## THEODORE ROSZAK

## by Gregory Gilbert

One of the leading sculptors of the Abstract Expressionist era, Theodore Roszak (1907-1981), actually began his career as a Constructivist in the early 1930s. During this period, Cubism, Surrealism, and Constructivism were the dominant vanguard modes in the United States, and Roszak's works from the 1930s were an inventive synthesis of these trends. Influenced by the stylistic pluralism of the decade, Roszak produced reliefs that were a fanciful blend of biomorphic and geometric abstraction, transforming these developments into a distinctly personal repertoire of forms. In the 1940s, he purged his constructions of their Surrealist content, adopting an angular, reductivist style derived from Purist painting. Moreover, Roszak was one of the first American artists to embrace the machine aesthetics of the Bauhaus, and he used a variety of industrial materials and technical design methods in creating his relief constructions.

Born in Poznan, Poland, Roszak settled in Chicago with his parents in 1909. He began a five-year course of study at the Art Institute of Chicago in 1922 which was interrupted in 1926 by a year of classes at the National Academy of Design. During this period, Roszak's output was devoted to painting and lithography, and his style was indebted to such early modernists as

George Bellows and George Luks.

In 1929 Roszak went to Europe on a fellowship, and while visiting Paris he was exposed to such radical vocabularies as Surrealism, Purism, and Cubism. Roszak's fellowship period, mostly spent in his studio in Prague, coincided with the "Exhibition of Contemporary Culture" at Brno which extolled the active collaboration between Czech artists and industrial designers, a trend stimulated by the technical orientation of the Bauhaus design program. Roszak also learned of Bauhaus precepts by reading Laszlo Moholy-Nagy's book, Von Material zu Architektur. Published in the United States as The New Vision, in 1930, it had a tremendous impact on the development of geometric abstraction in this country. Throughout the book, Moholy-Nagy stressed the utilization of the machine as a versatile tool in art making, and the finely-crafted appearance of Roszak's constructions attest to his skill in handling mechanical processes.

Upon returning to the United States in 1931, Roszak settled in New York City and was awarded a Tiffany Foundation Fellowship. For the duration of the grant, Roszak lived in Oyster Bay, Long Island, and it was at this time when the artist first turned to making sculpture, producing large-scale reliefs carved from

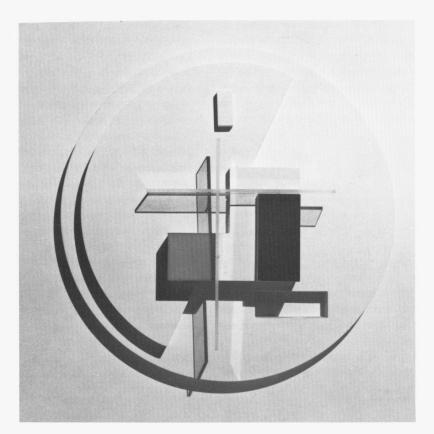
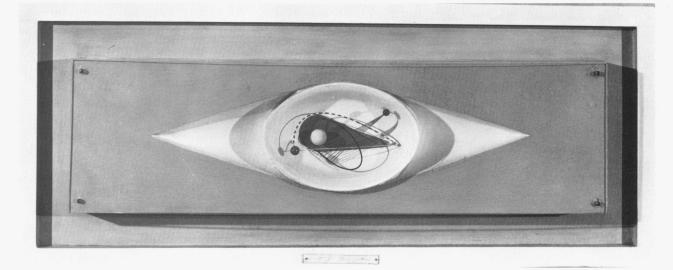


Fig. 44
Theodore Roszak
Within a Circle (1936)
plastic and wood
40 x 40 x 10
New Jersey State
Museum Collection
Purchase



plaster. Prior to his adoption of sculpture, Roszak had painted a series of Surrealist landscapes and Cubist-inspired figure studies. In many of these works, Roszak included an assortment of geometric forms rendered with an almost exaggerated sense of plasticity, signaling his growing interest in three-dimensional design. Indeed, a variety of these abstract shapes were later reformulated as sculptural elements in his plaster reliefs. Roszak's background as a painter is also reflected in his constructions from the 1930s and 1940s, as a number of these pieces were boldly colored in a range of vibrant, primary hues.

