popova

liubov

The Museum of Modern Art, New York

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Although Liubov Popova's mature career spanned only a dozen years, from 1912 to 1924, she produced a sizable body of work that is diverse in style as well as highly innovative. Along with Kazimir Malevich, Vladimir Tatlin, and Alexander Rodchenko, she stands out as one of the four most accomplished artists of the Russian avant-garde in the first quarter of the twentieth century. The work of these artists serves to define important issues in the development of Russian art from figuration to abstraction and, subsequently, from pure art to utilitarian art. Yet in Popova's relentless pursuit of a new visual language compatible with the requirements of modernity and contemporary Russian society, she created a body of work quite different from that of the three other major artists of the period. Unlike Malevich she was not interested in the mystical and spiritual aspects of art; unlike Tatlin she did not work with real materials in real space; and unlike Rodchenko she was not a theoretician.

Popova's evolution follows a path that in many ways was shared by a number of artists of the avant-garde. However, it is essential to remember that throughout all the stylistic changes in her work, Popova's vision always remained rooted in painting. She played a major role in shaping the concepts and ideals of Russian Constructivism during its decade of existence in post-revolutionary Russia. The permutations of her painting after 1919 reflect the transformations of Constructivist concepts, and her oeuvre represents Constructivist painting at its best. Now that many of Popova's works and related documents are available for study, it is possible to evaluate her achievement in a more general art-historical context.[1]

"Artist-Constructor" was the term applied to Popova by her contemporaries in the catalogue of the artist's posthumous exhibition that opened in Moscow in December 1924. In a brief foreword to that catalogue, Popova's artistic path was summarized, and the revolutionary spirit that guided the search for innovative solutions in her work was emphasized:

> A Cubist period (concerned with the problem of form) was succeeded by a Futurist period (concerned with the problem of movement and color), followed by the principle of abstracting parts of objects and then, with a logical inevitability, the abstraction of the object itself. Representation was replaced by the construction of form and line (post-Cubism) and color (Suprematism). In 1917 her revolutionary tendencies came to the fore.... The most productive period of Popova's career took place in the years 1921–24.[2]

In her writings[3] Popova designated the year 1913 as the beginning of her mature independent work. Indeed, her output of the years 1908 to 1912, which included still lifes, landscapes, and studies of trees and human figures, is representative of the then broadly practiced idiom, influenced by Impressionism and Cézanne, that was favored by many Russian artists of the period, including her teachers Stanislav Zhukovski and Konstantin Yuon.

Supplementing these early influences were Popova's numerous trips to historic Russian cities and to Italy between 1909 and 1911. A trip to Kiev in 1909 awakened in her an admiration for ancient Russian art and the religious paintings of the Symbolist artist Mikhail Vrubel. On her first visit to Italy, in 1910, the art of Giotto and Pinturicchio had a particularly strong impact. The summer of 1910 took her to Pskov and Novgorod, where she became acquainted with splendid examples of icon painting. The following year she visited St. Petersburg and admired the collections of the Hermitage; and later that year she traveled to Rostov Veliki, Yaroslavl, and Suzdal. The impressions gained from these journeys remained with Popova and were to serve as formative influences on her work in terms of her perception of form and color. Sensing the necessity to develop a more independent style, Popova took a studio on Antipievski Street in Moscow with the painter Liudmila A. Prudkovskaya in the fall of 1911. Subsequently, in 1912,

1. Liubov Popova. *Female Model*. c. 1912. Oil on canvas, 49×28½" (124.5×72.5 cm). Private collection, Moscow

2. Vladimir Tatlin. *Analytical Figure Drawing*. c. 1913–14. Leaf 79 from an album of drawings. Charcoal on paper, 16×10¼" (43×26 cm). Central State Archive of Literature and Art, Moscow

she joined a collective studio, The Tower, on Kuznetski Most, where she worked alongside such artists as Viktor Bart, Vladimir Tatlin, Anna Troyanovskaya, and Kirill Zdanevich. During this period she also became acquainted with modern French art through visits to the Sergei Shchukin collection in Moscow.[4]

Clearly Popova's artistic independence was triggered by a trip to Paris in the fall of 1912 with her friend Nadezhda Udaltsova. This stay of several months provided Popova with an intensive experience of French Cubism. She had been introduced to Cubism in early 1912 through the works of Picasso and Braque (mostly examples of the years 1908–09) in the Shchukin collection, as well as through her contacts with Russian avant-garde artists, French and Russian art periodicals, and numerous exhibitions that included French Cubist works. She was also certainly aware of the debates on Cubism raging among Russian avant-garde artists, as well as of the controversy over whether to accept or reject Western influences such as Cubism in light of efforts to create a new, purely Russian artistic idiom. Those in favor of rejecting foreign influences, notably the painters Mikhail Larionov and Natalia Goncharova, were opposed by other members of the avant-garde such as David Burliuk and the Jack of Diamonds group, who were strongly interested in modern French art.

Russian interest in Cubism peaked in 1912–13. Besides the debates on Cubism sponsored by the Jack of Diamonds and Union of Youth groups in February and November 1912, an anthology of essays titled *A Slap in the Face of Public Taste*, containing Burliuk's article on Cubism, was published in December of that year, and a number of exhibitions including French Cubist works were presented. In 1912, while Popova was in Paris, the book *Du Cubisme* by Albert Gleizes and Jean Metzinger appeared; it was reviewed in the March 1913 issue of *Soyouz Molodezhy* (*Union of Youth*) and was published that year in Russian translation. All of these events must have stimulated Popova's imagination and curiosity about Cubism. Yet, although certain aspects of Picasso's work of 1910–11 are evident in Popova's work of this period, it is clear that, like most of the other Russian artists, she had been less exposed to the fully developed high Analytic Cubism of Picasso and Braque of 1910–11 than to the slightly modified version of Cubism practiced by such artists as Gleizes, Metzinger, and Henri Le Fauconnier, whose works had often figured prominently in Russian exhibitions of French modern art. In Paris, Popova enrolled at the Académie "La Palette," where she worked under the tutelage of Metzinger and Le Fauconnier. Her understanding of Cubist principles was therefore heavily dependent on the teachings of these artists, particularly Metzinger.

Cubo-Futurism: From Figuration to Abstraction

In comparing Popova's works of 1912 before her stay in Paris with those of 1913, after she had absorbed certain principles of Cubism, one is struck by the difference in quality and the strength of expression. The comparison of *Female Model* (fig. 1) of c. 1912 and *Seated Female Nude* (page 38), one of a group of paintings of c. 1913–14 on this subject, makes manifest the leap that occurred in Popova's work within a reasonably short period of time: from a timid traditionalist to an independent, assured artist. Although it is difficult to attribute specific paintings to Popova's Parisian stay, several of her sketchbooks, containing drawings of trees and human figures done around that time, are still extant[5] and allow us to study her approach to creating form. They reveal a sure hand and tremendous energy of execution.

Among sketches of trees some are very Cézannesque; others show a Neoprimitivist quality defined by heavy black contours and simplified crude drawing, indicative of Popova's contacts with Larionov and Goncharova, the creators and practitioners of Neoprimitivism between 1908 and 1910. A greater number of sketches are of the human figure, which is fragmented and reconstituted in terms of geometric (conical and cylindrical) elements hinged to one another by circular joints. This type of figure construction shows affinities with contemporaneous figure studies by Tatlin (fig. 2), in whose studio Popova often worked during the winter of 1913–14 along with other members of the avant-garde, among them her close friend the architect Alexander Vesnin.

The principles underlying such construction of the figure are derived essentially from Cubism, modified by a certain Futurist inflection. The influence of Metzinger and Umberto Boccioni seems evident during this phase of Popova's development, but it is incorporated into her own expressive idiom. Her three different versions of a seated female nude (pages 37, 38, 39), all executed in 1913–14, bear structural analogies to Metzinger's *Tea Time (Mona Lisa with a Teaspoon)* (fig. 3) of 1911. On the other hand, the title of one of these compositions, *Figure + House + Space* (page 39), perhaps the latest of the three, can almost be read as an *hommage* to Boccioni, whose 1912 work, *Head + House + Light* (fig. 4), was included in the

3. Jean Metzinger. *Tea Time (Mona Lisa with a Teaspoon)*. 1911. Oil on cardboard, 29⅞ × 27⅝" (75.9 × 70.2 cm). The Philadelphia Museum of Art, Louise and Walter Arensberg Collection

4. Umberto Boccioni. *Head + House + Light*. 1912. Plaster. Destroyed

exhibition of his sculpture held in Paris at the Galerie La Boëtie in 1913.[6]

Popova, who was then still in France, might have seen the exhibition and responded to it in her own work. Moreover, Boccioni's *Technical Manifesto of Futurist Sculpture*, formulated in 1912, was not only included in the catalogue to the La Boëtie exhibition but also translated into Russian in 1914, so that Popova would certainly have been familiar with it. The Italian artist's concern with the relationship between an object and the surrounding space was shared by Popova, who was trying to work out this problem in her own paintings. Boccioni's sculpture *Development of a Bottle in Space*, also included in his 1913 exhibition in Paris,[7] has often been quoted as an inspiration for her work of that period.[8]

An analysis of Popova's work also suggests an affinity with the work of Fernand Léger, whose tubular and conical forms, particularly in his series of paintings of 1913–14, *Contraste des formes*, are similar in structure and geometry to those in Popova's paintings.

Another possible influence on the evolution of the new idiom, composed of nesting cones and cylinders, was the Russian sculptor Alexander Archipenko, then also living in Paris. During Popova's stay in Paris, from the fall of 1912 through the summer of 1913, she visited his studio and was familiar with the three-dimensional work he was then creating. These mixed-medium constructions, such as *Medrano I* (fig. 5), combined wood, glass, and metal, and employed a vocabulary of fragmented conical and cylindrical shapes as well as circular elements emphasizing shoulder, knee, and elbow joints.[9] Popova's figure drawings similarly emphasize fragmentation of the body into geometric components built of planar and three-dimensional sections. A grid is superimposed on the structure of a figure, and in some cases the broad shading strokes intensify a sense of planarity rather than of volume.

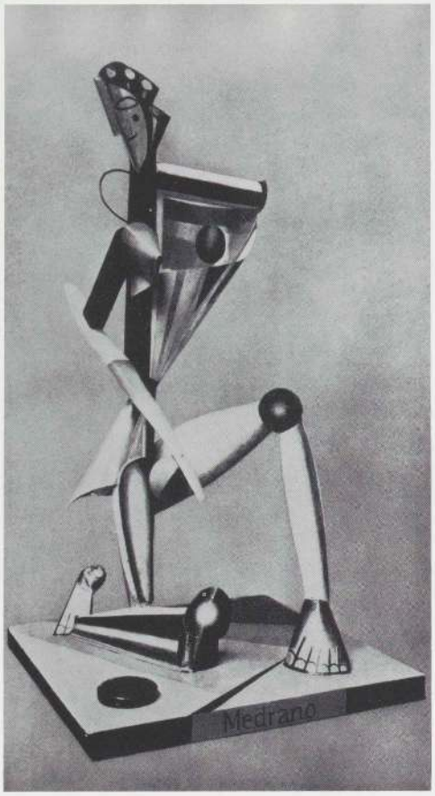
At this point Popova's interest is focused on the figure itself and its construction. In the three versions of a seated female nude that mark the beginning of her Cubo-Futurist period, she further explores the relationship of the fragmented figure in space, trying to accommodate the figure to its surroundings. In other, already more fully Cubo-Futurist works of 1914, such as *Cubist Cityscape* (page 42)[10] and *Objects from the Dyer's Shop* (page 43), Popova attempts a much more coherent overall composition; the sections rendered three-dimensionally are fewer and more integrated into the overall structure. The division of figure/ground is almost entirely dissolved. There is also an increased sense of planar composition. It should be noted that Popova's Cubo-Futurism is quite distinct from that of Malevich. Hers shows a much greater Western influence and is devoid of the irrational element that Malevich introduced into his compositions.

