horter Collection, 1919, o/c, 24" x 19".

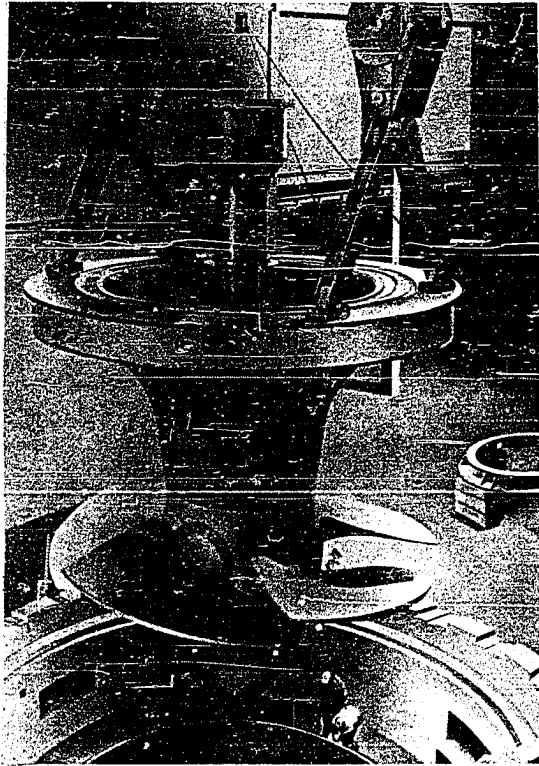


Plate 73. Charles Sheeler, Suspended Power,
Beauchamp Smith Collection, 1939, o/c, 30" x 26".

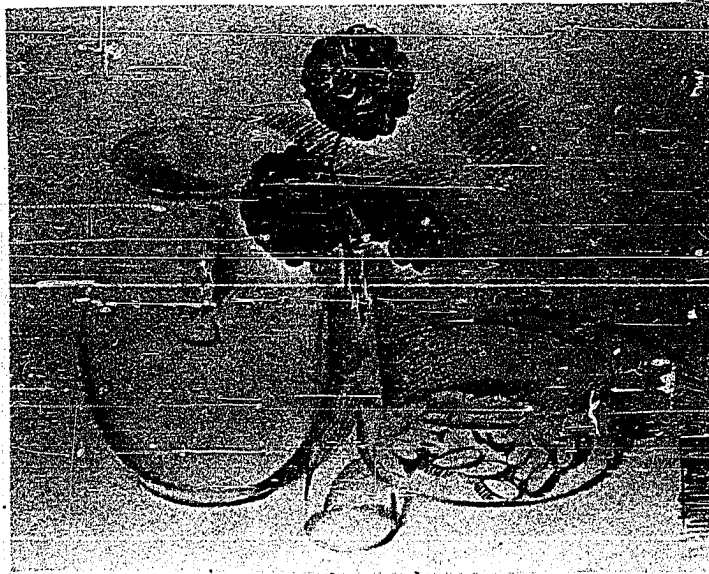


Plate 74. Charles Sheeler, Still Life, Howald Collection, 1921, pencil, 13" x 15 1/16".

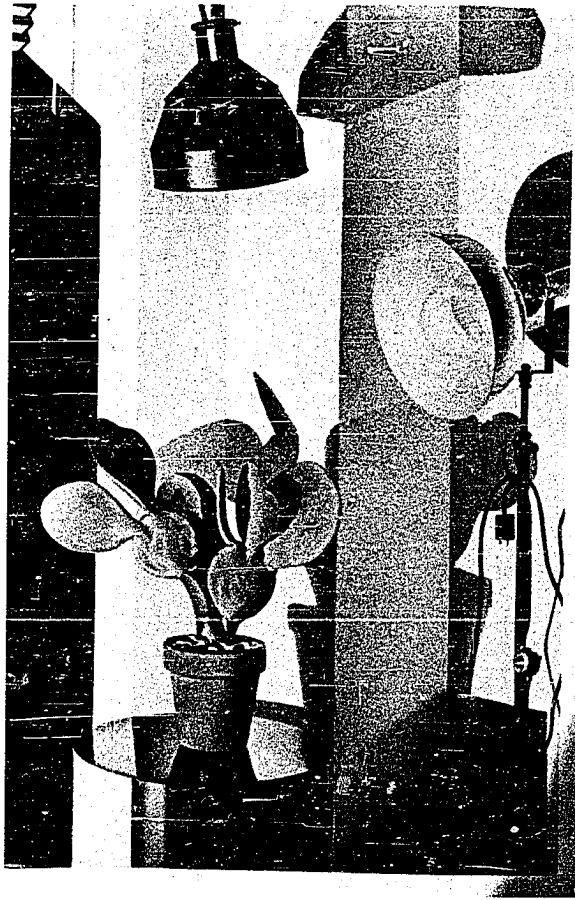


Plate 75. Charles Sheeler, *Cactus*, Philadelphia Museum of Art, Arensberg Collection, 1931, o/c, 45 1/8" x 30".