In 1931, Roszak enrolled in tool designing courses at an industrial school, and he soon set up his own shop equipped with a full array of tool-making hardware. Intrigued by the Bauhaus notion that artists should create forms expressive of the machine age, Roszak employed a wide range of tools that had previously been used by industrial designers. In keeping with his scientific approach to making sculpture, many of the preparatory studies for Roszak's reliefs were drawn on graph paper, executed with the technical precision of an engineering plan. This successful merging of art with technology was strongly tied to the machine-oriented ideology of the 1920s and 1930s.

Roszak soon gave up working in plaster and began to experiment with forms making use of his new metal-working skills. During the 1930s, the style of his reliefs vacillated between the polar extremes of biomorphism and geometric abstraction, and in several works he freely mixed both modes to create fantastic hybrid designs. However, the majority of Roszak's constructions from the first part of the decade were decidedly organic in character and resemble swirling matter frozen into static, pristine forms.

In addition to sculpting these amorphic relief shapes, Roszak also employed a purely geometric idiom

in several of his wall constructions. Unlike the streamlined, curvilinear elements that appear in his works from the early 1930s, the geometric style of Within a Circle (fig. 44), a plastic and wood relief from 1936, can be linked to the Neo-Plastic vocabulary of Piet Mondrian and the De Stijl group. In this piece, Roszak has arranged a series of solidly colored and transparent planar elements on a circular backing. While several of the geometric shapes are parallel to the face of the relief, others thrust forward at right angles from the flat surface and are aligned in rigid vertical and horizontal configurations. In Within a Circle, Roszak made reference to the three-dimensional grid that underlies the planar syntax of Mondrian, successfully reformulating Neo-Plastic painting principles into sculptural form. The rectilinear structure of Within a Circle is also very similar to the cubic, architectural studies that were executed by Theo van Doesburg, such as his Project for a Private House of 1922.1 Like the architectonic abstractions of van Doesburg, Roszak has constructed an interlocking system of solid forms and cubic units of space. Moreover, the use of transparent planes in Within a Circle suggests the influence of Naum Gabo, for he produced a number of constructions in the 1920s and 1930s that were composed of clear plastic elements, allowing the artist to emphasize space as a structural component within his pieces.<sup>2</sup> Similarly, Roszak articulated space in Within a Circle by creating a geometric grid of solid forms and transparent planes. Both Gabo and van Doesburg viewed their works in relation to architectural design. In 1940, a reviewer for The New York Times drew a parallel between Roszak's geometric reliefs and architecture commenting, "They are clean, bright, self-sufficient ... and are suggestive of a variety of architecturally decorative uses."3

Within a Circle also bears a close resemblance to the reliefs of Jean Gorin, the French geometric abstractionist who was a prominent figure in the Parisian Fig. 45
Theodore Roszak
Elliptical Arrangement,
1937
mixed media
10 x 24 x 2
Sid Deutsch Gallery

Abstraction-Creátion group.<sup>4</sup> In addition to the possible influence of van Doesburg, Gabo, and Gorin, the geometric vocabulary used by Moholy-Nagy in his paintings from the 1920s may have served as a point of formal departure for Roszak. For example, Moholy-Nagy's painting ZVIII of 1924 is an exercise in pure geometric abstraction. Here, the Hungarian Constructivist has depicted a series of interpenetrating planes that are juxtaposed against a background of rectangular and circular forms. The angled, plastic strips of Roszak's Within a Circle resemble the suspended, intersecting planes of ZVIII, yet while Moholy-Nagy used illusionistic painting techniques, Roszak's relief is a tangible form which boldly projects forward into space.