In Popova's *Objects from the Dyer's Shop*, the Cubist and Futurist elements are assimilated into a distinctly personal structure. The composition is essentially a still life including objects associated with the dyer's shop, yet the forms are so fragmented, flattened, and dislocated that the initial objects—hat, gloves, a uniform—are barely discernible. Flatness of space is emphasized by the inclusion of lettering, a standard Cubist device (here in the Cyrillic alphabet). In a few instances the vestiges of volumetric forms are still present. But there is nothing Cubist about the overall color scheme, whose brilliance and combination of hues are reminiscent of Russian folk art and icon painting. An effort seems to have been made to incorporate Futurist devices such as lines of force[11] and repetition of forms in sequential order, to accentuate the dynamic quality of the picture.

Although Cubist and Futurist pictorial strategies were well known among Russian artists of the avant-garde (and it should be emphasized that Cubo-Futurism was a purely Russian phenomenon), Popova's interest in Futurist devices was probably intensified by her trip to Italy in the spring of 1914 after her second stay in Paris. Even though she studied mainly ancient monuments and masterpieces of Renaissance art, this direct contact with the birthplace of Futurism must have had a more immediate effect. In a group of still-life paintings of 1914 some are titled *Italian Still Life* (page 44); others have specific Italian references (pages 50, 51). Their compositional structure is quite different from that of *Cubist Cityscape* or *Objects from the Dyer's Shop*. The forms are larger, the space shallower, and the flatness of the picture plane emphasized by the placement of lettering or inscriptions across the picture surface. The inscriptions, primarily in the Latin alphabet and in various languages, contribute to the anecdotal reading of the pictures; some, such as *LACERBA*,[12] are direct references to the incorporated influences.

The series of still lifes marks a continuation of Popova's interest in exploring this genre, along with portraiture, and, in 1916, landscape. These interests, already present since the early phase of her artistic development, would remain until about 1916, when she entered her non-objective phase.

Among the most successful paintings of Popova's mature Cubo-Futurist period are her portraits of 1915, in which she com-



5. Alexander Archipenko. *Medrano I.* 1912. Wood, glass, sheet metal, metal wire, found objects, painted, 38" (96.5 cm) high. Probably destroyed during World War I

6. Jean Metzinger. *Woman with a Fan.* 1912–13. Oil on canvas, 35¾ × 25¼" (90.7 × 64.2 cm). Solomon R. Guggenheim Museum, New York. Gift of Solomon R. Guggenheim

bines the Cubist and Futurist devices of fragmenting form, including lettering or Western words, and using lines of force. The heightened color she employed was related to the palette of greens and ochres characteristic of the earliest Cubist paintings of Picasso and Braque (1908–09), but the brightness of her color is clearly much more Russian and the final form independent and innovative. The Cubist and Futurist elements, essentially incompatible in nature as representing the static versus the dynamic aspects of the picture, are organized into a harmonious whole.

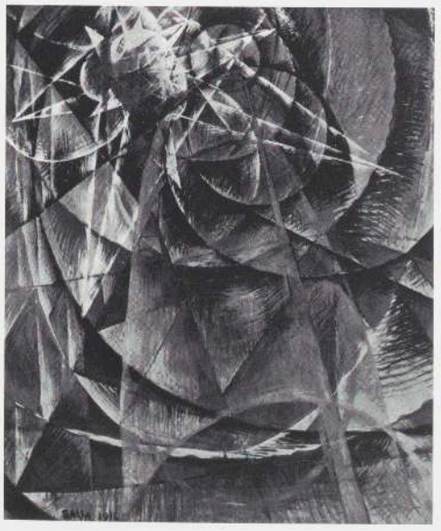
Popova's experimentation with portraiture produced *The Pianist* (page 47), *Lady with a Guitar* (page 48), *Portrait* (page 51), and *Portrait of a Philosopher* (page 53), among other works. *The Pianist* displays much greater affinities with Cubism than Futurism, in terms both of the color scheme—muted, closely valued grays with touches of ochre and brown—and the compositional structure. Although the picture is painted flatly, certain areas are textured rather heavily, indicating Popova's interest in materials. This is particularly evident at the left side of the picture, which is covered with very Cubist stippling, and the ochre/brown section at the lower right, where the heavy texture creates a comb-like pattern similar to that of the pianist's flowing hair, but here almost incised in paint. Especially heavily textured, with the look of sand or marble dust, is the white plane at top center, curving out directly to the right of the face.

Popova's interest in textural explorations should be viewed in the context of a more general interest in texture, or *faktura,* on the part of Russian avant-garde artists. Although such aspects of the surface had become important in Western European painting, the Russians developed a very specific concept of *faktura,* recognized as a vital element in the construction of a painting. David Burliuk elaborated upon this concept in his article "Faktura," published in the anthology *A Slap in the Face of Public Taste;* it was further articulated in a pamphlet by Vladimir Markov, *Principles of Creation in the Visual Arts: Faktura,* published in 1914.[13] Popova experimented with adding sand or marble dust to paint in order to give the surface an extra dimension. This often contributed to the higher light reflectivity of the surface and in later works emphasized a charged, dynamic composition. This type of texture would later be employed by Popova in her non-objective works, such as *Painterly Architectonic* of 1918 (page 81), and subsequently in the Space-Force Constructions on plywood of 1921 (pages 89, 90, 96, 97).

The year 1915 was very active for Popova creatively and marked the beginning of her serious efforts to exhibit her work. Although she had shown her paintings in 1914 with the Jack of Diamonds group, the exhibitions of 1915 marked an important point in the life of the avant-garde. On March 3, 1915, the exhibition "Tramway V: The First Futurist Exhibition of Paintings" opened in Petrograd, and Popova was represented by six works, among them *Lady with a Guitar,* one of her Cubo-Futurist portraits, probably executed early in the winter of 1915.[14] Here, despite a lingering influence of French Cubism in the coloration as much as in the fragmentation of form and the subject matter itself, the emphasis is on large planar sections throughout the composition, so that the space within which the figure is situated is much more compressed. Depth is only suggested by the perspectival treatment of the hat, circular fragments of the figure's left arm, and vestiges of the three-dimensionally rendered guitar in the lower central section. Popova is clearly grappling with her experiences of Cubism, attempting to infuse them with her own explorations in search of a pictorial language independent of the influence of the French Cubists.

Even if parallels could be drawn to various works by Metzinger, such as the two paintings of 1912 titled *The Yellow Feather,* Popova's interest in a more planar organization of the picture and much greater suppression of the figurative element makes her work quite distinct. The high color of some of the paintings of 1914, such as *Cubist Cityscape* and *Objects from the Dyer's Shop,* is eliminated in favor of a muted palette of grays, which reveals the artist's greater preoccupation with form than with spectral color. The culmination of these explorations can be studied in *Portrait of a Philosopher,* depicting the artist's younger brother Pavel, which was first shown in "The Last Futurist Exhibition of Paintings: 0.10" in Petrograd in December 1915–January 1916.[15] The seated figure of a man in a top hat, holding a copy of the French periodical *Revue Philosophique de la France et de l'Étranger,* can be compared—as Dimitri Sarabianov points out[16]—to Juan Gris's 1912 *Man in a Café* and Metzinger's *Portrait of Albert Gleizes* (1911–12). On the other hand, it might draw its inspiration from Picasso's *Portrait of Ambroise Vollard* (1910), which had been in Moscow since 1913 in the collection of Ivan Morozov. The flowing hair of the sitter is also reminiscent of Picasso's *Portrait of Daniel-Henry Kahnweiler* (1910). Among Russian works, two paintings by Malevich—*Portrait of M. V. Matiushin* (1913), shown in the "Tramway V" exhibition,[17] and *Portrait of Ivan V. Kliun* (1913)—constitute precedents for Cubo-Futurist

7. Umberto Boccioni. *Materia.* 1912. Oil on canvas, 88½ × 59" (225 × 150 cm). Private collection, Milan



8. Giacomo Balla. *Mercury Passing in Front of the Sun.* 1914. Tempera on paper mounted on canvas, 48⅜ × 39½" (123.5 × 100.5 cm). Private collection, Milan

experimentation with portraiture.

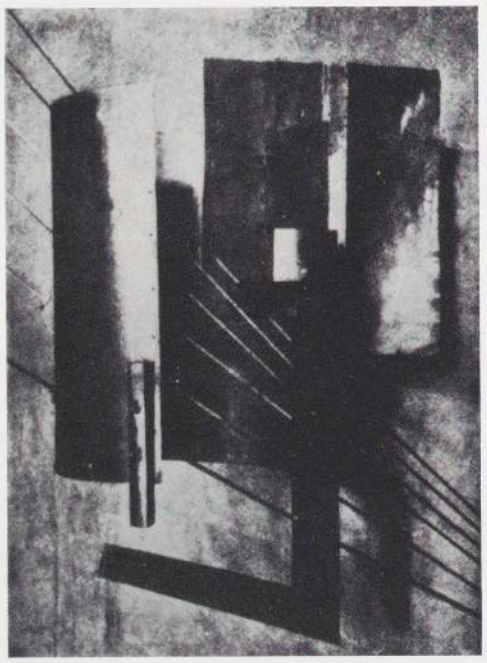
However, departing from the above examples, Popova develops in this portrait her own stylistic principles. She analyzes and reconstitutes the figure as a composite of large overlapping planes often shaded in a darker hue or simply in white. Large sections of recognizable figuration are retained in such areas as the sitter's face, his left hand, and the periodical we assume he is holding. The distinction between background and figure is eliminated; both are created of the same substance—the plane. The relationship of the planar parts becomes very important, and Popova at times makes use of the Cézannesque *passage*—planes situated at different points in space bleeding into one another in such a way that they constitute one continuous pictorial plane. The spatial structure is very tight and the space of the picture very shallow. This impression is further enhanced by the inclusion of the French words *Revue Philos* (an allusion to the sitter's interests and occupation) and fragment *Exp*—the beginning of the word *exposition*. Only the piece of patterned wallpaper in the upper right-hand corner seems to indicate a different point in space, somewhere behind the figure yet brought forward through its color. With *Portrait of a Philosopher* Popova abandons the muted palette and introduces high color in different intensities of deep blue with contrasts of bright yellow and green. She returns here to the color scheme of the earlier pictures of 1914. The bright palette and planar structure of the composition signal pictorial elements that will become principal vehicles of expression in her non-objective works: color and plane.

While working on the portraits, Popova explored another subject equally popular with the Cubists: the still life with musical instruments. Among her six contributions to the "Tramway V" exhibition were *Violin* (page 48) and *Objects* (page 49), the latter essentially a still life with a guitar and bowl of fruit. Because of its inclusion in the "Tramway V" exhibition, this work must have been executed in the winter of 1915, around the time of *Lady with a Guitar.* Other still lifes of 1915 incorporate the same elements: a guitar, a bowl of fruit, a traditional Russian tray (black with a decorated border), and Cyrillic lettering. Here the lettering *TEL 35-0* may refer simply to the artist's or a friend's telephone number. In this group of compositions the forms become larger. Some remain recognizable, such as the bowl of fruit; others, such as the guitar and tray, are indicated by their characteristic shapes. The work repeats the overall blue-gray tonality of *Lady with a Guitar;* the large planar sections throughout the composition unify the pictorial field and create an overall surface composition. The principle of arranging the planes as intersecting elements foreshadows the planar configurations of the Painterly Architectonics.