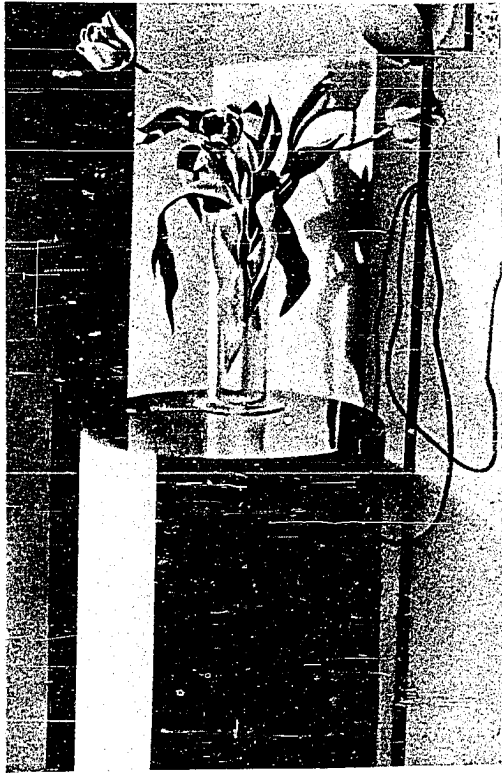


plate 76. Charles Sheeler, Tulips, Mr. and Mrs. John S. Sheppard, 1931, conte crayon, 26" x 19".

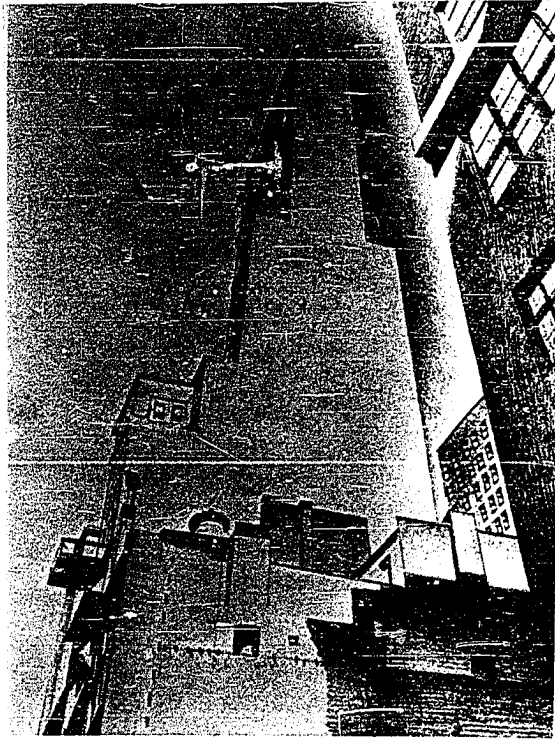


Plate 77. Charles Sheeler, Delmonico Building,
Library of Congress, 1926-27, lithograph, 9 3/4" x
6 3/4".

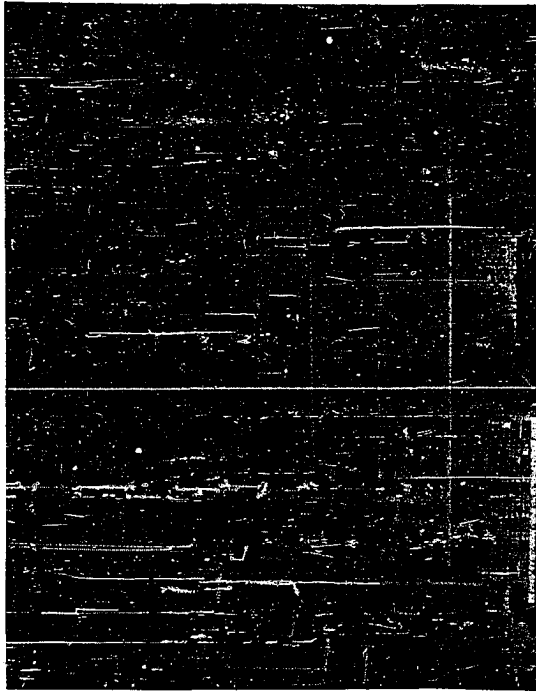


Plate 78. Charles Sheeler, photograph related to Offices (illustrated in *Cahiers d'Art*, Deuxième Année, 1927), New York, 1920.

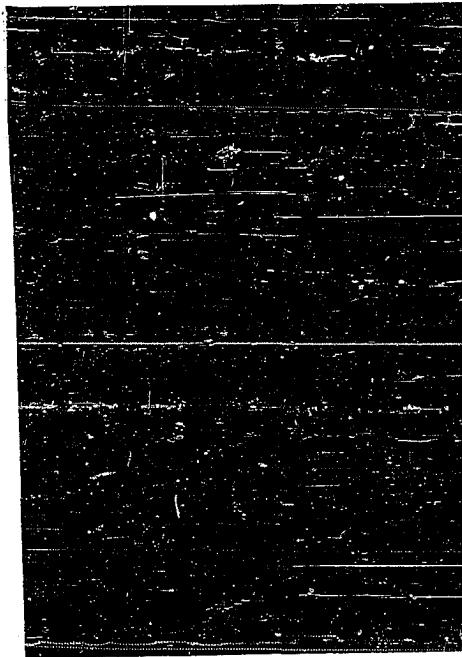


Plate 79. Glen O. Coleman, The Arrangement,
Whitney Museum of American Art, 1928, o/c.