During the latter part of the 1930s, Roszak's works again became more curvilinear and organic, reflecting the impact of Joan Miro's and Jean Arp's Surrealist images. In Red Amorphic in Oval of 1937 (pl. IX) Roszak exploited the pliancy of steel to create a sinuous figureeight shape. Echoing the "truth to materials" credo of the Russian Constructivists, Roszak once remarked that the forms of his reliefs were dictated by the inherent structural properties of metal and plastic.<sup>5</sup> The rhythmic, curving design of his construction seems to allude to swirling motion and the artist reinforced this notion by including small spherical shapes that turn in orbital patterns. The quality of motion and flight which marks the piece was even more strongly conveyed by positioning the relief on the wall; in dispensing with the pedestal, Roszak was able to create the impression that his celestial, biomorphic form was actually hovering in space. Besides the circular elements that appear in Red Amorphic in Oval, Roszak also included a triangular structure of wire that may have been inspired by illustrations in Moholy-Nagy's The New Vision. Not only did the book provide Roszak with an ideological base for assimilating Bauhaus and Constructivist tenets, it also illustrated forms that Roszak readily incorporated into his reliefs. In his study, Moholy-Nagy featured sculptural plans by Joost Schmidt in which the outer skins of objects were depicted as an open network of wire.<sup>6</sup> Although a shape has been delineated, the mesh-like surface allows the interior space of the form to be revealed, creating a sense of virtual volume. The design of the metal web in Red Amorphic in Oval relates to the structural principles devised by Schmidt in his spatial plastic elements.

Roszak used a similar wire shape in his Elliptical

Arrangement, 1937 (fig. 45), a steel, plastic, and wood relief of the same year. Further, its surface has been enlivened by the same spherical elements that appear in Red Amorphic in Oval. One of the spheres is attached to an arcing trail of dashes suggesting the orbital movement of a planet or atomic particle. Elliptical Arrangement, 1937 reflects Roszak's active interest in astronomical discoveries and physics, a concern that he shared with other modernist sculptors, particularly Alexander Calder and Ibram Lassaw.

In 1938, Roszak had an opportunity to work with Moholy-Nagy at the Design Laboratory in New York, a workshop sponsored by the Fine Arts Project of the W. P. A. established under the guidance of Moholy-Nagy. Roszak taught design and composition there, and his commitment to a technologically based art was strengthened through his association with the Hungarian Constructivist.

During the 1940s, Roszak continued making his constructions. One relief he produced in 1943, Vertical Construction, reveals that Roszak's restless experimentation with forms had not abated. The style of the work is strongly tied to Roszak's earlier interest in the Purist manner of Amédée Ozenfant, yet Roszak ventured beyond the planar boundaries of the canvas to realize his reductivist design in plastic terms. By the mid-1940s, Roszak had abandoned the Constructivist approach for the expressionist style which was to become his sculptural trademark. While Roszak had, indeed, rejected the Constructivist mode in his later work, it was more for ideological than formal reasons as he pessimistically exclaimed in 1949:

It may be relevant to recall that the constructivist position in modern art assumes a total interaction with life, theoretically and in direct engagement. This in turn suggests that the sculptor could assume the multiple rôle of artist-designer-technician and so forth, implying a creative life beneficial to society through industrial channels. . . . Industry today cannot absorb any genuine esthetic values. . . <sup>7</sup>

Roszak's constructed reliefs were widely exhibited throughout the 1940s and 1950s, yet after a 1956 retrospective of his works, many of them were stored away in the artist's studio and were not exhibited again until 1978. The show at the Zabriskie Gallery in New York City prompted a positive critical reassessment of

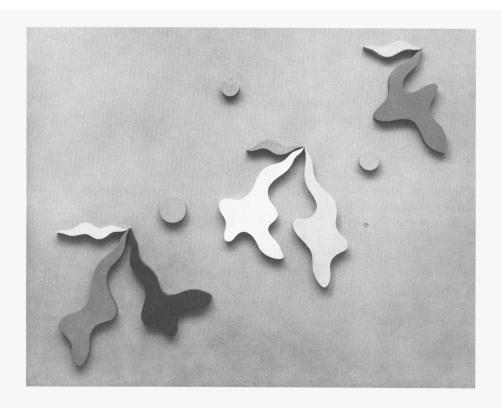


Fig. 46
Charles Shaw
Polygon, 1937
wood relief painted red,
blue, grey and white
48 x 60
Washburn Gallery