Popova's search for new formal solutions made 1915 a highly productive and stylistically diverse year. Among her important works of this period are two canvases titled *Traveling Woman* (pages 54, 55). Here she is no longer preoccupied with analyzing the figure in space and recomposing it within the Cubo-Futurist vocabulary. She is now concerned mainly with the flatness of pictorial surface and with finding a way to convey dynamism through the entire compositional arrangement as well as building up all the pictorial elements, that is, both figure and space, from the same formal components.

The two versions differ in color and in the vocabulary of forms used. In one version, in the Norton Simon collection (page 54), the palette consists of deep purplish blues, greens, and yellows that complement and balance one another. The section describing the body of the traveling woman is defined broadly in terms of triangular planes. The composition carries a certain distant analogy to Metzinger's *Woman with a Fan* of 1912–13 (fig. 6). Popova's composition, however, is almost non-figurative; the image of the subject is decoded through the recognition of such Cyrillic words and their fragments as *journaly* (newspapers) and *chliap* (hats), referring possibly to a hatbox. The face under the hat decorated with a feather is dissolved into white triangles, legible as a face only by association with the stated subject of the picture. Still in use are certain Futurist devices for integrating figure and space, not unlike those in Boccioni's painting *Materia* (fig. 7). The dynamic quality of the woman moving against a background that could be associated with a train station is conveyed through the network of diagonal lines defining the sides of triangular planes.[18] The composition exudes great energy through the interplay of form and color.

The *Traveling Woman*[19] in the Costakis collection owes more to Italian Futurism in the way dynamism is projected through lines of force related to the manner of Boccioni and Balla (fig. 8), whose works were certainly familiar to Popova. By making use of multiple diagonals and circular rhythms, she emphasizes her own manner of depicting velocity and light. The overall organization of the picture looks back to the compositional structure of *Objects from the Dyer's Shop* and forward to her planar dynamic arrangements in the Painterly Architectonics of 1916–19. This is particularly evident in the central section, where the two diagonals bordering the



9. Vladimir Tatlin. *Corner Counter-Relief.* 1914–15. Detail of the central section. Wood, iron, metal, cable. State Russian Museum, Leningrad

10. Liubov Popova. *Volume-Space Relief.* 1915. Lost

fragments of planes come to an apex and create a triangular or pyramidal shape, oriented dynamically upward. The restrained palette of dark blues and purplish burgundies is well balanced and further emphasizes the energy within the composition.

As these paintings indicate, Popova's work of 1915 encompasses a variety of styles. This diversity makes evident her search for a new, personal formal language, and parallels the quest of other members of the Russian artistic and literary avant-garde at that time. Popova's efforts brought results in the non-objective works of 1916, but a year before reaching the point of complete non-objectivity, she explored still another avenue of expression, one more sculptural and three-dimensional—the relief.

Three-Dimensional Work: Reliefs

Popova's renewed contact with Tatlin's studio upon her return from France in 1913 added new elements to her stylistic research, namely an interest in real materials and real space. She worked in his studio from 1913 through 1916 in the company of other members of the avant-garde, including Udaltsova and Vesnin. There she saw Tatlin's newly created three-dimensional works—defined by him first as painterly and then as counter-reliefs (fig. 9). These innovative assemblages of planar abstract shapes, made from randomly found ordinary industrial materials (primarily wood, glass, and metal), explored real space as an active component of form. The principle underlying their creation was the "culture of materials," according to which each material dictates the form that best expresses its inherent character.[20] Executed mainly in 1914–15, these works stimulated the development of a new open sculptural idiom defined as "construction" and led to the emergence of Constructivism. Seeing Tatlin's reliefs might have prompted Popova to undertake her own experiments with a three-dimensional medium, as a number of other artists were also doing at the time, among them Vladimir Baranoff-Rossiné, Ivan Kliun, and Ivan Puni.[21]

During 1915 Popova created at least three and probably four reliefs: *Portrait of a Lady (Plastic Drawing)* (page 56), *The Jug on the Table (Plastic Painting)* (page 57), and *Volume-Space Relief* (fig. 10). The first two, along with *Vase with Fruit (Plastic Painting)*, were exhibited in the "0.10" exhibition.[22] *Volume-Space Relief* was included in Popova's posthumous exhibition and was listed and reproduced in the catalogue under this title, along with the reliefs *Portrait of a Lady* (titled *Relief*) and *The Jug on the Table*.[23] Three reliefs, *Vase with Fruit, Volume-Space Relief,* and *The Jug on the Table,* are clearly visible in one of the installation photographs of the posthumous exhibition (fig. 11). The abstract *Volume-Space Relief* was also illustrated in *Die Kunstismen,* a book published by Hans Arp and El Lissitzky in 1925.[24] Of the four reliefs, only two, *Portrait of a Lady* and *The Jug on the Table,* are extant.

On stylistic grounds, I would suggest that the sequence of their execution proceeds from *Portrait of a Lady* to *The Jug on the Table* to the non-objective relief.[25] *Portrait of a Lady* seems to be a three-dimensional elaboration of the head and shoulders of the sitter in an earlier 1915 painting, *Lady with a Guitar* (page 48). The placement of the figure is frontal, with only some sections of the composition rendered as three-dimensional: the left side of the hat, the eye area defined by a conical form on the right of the relief (at the figure's left eye), and her right shoulder (lower left of the composition). The head is placed against the same wallpaper pattern used in *Study for a Portrait* (page 50) and *Portrait of a Philosopher.* Although the work is conceived as a relief, it operates within the artist's Cubo-Futurist vocabulary. In fact, the protruding elements done in relief can be read as three-dimensional counterparts to the analogous forms clearly visible in the right section of Popova's 1914 Cubo-Futurist painting *Objects from the Dyer's Shop.* Even the brilliant color scheme of *Portrait of a Lady* relates to *Objects from the Dyer's Shop* and *Cubist Cityscape.* Essentially, form is brought to the borderline between figuration and abstraction. Although we can clearly decipher composite parts of a woman in a hat, the shaded planes that define different parts of the face, hat, and shoulders serve also as abstract geometric shapes, anticipating Popova's use of multicolored overlapping planes in her mature non-objective works.

Both in the "0.10" exhibition and on a postcard addressed to her former governess, Adelaida Robertovna Dege, dated October 19, 1915, Popova described *Portrait of a Lady* as "plastic drawing," whereas *The Jug on the Table* was defined as "plastic painting" and reproduced as such on a postcard to Dege dated June 23, 1916.[26]

The artist's distinction between "plastic drawing" and "plastic painting," taken into consideration with the dates on the two postcards, may indicate the sequence of execution. The second relief, *The Jug on the Table,* which stylistically is more sculptural, has a greater number of three-dimensional parts than does *Portrait* and includes a fragment of an actual wooden

11. Installation view of Popova's posthumous exhibition, Moscow, December 1924

12. Georges Braque. *Castle at La Roche-Guyon*. 1909. Oil on canvas, 25¾ × 21¼" (65 × 54 cm). Pushkin State Museum of Fine Arts, Moscow

table leg. The presence of a section painted in a checkered-cloth pattern and the wooden piece could be considered her *hommage* to Picasso's first collage, *Still Life with Chair Caning* of May 1912. This seems to be the only instance when Popova used real materials as part of a composition. Generally, for her, material is identified as pictorial material, that is, the color and texture of painterly surfaces. In the right-hand section of *The Jug on the Table,* for example, the white/gray and green planes are heavily textured with an admixture of marble dust, creating a thick, crusty surface. In this relief, as in *Portrait of a Lady,* figuration is pushed to the borderline of abstraction; if the title did not clearly define the figurative subject matter, the array of ribbon-like, three-dimensional sections could be perceived as an abstract construction. Certain vestiges of the Cubo-Futurist style remain in the almost modeled quality of the half-shaded three-dimensional parts, but the main issue becomes the relationship of open volume and space.

Another relief, titled *Volume-Space Relief* in the catalogue of the posthumous exhibition, is the most abstract of all the reliefs and is essentially non-referential. Conceived as an arrangement of large, shaded, overlapping planes and ribbon-like sections, it has a compositional structure almost exactly like that of the later Painterly Architectonics. Here the artist's sole preoccupation is with the relationship of geometric form, space, and volume rather than with the descriptive subject matter, as in the other reliefs.

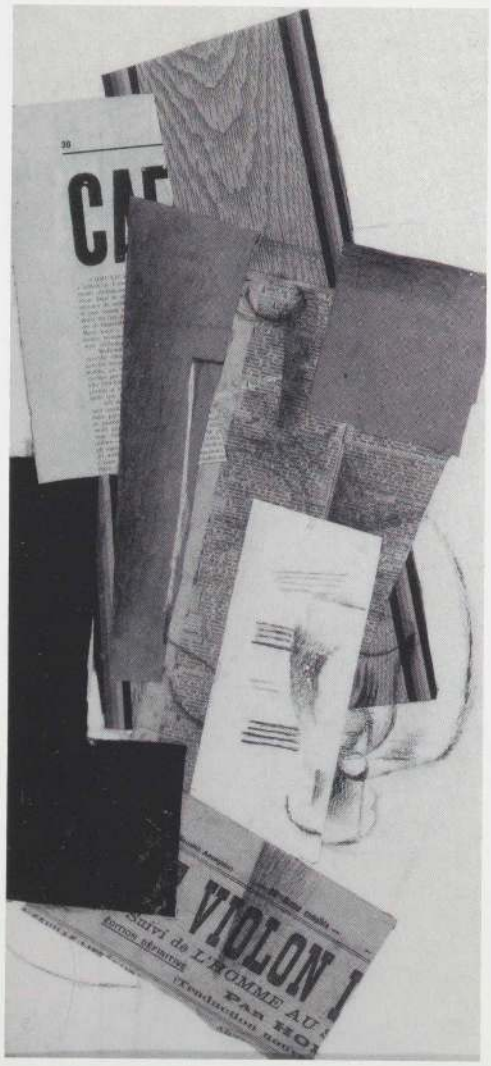
However, Popova's interest in exploring the three-dimensional idiom was limited to these three or possibly four works.[27] Moreover, her three-dimensional works always retained an essentially pictorial format, never really freeing themselves from the relationship to the picture plane in the way that Tatlin's reliefs or those by Puni did.[28] Until the early 1920s Popova remained first and foremost a painter and was interested principally in evolving an idiom resulting from the manipulation of pictorial elements on the surface. Hence her attention was focused on exploring different textural possibilities including the addition of extraneous materials to pigment and building out the surface thickly, away from the picture plane.

An increased emphasis on composition, conceived as the interplay of well-defined planar elements with only vestiges of figurative references, becomes apparent in her 1916 works such as *The Grocery Store* (page 58), *Box Factory,* and *Birsk* (page 59).[29] In these paintings well-articulated, partially shaded planes create a dense overlay of forms, even though one can still detect a certain Cubist parentage. *Box Factory* and *Birsk* in particular are not unlike the structures in Picasso's and Braque's works of 1909, exemplified by the latter's *Castle at La Roche-Guyon,* formerly in the Shchukin collection (fig. 12). Yet Popova's planes are longer and create an essentially vertical scaffolding that indicates a relief-like pictorial space. Such spatial configuration and planar articulation, as well as the larger size of the planes apparent in *The Grocery Store,* can easily be compared with the compositional structure of the lost non-objective relief. Although the titles of all three works still imply a referential subject matter, figuration becomes a vestigial element, and pictorial structure becomes dominant in our perception of the paintings. We begin to read the work in terms of interlocking planes, not as the depiction of a specific subject. In emphasizing the planar definition of parts and the way they organize pictorial space, these works constitute a transitional phase to Popova's entirely non-objective Painterly Architectonics, which she began in 1916.