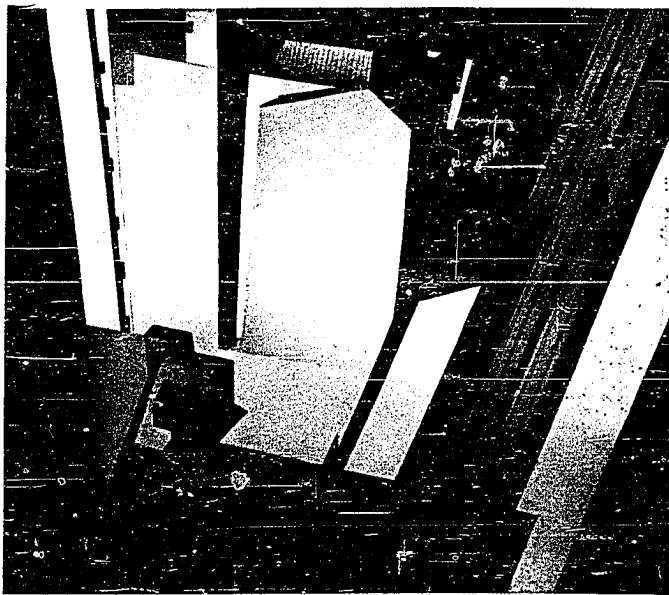


Plate 80. Charles Sheeler, Church Street El,
Cleveland Museum of Art, after 1920, before
January, 1921 (illustrated in Vanity Fair, April,
1921, p. 47), o/c, 16 1/8" x 19 1/8".

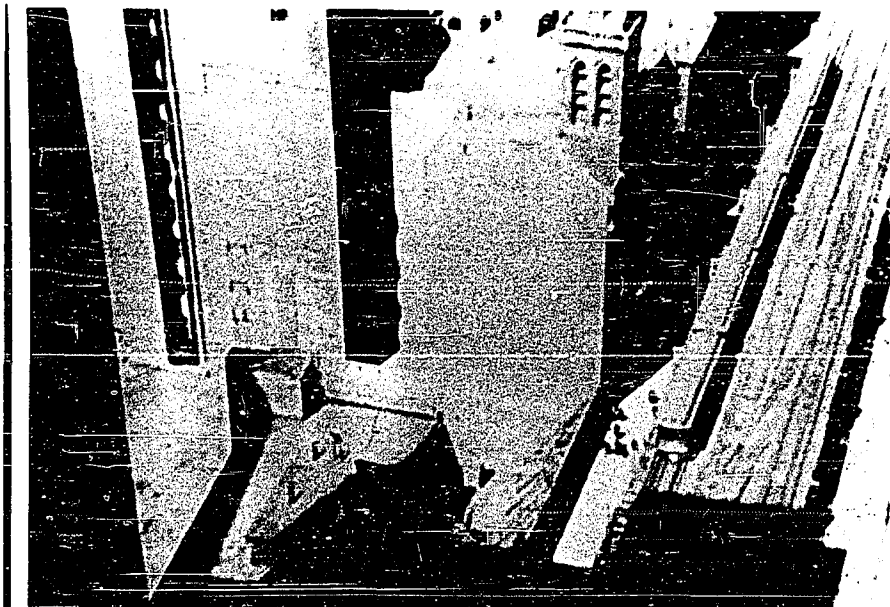


Plate 81. Charles Sheeler, Church Street El,
still from movie, National Film Archive Still
Library, 81 Deal Street, London, W1V 6AA, England.



Plate 82. Charles Sheeler, Ritz Tower, 1920-27,
(illustrated in Cahiers d'Art, Deuxième Année,
1927), photograph.

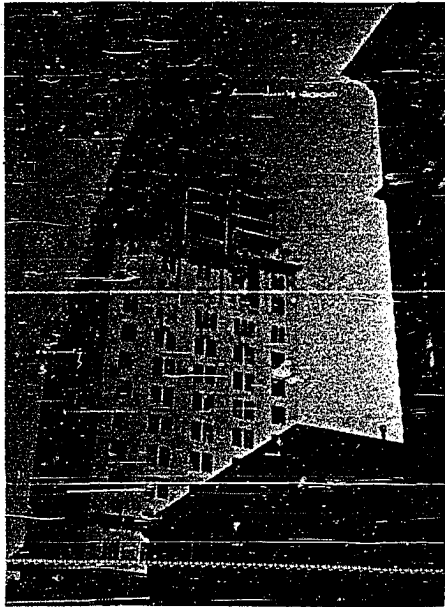


Plate 83. Charles Sheeler, New York, Berkley
Appartment Hotel (illustrated in Cahiers d'Arts,
Deuxième Année, 1927), photograph.