Roszak's early constructions, and they are now regarded as being among the most innovative sculptural works of the period. In producing his reliefs, Roszak adhered to Bauhaus and Constructivist dictates, yet the mathematical anonymity of these styles was tempered by his own inventive brand of Surrealist whimsy and expressive use of color.

## **NOTES**

<sup>1</sup>Alfred H. Barr, Cubism and Abstract Art (New York: Museum of Modern Art, 1936. Reprint by Arno Press, 1966), p. 197.

<sup>2</sup>Barr, Cubism and Abstract Art, p. 136.

<sup>3</sup>Howard Devree, "Review," The New York Times (November 17, 1940), section 9, p. 10.

<sup>4</sup>Rutgers University Art Gallery, Vanguard American Sculpture (New Brunswick, New Jersey: Rutgers University Art Gallery, 1979), p. 127.

<sup>5</sup>Museum of Modern Art, Fourteen Americans, ed. Dorothy C. Miller (New York: Museum of Modern Art, 1946), p. 37.

<sup>6</sup>Laszlo Moholy-Nagy, The New Vision (New York: George Wittenborn, Inc., 1946), p. 37.

<sup>7</sup>Theodore J. Roszak, "Some Problems of Modern Sculpture," American Magazine of Art, XLII (February, 1949), p. 56.

Plate IX
Theodore Roszak
Red Amorphic in Oval
(1937)
painted wood and steel
25 x 38 x 10
Collection of Mrs. T. Roszak



## BEYOND THE PLANE: AMERICAN CONSTRUCTIONS 1930-1965

by Joan Marter

The constructions in this exhibition were produced in the decades immediately preceding and following America's involvement in the Second World War. Beginning in the 1930s with the assimilation of the rationalist principles of Constructivism from Europe, this period culminated in the early 1960s with the emergence of a well-defined vernacular of hard-edge planar abstractions. The objectives in creating these painted reliefs range from the search for order and prosperity in the face of deprivation and political turmoil of the Great Depression, through the struggle to maintain our national integrity during World War II, followed by the hope for survival in the nuclear age. These constructed works which extend beyond the plane of the wall combine diverse materials and hues and project into the third dimension. At times these works are evocative of the transformation of an architectural interior into a pattern of abstract forms, conflating painting and sculpture at the service of a total statement. In other examples it is the optimism of machine-age technology which is generated by the Bauhaus-derived choice of polished metals and industrial elements. For many Constructivists, however, it is nature which continued to inspire: the search for a universal order based on an analysis of the underlying structure of reality.

These early Constructivists are also of some interest because a significant portion of contemporary American abstraction involves the fabrication of works which extend beyond the plane of the wall while remaining attached to it, or that extend the pictorial surface by introducing elements which relate in actual space. When recent works by Frank Stella, George Sugarman, Ellsworth Kelly, Donald Judd, and others suggest that planar/spatial constructions have become an American idiom, the precedents for this vernacular in the production of previous decades warrant some consideration.

Americans began to make constructions in the 1930s as a direct result of their exposure to International Constructivism, either through trips abroad or through exhibitions and publications in this country. Laszlo Moholy-Nagy, who settled in the United States in 1937, and Naum Gabo, who visited in the following year and settled permanently in 1946, encouraged the perpetuation of the machine aesthetics of the Bauhaus and the acknowledgement of the space/time continuum in abstract art. During the 1940s, after Piet Mondrian's arrival here, there was a resurgence of interest in the

to describe the interior spatial volume of the guitar, but also to break open the contours of the object and relate it more directly to surrounding space. In most Cubist constructions the wall serves as a pictorial ground, while the works extend through several spatial planes due to the superimposition of elements. The forms are often geometric, and sheets of metal are curved or cut to make reference to still-life objects. Picasso, Alexander reference to still-life objects. Picasso, Alexander created constructions remained committed to the representation of observed reality, however abstracted the forms might be. In addition, there was no stated political forms might be. In addition, there was no stated political ideology which was related to the works.