Early Non-Objective Work: Painterly Architectonics

The catalogue of Popova's posthumous exhibition lists a work of 1915 as *Painterly Architectonic,* although at present it is virtually impossible to identify the work.[30] Also listed are a number of paintings, dating mainly from 1916 to 1918, which are designated by the same title. These were Popova's mature works, her non-objective paintings where the use of the term "architectonic" was possibly applied to emphasize the constructive aspects, the "building up," of such compositions. It is generally assumed on the basis of her exhibited works that Popova began to paint her first non-objective pictures, which she designated as Painterly Architectonics, following a trip to Samarkand and Birsk in the latter part of 1916. Her impressions of Birsk in these pictures still contain vestiges of figuration in a style emanating from Cubo-Futurism. In her subsequent work she made an effort to eliminate all elements related to reality, including the depiction of internal rhythms, and to consolidate expressiveness within colored planes.

It has been pointed out[31] that this type of painting evolved from Popova's interest in architecture, which was stimulated by her close friendship with Alexander Vesnin. According to Vasilii Rakitin,[32] the idea of Painterly Architectonics originated during Popova's trip to Samarkand, where she was stimulated by Islamic architecture and struck by the unusual and complex play of light reflected from different surfaces of the buildings. This enhanced her perception of plastic form, which had already



13. Georges Braque. *Glass, Bottle, and Newspaper.* 1914. Pasted paper on paper, 24⅝ × 11¼" (62.5 × 28.5 cm). Private collection

been shaped by her familiarity with ancient Russian icon painting and church architecture. One could, conceivably, see in the planar structure of the Painterly Architectonics an echo of the interplay of architectural planes of brightly sunlit buildings, but I believe that this experience played an auxiliary role in her quest for non-objective form. It is more likely that the architectonic aspect of these works referred to the compositional process of building a solid pictorial structure.

The catalyst in Popova's transition to non-objective painting was Malevich's Suprematism, which he developed in 1915. This new style, taking its name from the Latin word *supremus* (meaning ultimate, absolute), represented one of the earliest Russian attempts at non-objectivity. It was first unveiled to the public in December 1915 at the "0.10" exhibition, where a whole room of Malevich's Suprematist paintings was shown. Austerely composed, with means of expression reduced to the bare minimum of form and color, these works contain arrangements of simple geometric shapes such as squares, rectangles, circles, and cross-like configurations in unmodulated pure colors, organized dynamically against a white ground. The forms float within an infinite, unstructured space symbolized by the whiteness of the flat background, which seems to extend vertically and horizontally beyond the boundaries of the canvas. The philosophical principle underlying Malevich's creation of this style was his search for a new form compatible with the goals and ideas of modern society, unburdened by the traditional canons of bourgeois art based on representation. Suprematism was also an attempt at incorporating into painting the then very popular notion of the fourth dimension, that is, to combine the elements of space and time in a two-dimensional composition and thereby reach, according to Malevich, a higher spiritual plane. This would require the viewer's intellectual involvement in the process of perception of the work of art.[33]

The pictorial radicalism of the Suprematist idiom strongly affected many artists of the avant-garde, among them Popova, Rozanova, Udaltsova, Kliun, Puni, and numerous members of the younger generation. Popova's Painterly Architectonics are in many ways her response to the challenge of Malevich's Suprematism, which helped her to liberate herself from figurative references and to focus on the exploration of pictorial means for their purely non-referential meaning. Yet the intellectual premise of Popova's non-objective works and their pictorial construction differ markedly from Malevich's.

Painterly Architectonics that can be dated to 1916, such as *Painterly Architectonic (Still Life: Instruments)* (page 60) and *Painterly Architectonic with Three Stripes* (page 62), still contain a shadow of Cubism in certain aspects of their composition. *Still Life: Instruments*, by its very title and the use of shapes unequivocally associated with a guitar, is reminiscent of favorite Cubist subjects. The compositional structure indicates Popova's familiarity with the practice of overlapping planar shapes in Synthetic Cubist compositions, particularly characteristic of *papiers collés*, such as Braque's *Glass, Bottle, and Newspaper* (1914; fig. 13). However, Popova's overlapping planes show more regular, deliberately geometric shapes combined so that their interaction creates tension and yet maintains a dynamic equilibrium within the picture. The diagonally placed elements in the upper left, pointed toward the center of the white plane in the very middle of the composition, interact with a vertical plane at the lower right, also pointing toward the white plane. The white rhomboid plane floats in the center and provides a field for dynamic interaction of the other planar forms. This element is counterbalanced by the oval forms that anchor the picture in its verticality. These well-defined floating planes may have developed under the influence of Malevich's Suprematism, yet its influence, as well as that of Cubism, is reworked here into a different pictorial form. The high-key primary colors present in some of her earlier works, of 1914–15, emphasize Popova's gift for daring combinations that result in very bright yet harmonious and visually seductive compositions.

As much as *Painterly Architectonic (Still Life: Instruments)* manifests Popova's interest in the work of Malevich, her *Painterly Architectonic with Three Stripes*, as Margit Rowell has pointed out,[34] can be likened in its compositional organization to the structure of Tatlin's reliefs, also shown at the "0.10" exhibition.[35] Just as Tatlin layered various materials, placing them in different visual planes, so Popova arranges her pictorial elements within the configuration of planes positioned one behind another. Her pictorial planes are painted counterparts of Tatlin's three-dimensional forms.

These two Painterly Architectonics point out the dual influences acting upon Popova at that moment before she firmly established her own independent language. The variety of her production during the years 1916–17 shows her inventiveness and ability to find different expressive solutions. In works such as *Painterly Architectonic* (page 69) her interest in Malevich's Suprematism might be apparent in the use of floating color planes, open space, and saturated, unmodulated colors. Yet her forms are larger, and the composition's

strong structural quality results from her extensive use of well-anchored, overlapping geometric shapes. The floating planes are positioned along intersecting diagonal axes, and the interplay of these diagonals gives the composition a great sense of dynamic movement and energy. Although most of the forms are contained within the pictorial field, others are cut off by the edge of the canvas, thus conveying the sense of a composition extending beyond the confines of the picture plane. There is, in fact, a certain architectonic quality about the composition. In their underlying structure of crisscrossing diagonals and interplay of planar elements, the Painterly Architectonics anticipate the purely linear works of the early 1920s, which make similar use of dynamic space and form.

A pronounced Suprematist inflection is evident in *Painterly Architectonic: Black, Red, Gray* (page 64). In its simplicity of means—the use of only three forms and three flat but heavily applied colors and the compact, centralized composition—the work is direct and monumental. The compositional elements move upward from lower right to upper left, but the solid opaque colors, black and red complemented by medium gray, add weight to the floating geometric forms. On the other hand, the large black form fixes the composition to the picture plane, giving it a stabilizing, monumental aspect. It is the contrapuntal use of stabilizing and dynamic devices that creates a canvas bursting with energy. This painting should be seen in the context of Popova's association in the winter of 1916–17 with the Society of Painters Supremus, centered around Malevich.[36] Their plans to publish a Suprematist journal were never realized, but its logo, which is related to this painting and was designed by Popova (page 68), utilizes the form of a large trapezoidal black plane placed centrally within the compositional field.

For all her dependence on the principles of Suprematism, Popova's preoccupations are quite different from those of Malevich. The component elements in her paintings have great physicality; essentially, she is not concerned with the spiritual aspect or cosmic space that dominates Malevich's Suprematism. Her concerns are purely pictorial. The type of composition represented by *Painterly Architectonic: Black, Red, Gray* will evolve into works exemplified by *Pictorial Architectonic*, now in a private collection in Switzerland (page 70) and *Painterly Architectonic* in the collection of The Museum of Modern Art (page 71). In these pictures the artist increases the number of planar elements that build up the composition; she also stretches the composition closer to the edges of the canvas, thus conveying a sense of their extension upward beyond the picture plane. The extraordinary balance of the composition in the Swiss picture is achieved through the very centralized organization of the four composite planes, layered one behind another and poised on the lower right-hand corner of the black trapezoidal plane that just touches the edge of the painting. The Museum of Modern Art painting represents another variation on this type of centralized, layered composition. The composition is horizontal, its center occupied by a large red triangular plane that becomes, by its very placement and the acute angle pointing upward, the major dynamic force within the composition. The main emphasis is on the positioning of planar elements and their interaction.

Popova's works influenced by Suprematism coincide with another group of architectonics that continue the compositional organization of *Painterly Architectonic with Three Stripes* and relate to the structural principles of Synthetic Cubist pictures, particularly *papiers collés*, but also show a very strong "constructive," or architectural, aspect. To this group belong the *Painterly Architectonic* at the State Russian Museum (page 63), *Painterly Architectonic with Yellow Board* (page 63), and a double-sided work, *Painterly Architectonic* and *Painterly Construction* (pages 66, 67), at the State Tretyakov Gallery.

All these abstract compositions, analogous to the relief-like arrangement of parts in the Painterly Architectonics at the Scottish National Gallery of Modern Art (page 65) and at the Tretyakov Gallery (page 66) show Popova's absorption of the principles of construction known to her from Tatlin's reliefs of 1914–15 (fig. 9). Just as these reliefs were assemblages of various commonplace industrial materials whose inherent qualities dictated the forms, so Popova's architectonics are solidly built, almost tangible assemblages of planar elements. The overlapping of the planes, by its very tight structure, creates an ambiguity between the implied three-dimensional, shallow relief-like space and the two-dimensional flatness of the picture surface. The planar components interact dynamically, giving the viewer the impression that these compositions could be translated into actual three-dimensional works whose planar components would interact within real space, and make it an active element of form.

Despite their affinities with the principles of Tatlin's reliefs, Popova's Painterly Architectonics differ greatly in their approach to the medium. Popova is without a doubt looking for a new expressive language, yet her focus remains the painterly

medium. Although the preoccupation with materials is obvious in her work, these constitute pictorial attributes—plane, line, color, and texture—counterparts, as it were, of Tatlin's real materials. Popova, like many of her contemporaries, drew on such diverse sources as Cubism, Futurism, Malevich, and Tatlin, extrapolating from these essentially incompatible influences the ideas that allowed her to develop an original, personal vocabulary of form and compositional structure.

Popova's non-objective language of Painterly Architectonics came to full maturity in the works of 1918. Through spatial articulation resulting from the manipulation of form, color, and medium, she was able to achieve an unusually broad expressive range. The interaction of colored planes tightly occupying pictorial space became the principal means of expression. Heavily textured planes, often shaded in feathery brushstrokes that give them a half-dematerialized quality, interact in space, which is conveyed through the materiality of painterly texture. Space as background against which the forms are organized is eliminated. Excellent examples of this type are the *Painterly Architectonic* (page 78) from a private collection and the *Painterly Architectonic* from the Thyssen-Bornemisza collection (page 61). In both works the painting is read as the material construction of color, form, light, and space. The forms vibrate with color and texture, creating a dynamic whole.