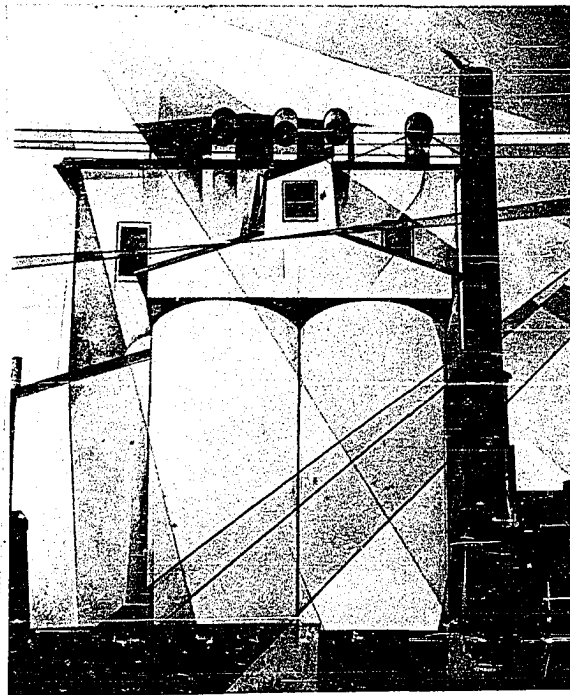


Plate 84. Charles Demuth, My Egypt, Whitney Museum of American Art, 1927, oil/composition board, 35 3/4" x 30".



Plate 85. Georgia O'Keeffe, East River From the Shelton, New Jersey State Museum Collection, 1927, o/c, 25 1/16" x 21 15/16".

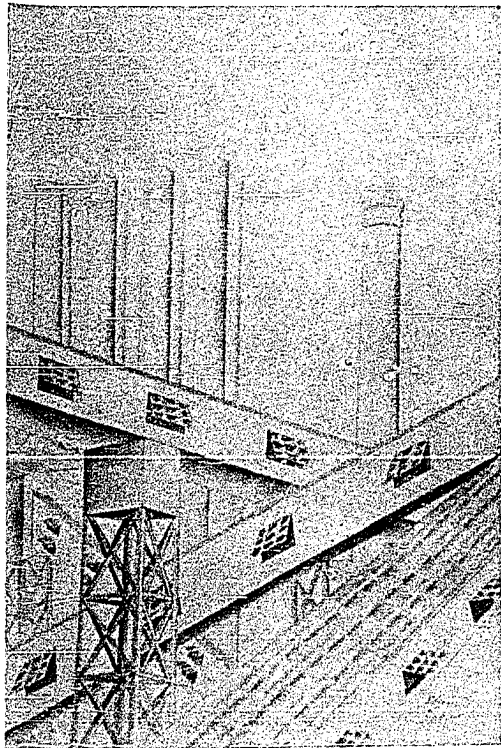


Plate 86. Elsie Driggs, River Rouge Plant, Whitney Museum of American Art, 1927, pencil/paper, 18" x 12".

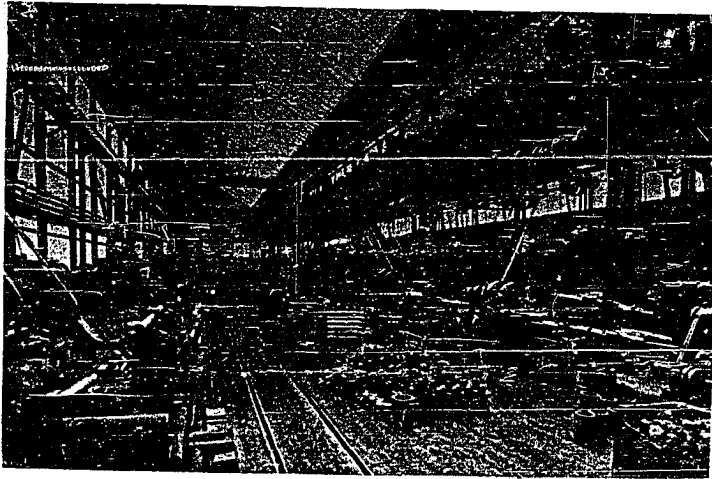


Plate 87. Engineering, vol. 102, August 11, 1916,
Plate XIII, "The Arrangement of Machine Shops:
The Shops of Messrs. Petters, Ltd., fig. 12.
General View of a Large Bay."

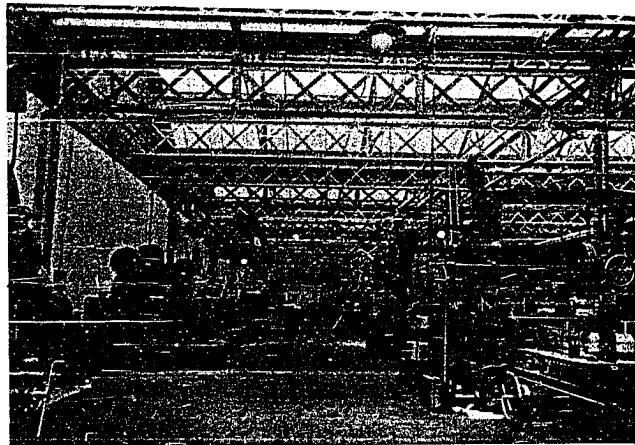


Plate 88. Engineering, vol. 102, November 3, 1916, p. 430, fig. 34.