cerns dominated the utilitarian interests of Tatlin: in his Realistic Manifesto of 1920. Here aesthetic conoutlined some of the principal tenets of Constructivism challenged among the Russian avant-garde. Gabo ever, the Productivists headed by Tatlin were not unof the new government and Communist ideologies. Howartists. Constructivism was intended to serve the needs were directly associated with the production of these machine age were espoused. Political and social change ous metals, glass, and plastic, and the aesthetics of the tation with a full range of new materials, including variroom. The Russians were also pioneers in the experimenby situating his non-objective relief in the corner of a away trom the wall and activating a larger spatial area in 1913 in Paris, but soon he was moving his constructions initially inspired by the reliefs of Picasso which he saw the cause of the Revolution in their country. Tatlin was believing that creative radicalism was in keeping with possibilities of total abstraction in their constructions, Tatlin, Naum Gabo, and others freely explored the strong commitment to a political purpose for art. Vladimir influenced by Cubist reliefs, their works differed in the Although the Russian Constructivists were initially

The realization of our perceptions of the world in the forms of space and time is the only aim of our pictorial and plastic art...we construct our work as the universe constructs its own, as the engineer constructs his bridges, as the mathematician his formula of the orbits....in creating things we take away...all accidental and local, leaving only the reality of the constant thythm of the forces in them.!

tural. works are inherently both architectonic and architec-(although bearing some characteristics of both), these as objects. While neither painting nor sculpture taces with industrial materials, these painted reliefs exist order and composing neutral, non-individualized surpreceded. Eschewing pictorial illusionism for geometric produced in reaction to a highly subjective style that can be related to the earlier reliefs which were also which is central to the formalist aesthetics of the 1960s, rational ordering. The objectification of the work of art, hard-edge constructions employing elemental shapes in the nuclear age coincided with the re-emergence of  $\ensuremath{\mathsf{War}}$  politics and the fervent hope for a saner world in certain European artists in the post-War years. Cold mained closer to the geometric abstraction practiced by ognition during the 1950s, another group of artists repainters of Abstract Expressionism reached their full recgeometric clarity of Neo-Plasticism. While the gestural

Whether motivated by a search for universal harmony or the extraction of the essence of the natural world, whether utopian or formalist, whether rhetorical or simply rational, constructions produced by American artists are remarkable examples of the development of antists are remarkable examples of the development of

of the first constructions, he used thin sheets of metal and even collected. For Picasso's Guitar, 1911–1912, one Africa and Oceania which these artists eagerly studied inspired by primitive masks and ritualistic objects from pictorial surface. Cubist constructions were most likely Picasso began actually to extend his forms beyond the euce of a newspaper or a bottle of liquor. By 1911 even words or fragments of phrases suggesting the presforms: the contour of a violin, the sound hole of a guitar, to observed reality by relying on a few recognizable ture surface. At the same time he retained references lusionism by asserting the two-dimensionality of the picby Cézanne. Picasso broke with traditional pictorial ilthe dynamic relationship of solid and void first explored as a planar surface, the geometric analysis of form, and 1911 evolved from the new realization of the painting Cubist paintings which Picasso produced from 1909 to tinued by Pablo Picasso and Georges Braque. Analytical tioned by Paul Cézanne, and the challenge was contradition of three-dimensional illusionism was first questivists. The true nature of the pictorial surface and the early twentieth century with the Cubists and Construc-The history of relief constructions begins in the

Variations in opaque and transparent industrial materials in the constructions by Gabo, Antoine Pevsner, Ivan Puni, and other Russian artists produced greater spatial complexities than Cubist reliefs, while the mathematically-derived elements suggested links with contemporary technology. Many Constructivists, notably Gabo and Pevsner, left Russia in the early 1920s for Western Europe. The Bauhaus in Weimar (and later in Dessau) and other cities in Germany became centers for Constructivist activity.