Popova's attention to "construction," or the "constructive" aspect of painting, made itself apparent from 1915 with *Portrait of a Philosopher,* but it became her focal interest beginning in 1918. The two Painterly Architectonics in the Costakis collection (pages 82, 83) demonstrate the artist's goal of creating a dynamic construction of diagonally organized, semi-dematerialized planes that interact within pictorial space. The play of light on textured but semi-transparent triangular, trapezoidal, and almost rectangular forms conveys the impression of vibrating space and shimmering light. The composition seems to extend beyond the boundaries of the picture plane in all directions. The color scheme in both works reflects the artist's distinctive color sensibility. In the multicolored work (page 82), dominated by a large acid-green plane in the center which appears to have been pinned down to the picture surface with a black rectangle and a crescent, the hues return almost to the high color of the works of 1914–15. The second architectonic is almost entirely a symphony in blue, ranging from very pale and delicate to almost black. The entire picture is organized around a light center, a large almost white triangle, with blue/gray/black planes vibrating around it. The impression of vibrating light is heightened by a stippled effect, which gives an additional textural aspect. The composition is built on a series of triangular relationships and crisscrossing diagonals, which energize the pictorial field.

In Popova's statement included in the catalogue of "The Tenth State Exhibition: Non-objective Creation and Suprematism," held in Moscow in January 1919, to which she contributed a number of works, she defined her philosophy very succinctly.[37] The statement identified the fundamental sources for the development of painting. She equated painting and architectonics and pointed out five essential elements: painterly space, resulting from the experiments of Cubism; line, considered the basic means of defining form; color, associated with the search conducted by Suprematism; energetics, the focus of Futurism; and texture, an important aspect of surface treatment. All of these elements were integral to a balanced, harmonious work of art. Only by unifying color, line, texture, surface, and construction could one transform the expressive language of painting.

Texture, for Popova, was the content of painterly surfaces, and it indeed played an increasingly vital role in her compositions. Energetics, according to the artist, was expressed "through the direction of volumes and planes and lines or their vestiges, and all colors."[38] Color, in turn, participated in energetics through its weight, which was defined by its intensity; hence, color at its fullest intensity would impart the highest dynamic quality to a picture. Popova explored the dynamic potential of tonal variations within monochromatic and polychromatic color schemes. This principle is well conveyed in her various architectonics, where color is used at its fullest intensity, for example in the blue architectonic in the Costakis collection (page 83). In fact, in all phases of her development, but particularly in her Painterly Architectonics, Popova was a superb colorist. That special ability was recognized by her peers when, in the fall of 1920, she began to teach, together with Vesnin, a course on color at the Vkhutemas (Higher State Artistic and Technical Studios).

Popova's statement on her philosophy of painting should be viewed in the context of the so-called laboratory period of Constructivism and the discussions then originating among members of the avant-garde on the subjects of "composition" and "construction." These discussions were strongly related to the ideological stance of the avant-garde occasioned by the October Revolution of 1917 and

reflected a different understanding of the creative principles of art. The new social, economic, and governmental system brought about by the Revolution required that new institutions organize and direct various aspects of life. The Institute of Artistic Culture (Inkhuk),[39] formally established in May 1920, had been assigned the task of evolving a theoretical approach to art within the newly created Communist society and developing a specific program and pedagogical method for teaching art at the post-revolutionary educational and artistic institutions.

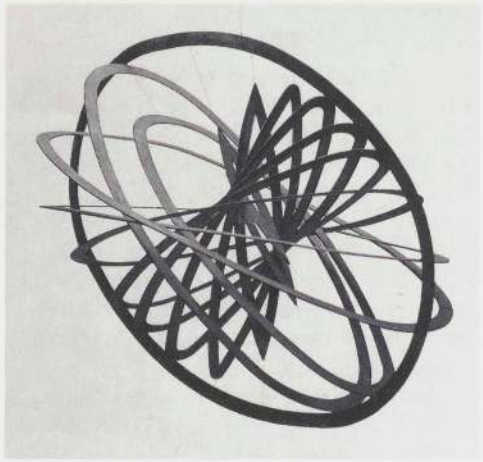
Beginning in December 1919, Popova was an active member of the Council of Masters (Soviet Masterov), a predecessor of Inkhuk, and upon the formation of Inkhuk she became one of the forces defining its program, which was initially established by Vasily Kandinsky. The focus of Inkhuk's activities was to establish a scientific basis for the creation of art and to find objective criteria defining artistic creation that would satisfy the search for a completely new language suitable for the unprecedented conditions that now existed. These criteria included such elements as material, surface, *faktura,* color, space, and time (or movement). Form was to be the result of the interaction of these elements and had to be universally understandable. Rejecting the traditional pictorial form of easel painting as outdated, the philosophy of Constructivism postulated that only three-dimensional creations composed of real materials, and using as part of their form the actual space of the viewer, were an acceptable medium of expression in the new order. Popova's definition, presented in the catalogue of "The Tenth State Exhibition," stated that painting is also a "construction" and that painterly constructions were the preparatory stage for real three-dimensional constructions. She very perceptively noted that "construction in painting equals the sum of energy of [the painting's] parts."[40] She tried to enforce this principle in her Painterly Architectonics, consciously combining all of the elements defined as mandatory for the existence of painting.

This understanding of a painting's construction allowed for the reconciliation and harmonious organization of theoretically incompatible elements into one fully expressive composition. Popova believed in a hierarchy of forms and saw the painter's role as choosing those elements which were of greater value for a specific composition. She strongly believed that intelligence and consciousness enabled an artist to select only those elements truly indispensable to a painterly context. Thus non-figurative painting was the main goal of her work at that time. According to her artistic philosophy, "images of 'painterly' and not 'figurative' value are the aim of the present painting."[41] "Painterly values" were those proper and unique to painting itself, which was complete in its own "reality," not in the depiction of reality. Painting thus was to be evaluated not on the basis of its mimetic quality but on the basis of its aesthetic qualities resulting from the interaction of pictorial elements themselves. Color, line, and texture, as already noted, were the essential determinants of form and space, their interaction serving as the conveyor of beauty.

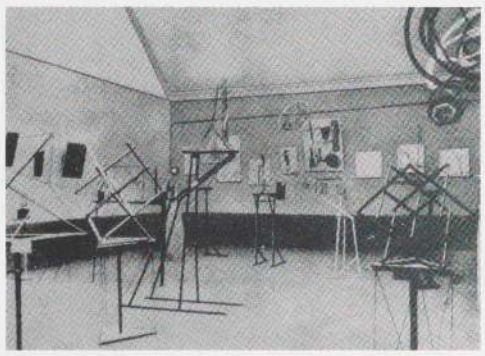
Form and space are built of the same basic elements in the works of 1918–20. It is the difference in texture and modulation of line and colors interacting and creating tension among the composite parts that determines the distinction between form and space and the emotional impact of the work. An excellent example of Popova's belief that dynamism was an all-important organizational agent of the composition and a valid additional factor in conveying beauty is her *Painterly Construction* of 1920 (page 67), the verso of her largest known architectonic, of 1916–17 (page 66), discussed earlier. Here Popova uses an entirely different formal and syntactic code from that in the front panel, which continues the structural principle of assembling planar geometric shapes common to her post-Cubist abstractions. In its organization *Painterly Construction* recalls the system of combining real materials in Tatlin's reliefs. The composition of the recto is solidly structured yet essentially static. The verso, on the other hand, is very dynamic. Two sharply diagonal axes cross the composition from lower right to upper left. Spiraling forms in the central section, semicircular elements in burgundy red and orange, and a heavy black fragment of a crescent at the left center and lower left all contribute to the impression of continuing flux among the pictorial components. This effect is further enhanced through the use of half-dematerialized planes achieved through skillful shading in a different color and change in texture. The picture exudes great energy, heightened by the juxtaposition of vivid colors, and also manifests, in a much stronger way, the artist's emphasis on line as the dominant factor of a composition. In this sense it is a transitional work, situated between the mature Painterly Architectonics exploring the interplay of dense, textured planar forms and the next phase of the artist's work.

Linear Compositions

Throughout the years 1920–21 an increased preoccupation with line rather than plane and color becomes evident in Popova's work. These explorations are related to the Inkhuk discussions on "com-



14. Alexander Rodchenko. *Oval Hanging Construction Number 12*. c. 1920. Plywood, open construction partially painted with aluminum paint, and wire, 24 × 33 × 18½" (61 × 83.7 × 47 cm). The Museum of Modern Art, New York. Acquisition made possible through the extraordinary efforts of George and Zinaida Costakis, and through the Nate B. and Frances Spingold, Matthew H. and Erna Futter, and Enid A. Haupt Funds



15. Installation view of the third Obmokhu exhibition, Moscow, May 1921

position" and "construction," particularly the attempts to define the latter. Line, as one of the fundamental means of the painter, was able to define abstract components of pictorial space and to convey conceptualized images without violating the two-dimensionality of the pictorial surface. By its sheer existence on the surface, line could elicit the impression of space. Its ability to convey rhythm and depth and to define and be translated into space made line a subject of special investigation for the Constructivists. It was fundamental to their attempts to reduce the means of expression to the bare essentials in order to evolve a concept of "construction." Rodchenko, in particular, emphasized the importance of line, executing many works in the 1920s that are austere, strictly linear compositions. His "hanging constructions" of 1920, composed of homogeneous geometric forms inscribed one inside another, constitute, as it were, three-dimensional transpositions of line into spatial form (fig. 14). His essay on line was intended to be included in a compendium of writings by Inkhuk members on the theme "From Figuration to Abstraction," which was never published.[42] It was the versatility of line that was so attractive to the Constructivists and other artists. For example, in 1919 Kandinsky wrote an extensive essay on the role of line as a means of pictorial expression; it was published in the magazine *Iskusstvo* on February 22, 1919, and was later incorporated into his 1926 publication *Point and Line to Surface*.[43]

In her statement for "The Tenth State Exhibition" Popova had written in 1919: "Line as color and a vestige of transverse plane participates in and determines the force of 'construction.'"[44] In 1920, when she joined Inkhuk along with Rodchenko, Stepanova, and others, the focus of her work became a systematic experimentation with pictorial construction and thus an exploration of the possibilities inherent in line. Her works of that period are composed predominantly of linear elements, sometimes incorporating vestiges of colored planes, but these are no longer well-defined, color-imbued forms. Both form and color are considered superfluous and are reduced to their common symbol—a colored line (since an edge of the colored plane is essentially defined by line). Thus form and color are reduced to a minimum to create the fundamental interpretative means of conveying texture and spatial relations. The varying thickness of line, intensity of color, and medium used result in different textural and spatial possibilities.

The linear compositions executed by Popova within this period are conceived according to two slightly different principles. One group, in two variations, consists mainly of works incorporating only straight lines (pages 98, 99), while the second group combines the straight-line grids and circular or semicircular elements into crisp dynamic structures (pages 88, 89).

Among the works using purely linear elements are a painting in a private collection (page 92) and a number of related drawings, which compositionally seem to be fragments of a larger spatial universe crisscrossed in a zigzag pattern by lines of force. These lines intersect at sharp angles and generate internal space situated between the pivotal points beyond the boundaries of the picture edge at top and bottom. Considered from a structural point of view, these pictorial constructions can be compared with the actual material constructions created contemporaneously by the younger, second generation of Constructivists who belonged to the Society of Young Artists—Obmokhu.[45] In the third Obmokhu exhibition, held in May 1921 in Moscow,[46] members of this group, which included sculptors Karl Ioganson, Konstantin Medunetsky, and the brothers Georgii and Vladimir Stenberg, presented several constructions of diverse materials that were three-dimensional transpositions of linear structures (fig. 15). Their forms, based on straight lines, represented essentially linear drawing in space; they defined space from without and within, making it an active component of form. Popova's pictorial preoccupations paralleled those of the Obmokhu members, all of whom were actively involved in the Inkhuk discussions on "composition" and "construction."