Plate 89. Engineering, vol. 101, January 7, 1916,
Plate I, fig. 1, View of the Smelting Works, "The
Hydro-Electric Power Works at Lake Margaret,
Tasmania."

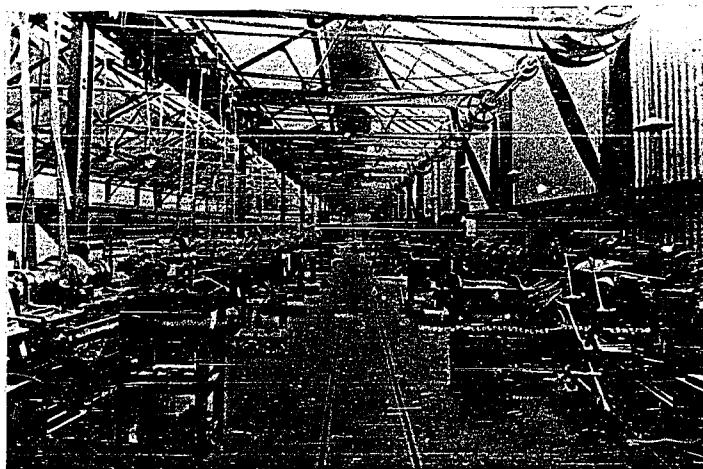


Plate 90. Engineering, vol. 102, August 11, 1916,
Plate XIII, fig. 15, "The Arrangement of Machine
Shops. View Taken in the Gallery."

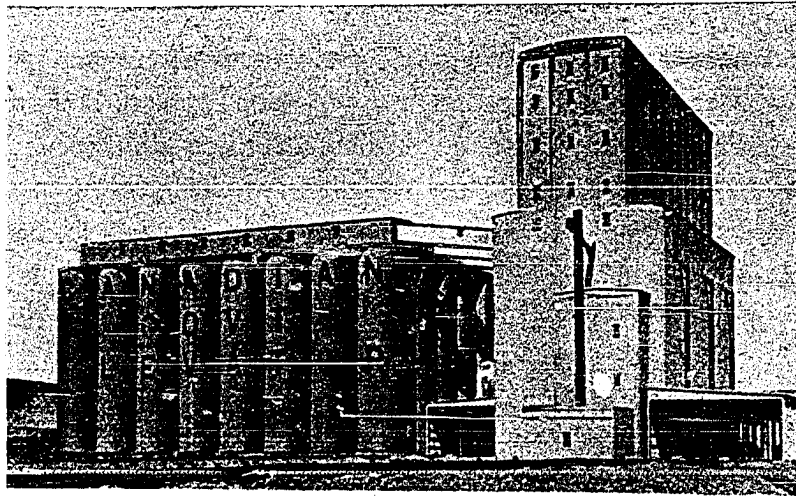


Plate 91. Le Corbusier, Towards a New Architecture, 1927, "Grain Elevators," illustration p. 31 (New York Praeger Reprint, 1960).

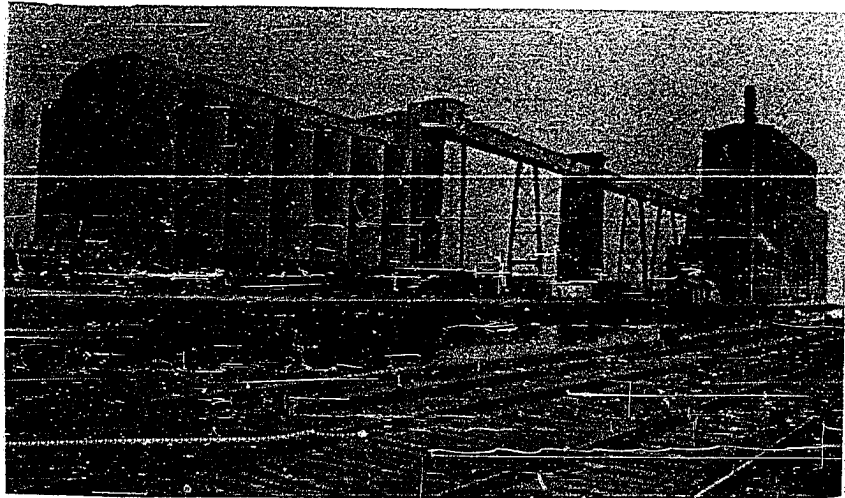


Plate 92. Le Corbusier, Towards a New Architecture, 1927, "Grain Elevators," illustration p. 32 (New York Praeger Reprint, 1960).