As in Russia machine aesthetics were also a concern at the Bauhaus where Hungarian artist Moholy–Nagy produced non–objective sculpture, paintings, and designed stage sets during his years on the faculty. His book, *The New Vision*, originally published in 1925, outlined the utilization of certain biotechnical elements in the work of art.<sup>2</sup> His work as well as his writings had a major impact on American and European Constructivists. The optimistic attitude toward modern industry and the importance given to the collaboration of artist and engineer had an impact on certain American artists, who openly acknowledged the importance of Moholy–Nagy's book to their early work.<sup>3</sup>

Another major movement which contributed to the formation of a new approach to the painted relief was De Stijl in Holland, formed in 1917. Although the leading artist of the group, Mondrian, did not produce relief constructions, his principles of Neo-Plasticism offered the possibility of transforming the specifics of nature into a universalized artistic idiom of basic forms and primary colors.4 In his Paris studio, and then later in New York, Mondrian created a total environment which was a realization of his ideas in three-dimensional space. Other De Stijl artists also experimented with the fully environmental implications of their work; for example, Theo Van Doesburg's designs for the cinema/dance hall of the Cafe l'Aubette in 1926.5 By 1928, the Dutch artist César Domela, who had joined De Stijl three years earlier, began to produce relief constructions. He was a member of several avant-garde groups in Paris during the following decade, and the exhibition of his constructions in the United States was important to American Constructivists.6

Architects, designers, painters, and sculptors combined efforts under the rubric of De Stijl. In addition to the organization of his studios, Mondrian considered the possibilities of moving beyond the pictorial plane in his unrealized project for an interior of 1923 and his set design for a play by Michel Seuphor in 1926.<sup>7</sup> The

utopian fusion of art and life envisioned by De Stijl artists—the belief in the joining together of all of the arts in the creation of an abstract environment which would support harmony among mankind—influenced American artists of the following decade.

By the early 1920s non-objective constructions were being produced in Germany, Russia, France, and Poland. A Congress of International Progressive Artists was held in Dusseldorf in 1922. The statement delivered by El Lissitzky, editor of the journal Veshch/Gegenstand/Objet was typical of the desire for a truly international art with universal significance among members of the Congress:

The new art is founded not on a subjective, but an objective basis. This, like science, can be described with precision and is by nature constructive. It unites not only pure art, but all those who stand at the frontier of the new culture. The artist is companion to the scholar, the engineer, and the worker.8

Despite the ambitious rhetoric on the purpose of art and the call for collaboration with the engineer, it = was only the architect and designer who were initially successful in fusing art and technology. For the most part, the constructions produced in these years by Kurt Schwitters, Friedrich Vordemberge-Gildewart, Domela, Jean Gorin, and others are small works combining the tenets of De Stijl with Constructivist materials. Throughout the 1920s, Germany was the principal locus for the production, exhibition, and publication of these painted constructions. However, when Hitler moved to suppress all artistic radicalism, the Constructivists left Germany and settled in France and England. Eventually some of these progressive artists came to the United States. By the time the Nazi regime ordered the closing of the Bauhaus in 1933, the Constructivists had already organized several groups in Paris. Shortlived organizations such as Cercle et Carré and Art Concret were followed in 1931 by the larger and more influential Abstraction-Création. This group, which at one time numbered five hundred members, provided the major precedent for the organization of abstract artists in the United States five years later, the American Abstract Artists. Members of Abstraction-Création, which included some American artists such as Alexander Calder, exhibited frequently, and issued an important publication, Abstraction-Création Art Non-Figuratif.

portant to formal art instruction in the fabrication of constructions. For Calder it was his degree in mechanical engineering, specifically his knowledge of kinetics, which accounted for his ability to fabricate motorized and wind-driven constructions. Smith worked on an assembly line in an automobile factory, and Roszak set up his own tool shop. In addition to the machine-like elements found in these constructions, even the sculpture of the period in these constructions, even the sculpture of the period and frontality, attesting to the interrelationship of painting and sculpture in these years.