In Popova's case, the dematerialized, fragmented planes of different colors, conveyed through feathery shading, and the variegated colored lines are the structural materials for different parts of the work: the sculptural form, based on line and space, is signaled through the vestiges of colored planes. The tension between various colored lines produces the effect of spiraling movement, enhanced by the dynamic interaction of the supporting triangular areas of color—the shadows, as it were, of the vectors of force. The background, of medium value, provided by an unpainted surface, is perceived as a neutral, all-encompassing, unstructured space, a field for the interaction of linear scaffolding and vestiges of color. The multicolored lines constituting this scaffolding are cut off at random by the edge of the picture, and their rotation seems to occur along the axis joining two points beyond the boundaries of the work. Here again the linear structure that activates the viewer's space and forces him to complete the form mentally can be compared to that achieved by Rodchenko in his hanging constructions of 1920.

In the works described above, Popova creates a secondary structure that supports the linear one. This support structure is formed by the triangular feathery shading that extends along both sides of the colored line, suggesting not only shadows but also imaginary planes or streams of light that are bordered by the firmly drawn colored lines. The fragmentary planes reach out into the space created by the scaffold of zigzagging lines. The dynamism of these compositions is further emphasized by their asymmetry. Here form is not only non-objective but is transformed into the new expression: construction. It exemplifies Popova's conviction, stated in one of her manuscripts of 1921, that "transformation for the sake of painterly or sculptural construction is a revelation of our artistic revolution. . . . What is of importance now is the form or part of a form, line, color, or texture that takes an immediate part in the painterly construction."[47]

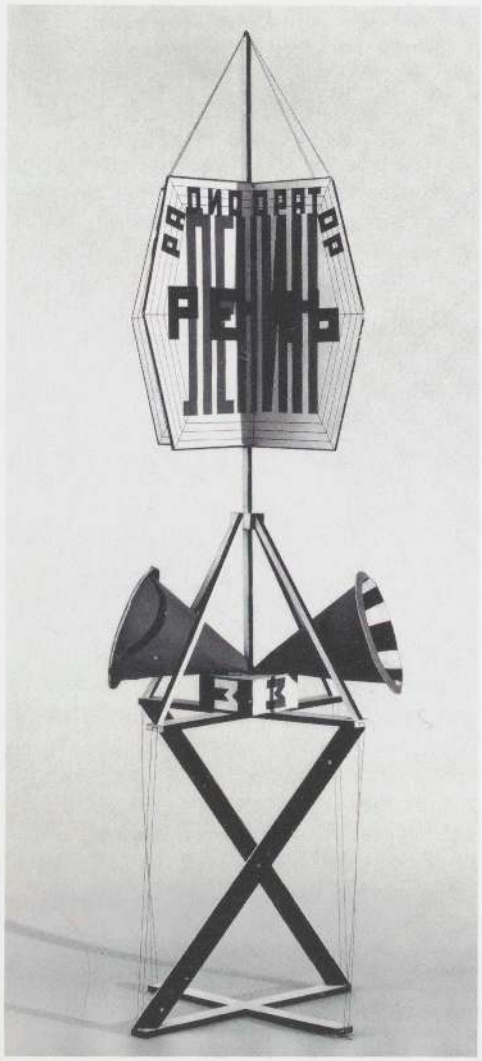
Although Popova cannot be considered a theoretician, her observations pointedly describe her objectives and imply a broader comprehension of the goals of art compatible with her country's new identity after the October Revolution. They show her to be a fervent supporter of the idea of a new, non-traditional artistic idiom. Her final definitions of "composition" and "construction," which appeared in the minutes of a meeting held January 21, 1921, described composition as "the regular and tasteful arrangement of materials," and construction as "purpose and necessity," that is, a purposeful combination of such pictorial fundamentals as volume and material, texture, color, and space.[48] The definition of construction was clarified in her notes of March 1921: "Construction is the aim. It is the necessity and expediency of organization."[49] What characterizes Popova's point of view regarding "construction" is her attitude as an artist-painter, not an artist-engineer—the new ideal of post-revolutionary Soviet society—involved with three-dimensional constructions using real industrial materials. Her components of "construction" are essentially the traditional painter's means, even though she interprets them as if they were real materials. This duality between theory and practice, or rather her very personal application of theory in her practice, continued in Popova's work of 1921–22.

Space-Force Constructions

Popova designated most of her works executed within the period 1921–22, whose focal point is dynamic space emphasized by linear structure, as Space Constructions and Space-Force Constructions. One can distinguish several basic series of compositions, each of which includes paintings on plywood and a number of smaller works on paper. Popova used the term for a group of works that were first exhibited in Moscow in September 1921 in the exhibition "5 × 5 = 25" (so-called because each of the five participants—Exter, Popova, Rodchenko, Stepanova, and Vesnin—contributed five works).[50] The exhibition was intended as a final presentation of the traditional medium of painting, signaling "death to easel painting," as the remnant of an elitist, bourgeois culture. Popova called her group of works "experiments in painterly-kinetic constructions," and the individual paintings bore titles such as *Space-Volume, Color-Plane (Surface), Enclosed Space-Construction,* and two called *Space-Force Construction.*[51]

The artist's statement, included in the catalogue, specified that her works "should be considered as a series of preparatory experiments for the concrete material constructions."[52] However, she never tackled concrete materials. As I have already emphasized, she was chiefly a painter, who later, under the pressures of the dominant utilitarian imperative in the Constructivist circle, turned her creative energies to practical ends in typography, textile design, and theatrical design. But even there her primary materials were form, light, color, and space.

Popova's Space-Force Constructions again represent innovative solutions to the handling of form, space, and material. Within a very limited vocabulary of means she was able to create quite diverse energetic, powerful works. For example, *Space-Force Construction* of 1921 (page 96), in oil on plywood, explores to maximum effect the interplay of six straight, diagonally placed lines crossing one another in the central section of the picture. The differing thicknesses of the lines and their varying colors highlight the dynamic effect. Their spatial interaction is enhanced by the multicolored "shadows" extending into the pictorial field and meeting the unpainted plywood plane, which acts as a symbol of space. The pairs of lines are neither parallels nor orthogonals but rather fragments of a web-like structure that seems to continue beyond the boundaries of the picture plane. The illusion of their existence in space increases the longer one contemplates the work. The variations in texture of the "shadows" contribute to the play of light, which further activates the composition. This crust-like effect of the textured planes is particularly visible in another *Space-Force Construction* (page 97), where the palette is limited to white, deep reddish brown, and one touch of black. The thick, crusty reddish-brown



16. Gustav Klucis. Maquette for *Radio-Announcer.* 1922. Construction of painted cardboard, paper, wood, thread, and metal brads, 45¾ × 14½ × 14½" (106.1 × 36.8 × 36.8 cm). The Museum of Modern Art, New York. Sidney and Harriet Janis Collection Fund

pigment is played up against off-white smooth-textured lines crossing the field from lower right to upper left and from lower left to upper right. This creates an almost relief-like surface against the background of unpainted plywood board.

These abstract linear Space-Force Constructions also exist in a more stringent, to a certain degree more static, version, exemplified by a 1921 work in the Costakis collection (page 98). The linear armature of works of this type, with solid verticals cut through at an oblique angle by two other strong bars, creates the impression of representing fragments of industrial structure held together by tensile cables (here further symbolized by thin white lines forming a secondary linear grid). The black feathery "shadows," as in so many other examples already discussed, convey a sense of spatial extension into depth beyond the picture plane. The composition has a layered structure suggesting its existence in space. The two sets of linear elements differing in thickness create tension that energizes the composition. Despite the fact that the linear elements point in different directions and the upright ones are not truly vertical or parallel to one another, the composition shows great stability even within an active field of vision.

This type of work is closely related to a group of other Space-Force Constructions that are composed of more three-dimensional beam-like elements, such as the drawings *Med Vervis* and *Untitled* (1921) in the Costakis collection (page 101). Here the linear armature and thick shading convey almost enclosed three-dimensional form, bringing to mind some of the shapes used contemporaneously by Lissitzky in his architecture and also in early modernist bridge structures. Such linear configurations imply the potential for extending space both vertically and horizontally and explore structural tension among the components.

Analogous concepts in the use of linear tensile structure can be found in the work of other members of the avant-garde, particularly in the propagandistic constructions of Gustav Klucis (fig. 16). The structures of wooden scaffolding held together by the tension of crisscrossing beams and cables reflect in three-dimensional form the concerns obvious in Popova's linear Space-Force Constructions. His wooden beams and tensile cables are counterparts of Popova's differing thicknesses of linear scaffolding. These variations in the thickness of lines and their textural aspect could be considered a transposition of the previously mentioned Tatlinian principle of the "culture of materials," whereby different materials have an inherent potential for specific forms and textures. Popova adapted this postulate by introducing such materials as marble dust into her traditional medium of oil paint, thus enabling her to create new types of texture, more physical and tangible, that added to the materiality of the picture.

The emphasis on the material aspect of the work of art is further evident in another series of Space-Force Constructions, created mostly during 1921, contemporaneously with the purely linear works. Exemplifying this series of paintings are a large square work in oil with marble dust on plywood in the Costakis collection (page 89) and the *Space-Force Construction* in oil with bronze powder at the State Tretyakov Gallery (page 90), both of which have related groups of drawings. All of these works combine straight linear and circular elements, occasionally supplemented by Popova's characteristic feathery shading.

The *Space-Force Construction* in the Costakis collection is rather large in format and, with its textured aspect and thickness of oil and marble dust applied to the plywood support, conveys a sense of great physicality. It is a solid structure whose physical parameters, defined through the use of *passage,* are suggested by the circular paths and different axes of rotational movements. The painting exudes great energy concentrated within the pictorial field but pushing out beyond its boundaries because of the random cutting off of the circular elements. The color scheme of black, red, and white against the natural plywood background enhances the dynamic aspect of the painting. Similar dynamic forces are at work in the Tretyakov's *Space-Force Construction,* but because of the introduction of the aggressive blue color, the final visual effect is much more decorative than in the Costakis picture. In the latter, the austerity of the palette (despite the vivid red) creates the effect of a much more sober and compact dynamic structure.

These Space-Force Constructions closed Popova's experiments with the pictorial medium. Although the break may not have occurred at the exact time of the announcement of the "death to easel painting," it followed shortly thereafter, possibly as a result of the November 1921 schism at Inkhuk when the theoretician Osip Brik officially proclaimed the productivist imperative as the fundamental goal of artistic creation.

Production Art

At the November 24, 1921, session of Inkhuk, Brik called for a definitive rejection of easel painting and declared the necessity for a transition to "real" utilitarian work. Brik's proposal was accepted and

signed by twenty-five artists, among them Popova, Rodchenko, Stepanova, the Stenberg brothers, and Vesnin.[53] Thus Russian Constructivism entered a new phase in which functional Constructivism, defined as production art, was to become the absolute and only viable artistic activity.