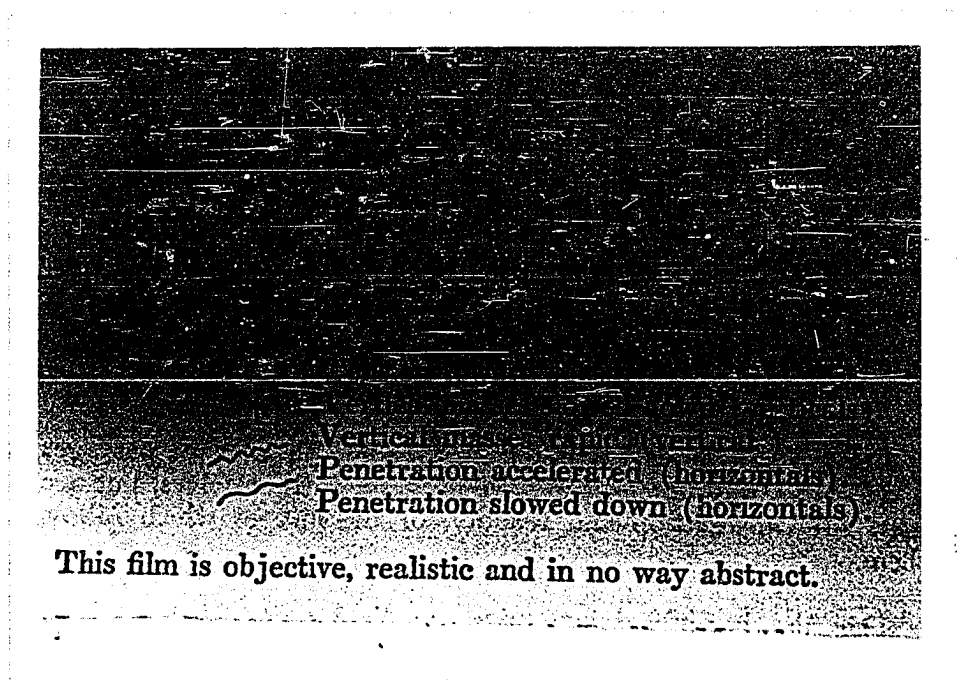


Plate 93. Leger, Diagram of film, Ballet
Mecanique, Little Review, Autumn/Winter, 1924,
p. 44.



Plate 94. Rudolph Steiner, "Study in Light and Shadow" (illustrated in Paul Frankl, New Dimensions, New York, Payson and Clarke, 1928, p. 68).



Plate 95. Charles Sheeler, Cactus, Museum of Modern Art, 1923-31, photograph, 9 1/2" x 6 5/8".



Plate 96. Bradley Walker Tomlin, "Cactus," House and Garden (cover), May, 1929.



Plate 97. Florence Brobeck, "Furniture Out-of-Doors," Good Furniture and Decoration, April, 1931, Vol. XXXVI, no. 4, p. 169-178.



Plate 98. Charles Sheeler, Katherine (c/o Dintenfass Gallery), 1931, conté crayon, 10" x 8".

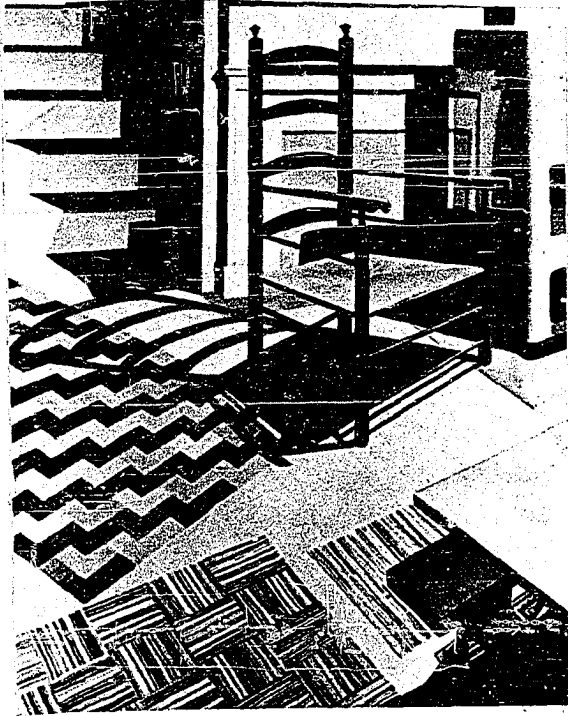


Plate 99. Charles Sheeler, Home Sweet Home,
Detroit Institute of Arts, 1931, o/c, 36" x 29".



Plate 100. "Basement Reconversion," illustrated in Martha and Sheldon Cheney, Art and the Machine, New York, McGraw Hill, 1936, p. 225.