How did the first generation of American abstrac-

but she is mentioned by many American abstractionists. Taeuber-Arp's work in these years has been overlooked, journals of the decade. The importance of and the editor of Plastique, one of the avant-garde the creator of many relief constructions during the 1930s, ple, many of the Americans met Sophie Taeuber-Arp, with others in the Abstraction-Création group. For examment their personal contact with these European artists of inspiration. For these Americans it is possible to docustract Surrealism of Miró and Arp was a major source jects. For Calder, Gertrude Greene, and Shaw, the Abpainted constructions with an assortment of found obberge—Gildewart. By 1926 he began to produce by Schwitters, Carl Buchheister, and Vordem-1920s and had seen constructions and abstract paintings Kelpe, for example, had been in Germany in the early begin their own experimentation with painted reliefs. European modernists who inspired the Americans to Greene, and Roszak) there was first-hand contact with factors. For a number of the artists (Kelpe, Calder, Shaw, in the essays which follow, but there are some common artist there are specific circumstances which are detailed the plane but remained attached to the wall? For each tionists come to produce works which extended beyond

However, for Ibram Lassaw, Burgoyne Diller, and Biederman among others, the creation of painted constructions predates their first-hand exposure to the European avant-garde and actually resulted from their friendship with progressive American artists. Calder, for

harmony among men through the unity of art and tech-

and were committed to the idea of creating a new

Constructivists who adhered to the tenets of the Bauhaus

to his later work. It was in these countries that he met

and Czechoslovakia which were of major consequence

Roszak traveled to Paris, but it was his sojourns in Poland

nology.

American artists had opportunities to learn of Constructivist developments in Europe during the 1920s through exhibitions and publications. Although the assimilation of Constructivist principles can be found in the works of only a small group of American artists initially, the germination of these ideas during the 1930s assured a substantial production of related, but more innovative works in the following decades. Acceptance of this progressive ideology by a few Americans suggests their sophistication regarding vanguard styles from abroad and also establishes them as the pioneers of a new and also establishes them as the pioneers of a new

direction for American art.

The fabrication of constructions by Paul Kelpe, Calder, Theodore Roszak, Charles Shaw, Gertrude resents a breakthrough for the development of an abstract style in this country based on International Constructivism. Simultaneously these artists learned other previous developments in abstraction: notably Cézanne's previous developments in abstraction: notably Cézanne's previous developments in abstraction and the new analysis of traditional pictorial illusionism and the new analysis of the structure of reality undertaken by the Cubists. The American artists mentioned above were more attracted to the non-objective art of De Stijl and the Bauhaus, however, with some interest also expressed in the biomorphism of Jean Arp and Joan Miró.

With these Constructivist works there was also an understanding and acceptance of the principal goal of every avant-garde artist of the period following World War I: to use the arts to achieve a new unity and harmony among men. The ultimate purpose was the creation of an urban utopia based on the elements of abstraction of an urban utopia based on the elements of abstraction. For some Americans the machine aesthetics of the Bauhaus were of particular importance, and the optimistic attitude toward technological progress assured a place for machine forms in American assemblages and sculpture for many decades (although for some artists there was a distinctly playful attitude toward the machine—which was indebted to Marcel Duchamp and Chine—which was indebted to Marcel Duchamp and France Picabia).

As for the radical departure from traditional ideas about the artist, it is from this period that America became less concerned with the identification of painters or sculptors based on the appropriate academic training and artists freely practiced all mediums. For example, Calder, David Smith, and Roszak were active both in the creation of two-dimensional and three-dimensional acceptance, in this period. Another change was that work experiences, particularly in industry, proved equally imexaperiences, particularly in industry, proved equally im-