The relationship between art and industry was part of a much broader debate concerning the nature of proletarian art in Soviet society in the aftermath of the October Revolution. The necessary connection between ideology and technology postulated by members of the group Proletkult (an acronym for Proletarskaya Kultura, or Proletarian Culture) influenced the Constructivists to a certain extent. Their proclamation of "Art into Life," which became the main slogan of the functional Constructivists, called for the artists' total commitment to production and consequently for a fusion of the artistic and the technological.[54] This ideological position rejected the concept of art as expressive of philosophical or aesthetic concerns, viewing it instead as a purposeful material creation. Yet it was different from applied art, which, according to the critic Nikolai Punin, was concerned primarily with decoration. Production art resulted in the creation of "completely artistic objects" and was therefore fundamentally different in nature. The "completely artistic objects" were to be designed by the "artist-constructor," that is, the artist with a knowledge of industrial process and an involvement with actual production. The result was to be an object whose form was dictated primarily by its purpose.

Initially Popova was not among the strongest advocates of production art, but following the lead of Tatlin, Rodchenko, and Stepanova, she gradually revised her attitude, recognizing the need for a closer involvement of artists in industrial production. It was, however, in designing for the theater and executing commissions for various propagandistic projects in celebration of Communist events that many Constructivist artists, Popova among them, found the opportunity to realize their utopian visions of art for the masses. Popova's involvement with the theater began in 1920 when Alexander Tairov commissioned her to design sets and costumes for his production of *Romeo and Juliet,* to be presented at the Kamernyi Theater in Moscow. Although she executed designs for a whole series of costumes, Tairov ultimately chose to use the set and costume designs by Alexandra Exter. Popova's theater designs for Vsevolod Meyerkhold were more successful. In 1922 she designed sets and costumes for his presentation of a play by Fernand Crommelynck, *The Magnanimous Cuckold* (page 106), and in 1923 for *Zemla Dybom (Earth in Turmoil),* an adaptation of Marcel Martinet's verse drama *La Nuit* (page 107).

The sets for the Meyerkhold productions could be considered a concretization of Constructivist ideas, indeed of the concepts that Popova explored so persistently in her later pictorial works. The structure of the sets for *The Magnanimous Cuckold,* based on an interplay of verticals and horizontals and the use of planes and rotating platforms (all executed in wood), complemented by a skillful manipulation of lighting to complete the form and activate the space, displayed basic organizational principles shared with Popova's pictorial works of 1920 and 1921, notably her Space-Force Constructions, which were predicated upon kinetic linear structure. The costumes, composed as combinations of simple geometric shapes, were among the best examples of *prozodezhda* (working clothing—in this case, for actors), designed to allow unrestricted movement and to emphasize the biomechanical rhythms of the actors' movements as devised by Meyerkhold. Popova's sets and costumes made the theatrical production a composite of gesture, movement, music, light, and architecture; the interaction of forms, materials, time, and space resulted in a living, unified work of art. This production marked the culmination of a radical change in stage design, eliminating the idea of sets and costumes as backdrop and illusion and bringing them into the realm of living art. The change can be compared with that which took place in painting when nonobjective art was purged of representation, narrative, and illusion and a painting became a self-referential entity defined uniquely in terms of its own pictorial means.

The set designs for *Earth in Turmoil* were quite different from the schematic, machine-like, kinetic plastic constructions used in *The Magnanimous Cuckold.* Even the same costumes characterized by an ascetic simplicity of *prozodezhda* had a dissimilar effect in another setting. The *Earth in Turmoil* set reflected Popova's changed ideological view of the artist's involvement with the theater and consequently with practical everyday life. Popova proposed the use of real props, such as cranes, machines, and guns, which gave the production the character of an "agit-performance" or a public event for the masses.[55] Conceptually related to the principles used in Constructivist posters, the set wove many realistic elements into an abstractly conceived whole.

Popova's talents were also employed practically, from 1921 to 1924, in the area of typography. Her designs for book, periodical, and music covers made use of

such devices as bold lettering arranged asymmetrically and colors juxtaposed to bring out important elements of the titles; different parts of the design created block-like configurations that later came to epitomize Constructivist typography, principally familiar in the West through the work of Lissitzky and Rodchenko.

Popova's activities in the area of textile design were by far the most closely aligned to the ideological tenets promoting production art. During 1923–24 she and Stepanova designed patterns for fabrics for the First State Textile Print Factory (formerly the Emil Tsindel Factory) in Moscow. In her production art she used principles similar to those that had dominated her work as a painter. Her textile designs were based on geometric forms in bright color combinations incorporated into rhythmical, lively patterns (pages 110, 111). The concept underlying her method was based on her conviction, shared and widely publicized by Stepanova, that textile design should relate to the principles of clothing design, and the latter, in turn, should reflect the practical needs of the consumer.[56] Of least importance were the aesthetic considerations, completely subordinated to the functional aspect of design. It was Popova's gift for striking color combinations and her great skill in manipulating forms, however, that gave her designs high aesthetic appeal.

Throughout the period she was involved with production art, Popova continued to teach the future artist-constructors at the Vkhutemas as well as at Gvytm (State Higher Theatrical Studios), and in 1924 she established a special course on "material formation of a spectacle" for the Proletkult in Moscow.

Popova died unexpectedly in 1924 at the age of thirty-five when she was at the height of her creative powers. Although her artistic career was cut short, her contribution was among the most important for the evolution of Constructivist concepts. The sizable body of work that she produced attests to the high quality of her achievement, revealing a versatile, innovative artist who drew on diverse influences, consolidated them, and made them the basis of her own distinctive means of expression.

notes

1. The principal archives of Popova's work are in a private collection, in the department of manuscripts at the State Tretyakov Gallery, and the Central State Archive of Literature and Art (CGALI), all in Moscow. A number of documents from these sources were included in a French translation of the monograph by Natalia A. Adaskina and Dimitri V. Sarabianov, *Lioubov Popova* (Paris: Philippe Sers, 1989), published in English by Harry N. Abrams, New York, in 1990.

2. *L. S. Popova, 1889–1924: Katalog posmertnoy vystavki khuidozhnika konstruktora L.S. Popovoy (Catalogue of the Posthumous Exhibition of the Artist-Constructor L.S. Popova)* (Moscow, 1924), pp. 6–7. Translation by the author.

3. See Adaskina and Sarabianov, *Lioubov Popova*, pp. 13, 42.

4. The renowned Sergei Shchukin collection of modern French art, which included many Impressionist and Post-Impressionist works, as well as numerous paintings by Matisse, Picasso, and Braque, was opened to the public in the spring of 1909 for viewing on Sundays. The catalogue of the collection was published in *Apollon*, a monthly review on art, in 1914.

5. Some of these sketchbooks are in the George Costakis Collection (Art Co. Ltd.) and the State Tretyakov Gallery, Moscow; others are in private collections in Sweden and the United States.

6. See *Exposition de Sculpture Futuriste du Peintre et Sculpteur Futuriste Boccioni du 20 juin au 16 juillet* (Paris: Galerie La Boëtie, 1913), cat. no. 4.

7. For the sculpture *Development of a Bottle in Space;* see ibid., note 6, cat. no. 6.

8. Margit Rowell makes this connection in her essay "New Insights into Soviet Constructivism: Painting, Constructions, Production Art," in *Art of the Avant-Garde in Russia: Selections from the George Costakis Collection* (New York: Solomon R. Guggenheim Museum, 1981), p. 18. The same connection is mentioned in Angelica Z. Rudenstine, ed., *The George Costakis Collection: Russian Avant-Garde Art* (New York: Harry N. Abrams, 1981), p. 352.

9. For an extensive analysis of Archipenko's work, see *Alexander Archipenko: A Centennial Tribute* (Washington, D.C.: National Gallery of Art, 1986).

10. In Adaskina and Sarabianov, *Lioubov Popova*, this painting is identified as *Le Kremlin, Le Tsar-Canon*, 1915 (ill. p. 98, lower left). This identification is based on the listing of works in the catalogue of Popova's posthumous exhibition held in Moscow in December 1924–January 1925. However, this listing does not positively indicate such an attribution. On stylistic grounds, in terms of an overall composition, apparent vestiges of figuration, and three-dimensional treatment of the figurative fragments, as well as in terms of color scheme, this painting seems to be situated between *Seated Woman* (Galerie Gmurzynska, Cologne) and *Objects from the Dyer's Shop*. Furthermore, the vestiges of architecture visible in the center of the composition are more indicative of an Italian Renaissance rather than a Russian influence. The details recall the architecture in the 1914 painting *Florence* by Alexandra Exter, who at that time lived in Paris at the same pensione as Popova and who also traveled to Italy in 1914. Since Popova's trip to Italy took place in 1914, this painting might have been executed after the trip. On this basis and also on stylistic grounds, I would attribute a date of 1914 to the painting. *Objects from the Dyer's Shop* was previously shown under the title *Early Morning*. The title used here is based on the listing in the catalogue to the posthumous exhibition, note 1, cat. no. 24.

11. This phrase, "lines of force," comes from Boccioni's *Technical Manifesto of Futurist Sculpture*, published in 1912 and subsequently included in the catalogue of Boccioni's exhibition at Galerie La Boëtie in Paris in 1913; see above, note 6.

12. The Futurist review *Lacerba* was founded in Florence in 1912 by the Florentine writer Giovanni Papini and the painter-critic Ardengo Soffici. As a biweekly and then a weekly newspaper that appeared until 1916, it was an important *porte-parole* of Futurism that disseminated advanced philosophical writing, political views, and progressive art ideas and illustrations. In 1914 Popova visited Italy, seeing Florence among other places, and might have come into contact with *Lacerba* through Soffici, a good friend of her friend Exter.

13. See D. Burliuk, "Faktura," in *Poshchechina Obshchestvennemu Vkusu* (*A Slap in the Face of Public Taste*), pp. 102–10. Also V. Markov, *Printsipy tvorchestva v plasticheskikh iskusstvakh: Faktura* (*Principles of Creation in the Visual Arts: Faktura*) (St. Petersburg, 1914).

14. The exhibition "Tramway V" opened on March 3, 1915, according to the Gregorian calendar then used in Russia. This would be February 18 by the Western calendar, which runs thirteen days behind the Gregorian calendar. Thus Popova must have painted the work within the first six weeks of 1915. See the exhibition catalogue *Tramway V: The First Futurist Exhibition of Paintings* (Petrograd, 1915), entry no. 45.

15. *The Last Futurist Exhibition of Paintings: 0.10* (Petrograd, 1915), cat. no. 86.

16. Adaskina and Sarabianov, *Lioubov Popova*, p. 66.

17. *Tramway V*, cat. no. 20.

18. A painting titled *Traveling Woman* was included in the "0.10" exhibition in Petrograd (cat. no. 92). A work titled *Traveling Woman* (second version) was later shown in Popova's posthumous exhibition in Moscow in December 1924 (cat. no. 18) and is prominently displayed in one of the installation photographs of that exhibition. This appears to be the Norton Simon picture, but the one in "0.10" might have been either of the two.

19. Although the painting is usually referred to as *Traveling Woman*, and the inclusion of wavy hair in the central section would suggest a female subject, the very center of the apex of the central triangle is occupied by a stiff white bib-like form that suggests a male torso, possibly her companion or attendant. For this reason one wonders whether the more appropriate title might be *The Traveler*.

20. Tatlin first exhibited his reliefs in a brief showing at his studio on Oshozhenka 37 in Moscow on May 10–14, 1914. They were later included in *The Last Futurist Exhibition of Paintings: 0.10*, cat. nos. 132–144m. On the occasion of the opening of this exhibition, Tatlin published a pamphlet, *Vladimir Evgrafovich Tatlin* (December 17, 1915), in which he discussed the philosophy behind his reliefs. This pamphlet is reproduced in H. Berninger and J. A. Cartier, *Pougny: Catalogue de l'oeuvre* (Tübingen: Ernst Wasmuth, 1972), pp. 54–55.