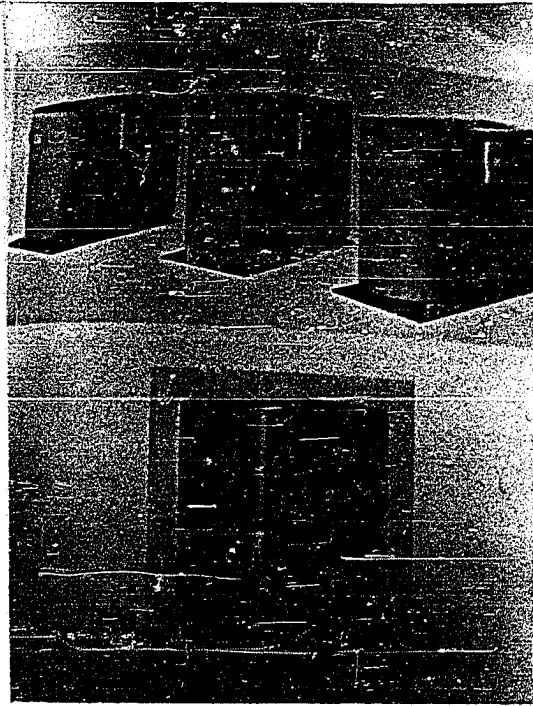


Plate 101. "Lurelle Oil-burner Jackets," illustrated in Martha and Sheldon Cheney, Art and the Machine, New York, McGraw Hill, 1936, p. 233.

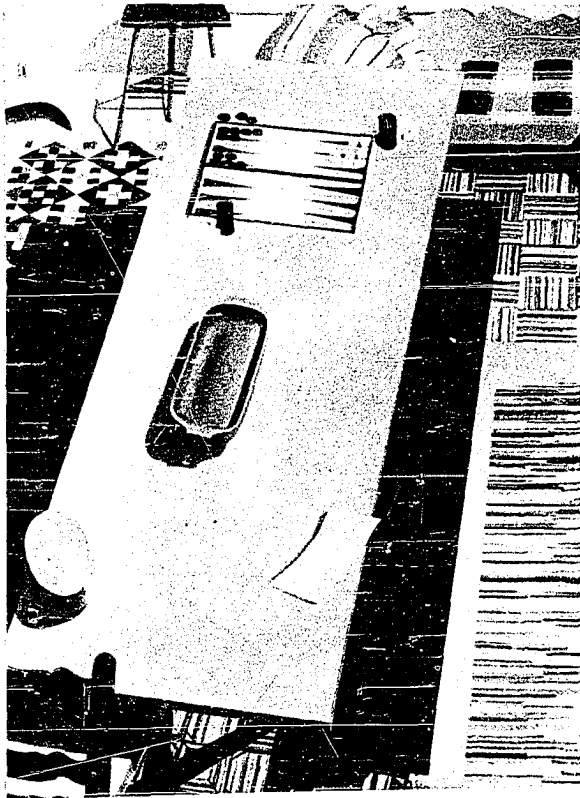


Plate 102. Charles Sheeler, Americana, Mr. and Mrs. Milton Lowenthal, 1931, o/c, 48" x 36".

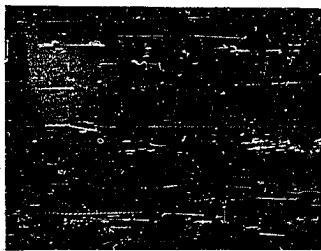


Plate 103. Charles Sheeler, American Interior,
Metropolitan Museum of Art, 1935, tempera and
pencil on paper, 8 3/4" x 9 3/4".



Plate 104. Charles Sheeler, Ephrata, Museum of Fine Art, Springfield, Massachusetts, 1934, oil on panel, 19 1/2" x 23 1/2".

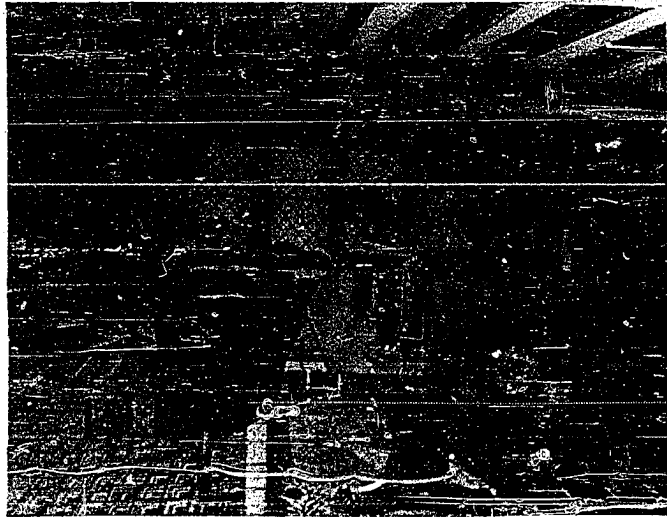


Plate 105. Anonymous, "A Portfolio of Primitive American Interiors," House and Garden, April, 1929, p. 113.

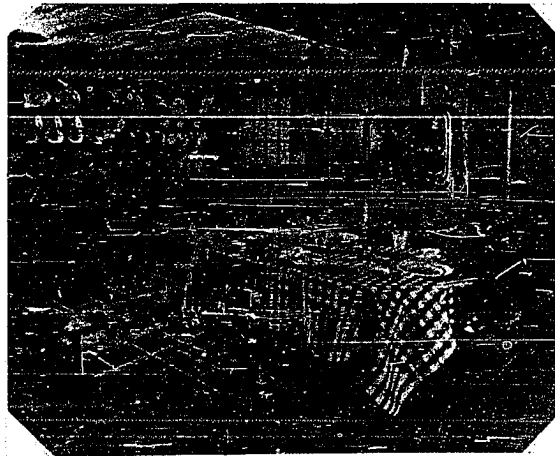


Plate 106. Anonymous, "A Portfolio of Primitive American Interiors," House and Garden, April, 1929, p. 113.