21. For more information on Kliun's and Puni's reliefs, see ibid., note 20.

22. *The Last Futurist Exhibition of Paintings: 0.10*, cat. nos. 95, 96, and 97, respectively.

23. *Liubov Popova*, catalogue of the posthumous exhibition, cat. no. 22, 111.7 (n.p.). The two reliefs were also illustrated as nos. 5 and 6 (n.p.).

24. *Die Kunstismen* (1925), fig. 62, p. 31, where it is incorrectly dated as 1916.

25. Dimitri Sarabianov proposes a different sequence for the first two reliefs, suggesting a progression from *The Jug on the Table* to *Portrait of a Lady* to the non-objective reliefs. See Adaskina and Sarabianov, *Lioubov Popova*, p. 64.

26. Both postcards to Dege are reproduced in Rudenstine, ed., *The George Costakis Collection*, figs. 813–16, p. 366. The works are also listed as such in *The Last Futurist Exhibition of Paintings: 0.10*, nos. 95–96.

27. Sarabianov believes that there were four reliefs and conveyed this in his discussion with the author in Moscow in January 1990 on the occasion of the Popova exhibition held at the State Tretyakov Gallery in Moscow. A still life with fruit bowl recognizable in several of the 1915 paintings might have been the subject of such a relief. In fact, Rudenstine, ed., *The George Costakis Collection*, reproduces another postcard written by Popova to Dege which represents a work called *Still Life*, subtitled "plastic painting" (note 26, fig. 811, p. 365), which could be *Vase with Fruit*, the relief shown in the "0.10" exhibition (cat. no. 97), also visible in the photographs of the posthumous exhibition.

28. See Berninger and Cartier, *Pougny*, note 21.

29. The latter two pictures had been misattributed to 1914–15 until Sarabianov, in the monograph on Popova, situated them in relation to a series of drawings done in conjunction with her trip to Birsk, a city in Bashkiria (Russia), to visit Adelaida Robertovna Dege.

30. Sarabianov, in his essay on Popova in the monograph, suggests a specific painting on the basis of a comparison between the listing in the catalogue and the installation evident in the photographs of the exhibition. However, since the works were presumably dated by the organizers of the exhibition, the accuracy of these determinations is open to discussion. For details, see Adaskina and Sarabianov, *Lioubov Popova*, p. 109.

31. Adaskina and Sarabianov, *Lioubov Popova*, pp. 133–37. See also George Peck and Lilly Wei, "Lioubov Popova: Interpretation of Space," *Art in America* (October 1982), pp. 94–104.

32. Vasilii Rakitin, "Ljubow Popowa," in Krystyna Rubinger, ed., *Women Artists of the Russian Avant-Garde: 1910–1930* (Cologne: Galerie Gmurzynska, 1980), pp. 199–200.

33. To accompany the presentation of his Suprematist paintings, Malevich published a pamphlet, *From Cubism to Suprematism: the New Realism in Painting* (Moscow: Zhuravi, 1915), which explained his philosophy of the new style. English trans. in T. Andersen, ed., *K. S. Malevich: Essays on Art 1915–1928* (Copenhagen: Borgen, 1968), vol. 1, pp. 19–41.

34. Rowell, "New Insights into Soviet Constructivism," pp. 20–22.

35. At "The Last Futurist Exhibition of Paintings: 0.10," Tatlin showed a roomful of reliefs as a counterpoint to Malevich's Suprematist work and also published a pamphlet in which he explained the principles of his reliefs.

36. The Supremus group, which was formed around Malevich in 1916–17, included Rozanova, Udaltsova, Kliun, Vera Pestel, Archipenko, Davydova, Menkov, the poet Alexei Kruchenykh, and the critic Alyagrov (Roman Jakobson).

37. *The Tenth State Exhibition: Non-objective Creation and Suprematism.* (Moscow, 1919), p. 29; reprinted in full in Matsa, *Sovietskoe iskusstvo za 15 let.*, p. 112.

38. Ibid., note 37.

39. "Inkhuk" is the acronym for the Institute Khudozhestvennoy Kultury (Institute of Artistic Culture). For detailed information on Inkhuk's goals and purpose, see Christina Lodder, *Russian Constructivism* (New Haven: Yale University Press, 1983), pp. 78–83; S. Khan-Magomedov. *Rodchenko: The Complete Work* (Cambridge, Mass.: MIT Press, 1987), pp. 55–58. The concept of "construction," including the discussion of Inkhuk, was the subject of the author's Ph.D. dissertation: M. Dabrowski, "The Russian Contribution to Modernism: 'Construction' as Realization of Innovative Aesthetic Concepts of the Russian Avant-Garde," New York University Institute of Fine Arts, 1990.

40. *The Tenth State Exhibition,* note 37.

41. Ibid.

42. The original of the text is in the Rodchenko family archive in Moscow; for excerpts in English translation, see D. Elliot, *Rodchenko* (New York: Pantheon Books, 1979), p. 128; A. B. Nakov, "Alexander Rodchenko. The Line," *Arts Magazine,* 47, no. 7 (May–June 1973), pp. 50–52.

43. V. Kandinsky, "Little Articles on Big Questions: On Point; On Line," *Iskusstvo,* February 22, 1919; later published as *Point and Line to Surface* (1926); reprinted in Vergo Lindsay, *Kandinsky: Complete Writings on Art,* vol. 1 (1982), pp. 425–26.

44. *The Tenth State Exhibition,* note 35.

45. "Obmokhu" is an acronym for Obschchestvo Molodykh Khudozhnikov, or Society of Young Artists, which was organized in 1919 by a group of younger Constructivists from the Vkhutemas.

46. The literature on this subject has created some confusion as to whether this was the second or third Obmokhu exhibition. The problem seems to have originated in the fact that the catalogue of the exhibition defined it as the "second spring exhibition of the Society of Young Artists." However, according to all the documentary materials regarding the activities of Obmokhu, the exhibition of May 1921 was the third in a series of four shows.

47. Manuscript, 1921, private archive, Moscow. Excerpts from the text are reprinted in Rakitin, "Ljubow Popowa," p. 211.

48. Central State Archive of Literature and Art (CGALI), Moscow, fond 681, and private archive, Moscow. Excerpts are quoted in Lodder, *Russian Constructivism,* pp. 88–89, note 80.

49. Quoted in English (from a Russian manuscript in a private archive, Moscow), in Rakitin, "Ljubow Popowa," p. 212.

50. *5 × 5 = 25,* (Moscow, September 1921), n.p., cat. nos. 11–15. [A copy of this handmade catalogue is in the collection of The Museum of Modern Art, New York.]

51. At this time it is not possible to give a positive identification of the works included in the "5 × 5 = 25" exhibition. See *5 × 5 = 25,* note 50.

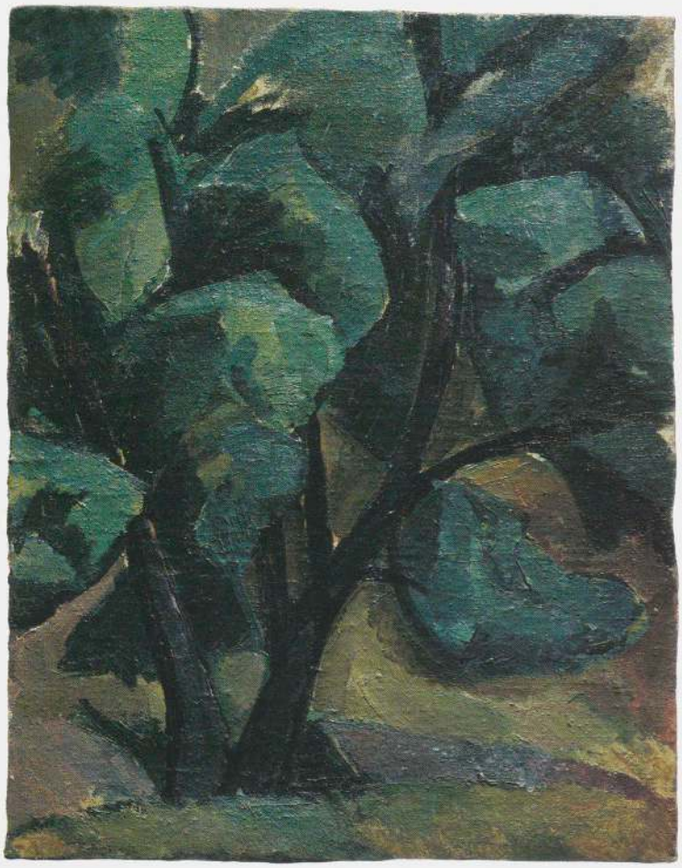
52. Ibid., note 51.

53. For a listing of all signatories, see Lodder, *Russian Constructivism,* p. 90.

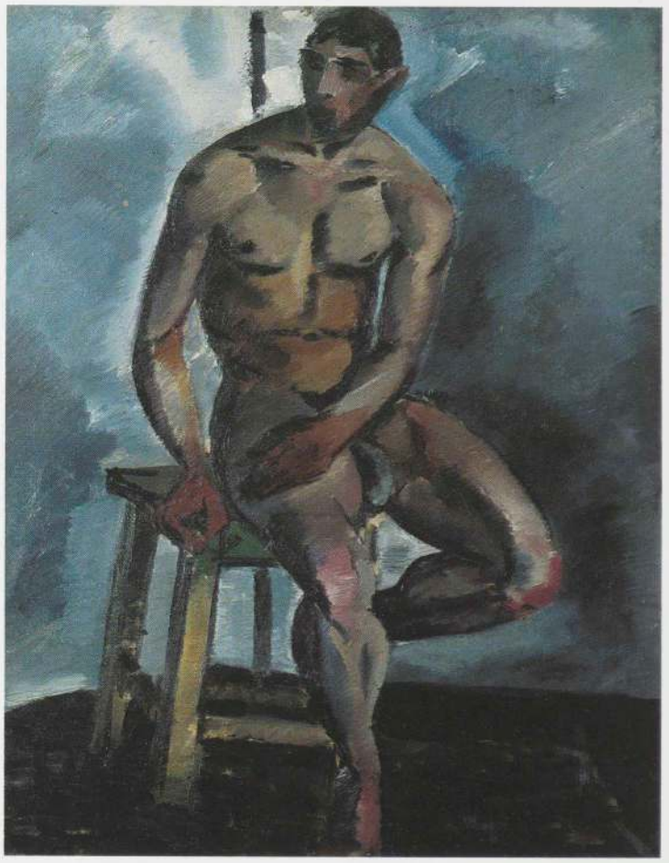
54. This aspect of Constructivism was the subject of an exhibition, "Art into Life," held at Henry Art Gallery, Seattle, Washington, June 4–September 2, 1990, and the Walker Art Center, Minneapolis, Minnesota, October 7–December 30, 1990. The catalogue of the exhibition illuminates in depth different areas of Constructivist art and philosophy.

55. Popova's art of the 1920s and her involvement with the theater are the subject of an essay by Natalia Adaskina in the catalogue of the Popova exhibition held in the Soviet Union in 1989–90. See *L. S. Popova: 1889–1924 Exhibition of Works from the Centennial Exhibition* (Moscow: State Tretyakov Gallery/ ARS Publications Limited, 1990), pp. 120–35. This period is also discussed extensively in Adaskina and Sarabianov, *Lioubov Popova,* pp. 190–259.

56. For the philosophy of textile and clothing design, see Lodder, *Russian Constructivism,* ch. 5, pp. 145–55.



Trees
1911–12
Oil on canvas
23⅞ × 18¾″



Male Model
c. 1910
Oil on canvas
39 × 30″