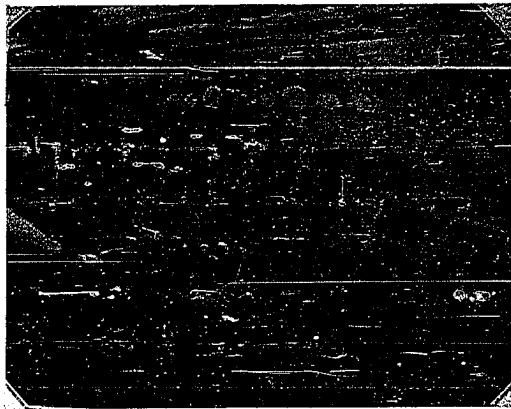


Plate 107. Anonymous, "A Portfolio of Primitive American Interiors," House and Garden, April, 1929, p. 114.

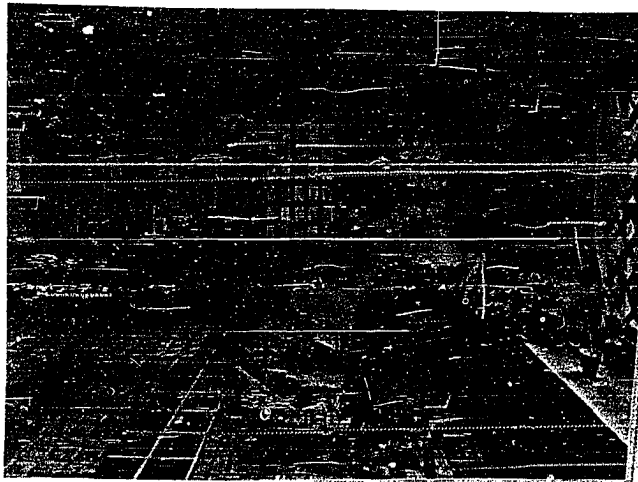


Plate 108. Anonymous, "A Portfolio of Primitive American Interiors," House and Garden, April, 1929, p. 114.

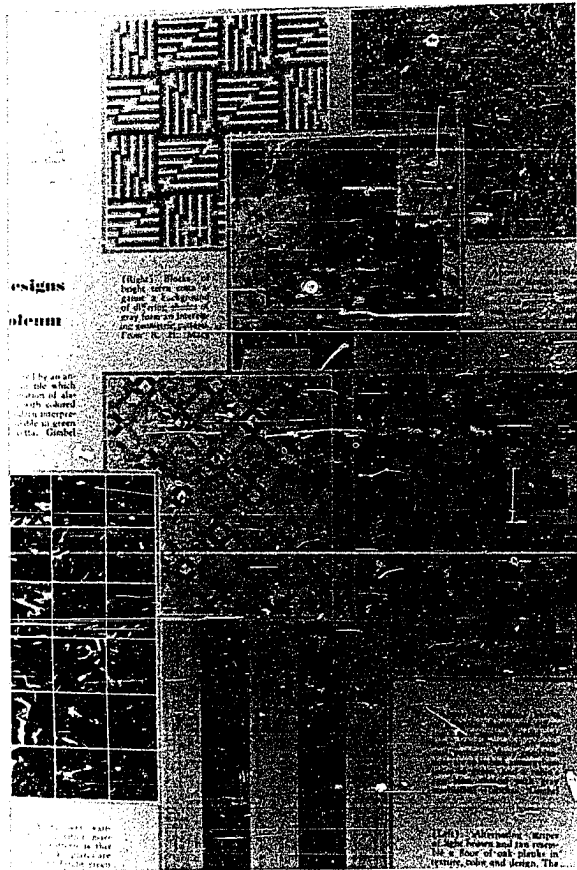


Plate 109. Anonymous, "New Designs in Linoleum,"
House and Garden, January, 1930, p. 71.

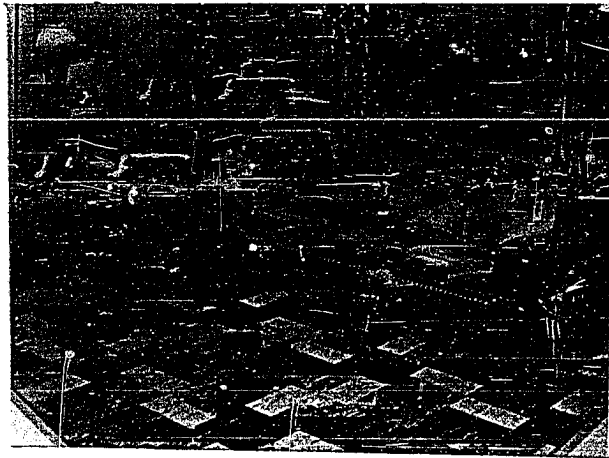


Plate 110. "Advertisement - Goodyear Rubber
Flooring," House and Garden, August, 1929,
following p. 48.

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