Lazar Markovich Lissitzky was born in 1890 in Polshinok in the province of Smolensk. His early drawings and picture books (see Figures 483 and 484) recall the environment of the small market town of wooden houses.

Lissitzky described his first book design as dating from 1905—two hand printed copies of a revolutionary almanac by him and his friends. His work at this time was strongly influenced by Vrubel. After failing to enter the Petrograd Academy of Arts, he left Russia in 1909 to study architecture at the "Technische Hochschule" ("Technological University") in Darmstadt. There, he was obliged to work in his spare time to earn money. The architect Joseph Maria Olbricht lectured at the university and the popular magazine Deutsche Kunst und Dekoration was published in Darmstadt publicising fashionable Art Nouveau.

In 1911 Lissitzky went to Paris where he visited his friend Ossip Zadkine, who was a native of Vitebsk, and on his return visited Henry van de Velde in Brussels, being familiar with his fitting out of Sergei Shchukin's house in Moscow. Influenced also by Behrens, Gropius and others whose aesthetic expressed expediency and renounced ornament, he was able to establish the basic principle of his life's work: "Architecture— that is art in its highest sense, mathematical order".  

In the Summer of 1912 he travelled in Italy, being impressed by Ravenna, the work of Cimabue, Uccello and artists before Giotto who may have reminded him of Cubism. Returning to Russia, he had to qualify again and he received a diploma in engineering and architecture from the Riga Technological University which had been evacuated to Moscow during the war. In 1916 he worked in architects' offices and helped to layout the Egyptian Department of the Pushkin Museum.

Between 1917 and 1919 he concentrated mainly on illustration for works such as "The Legend of Prague" (published 1917), "The Kid", Kiev 1919, (Figures 479-482). In the former he imitated traditional scroll illumination and in "The Kid" the influence of Chagall is evident. However, unlike Chagall's work which was incomprehensible to many, Lissitzky preserved his realism and was more generally understood. In common with Chagall and others his work at this time was strongly influenced by the Lubok and the Jewish Hassidic tradition.

After the 1917 revolution he took part in propaganda activities, designed the first flag for the Central Committee of the Communist Party of the Soviet Union (VTsIK) which was ceremonially carried across Red Square by members of the government on the first of May 1918.

In 1919 Chagall as principal of the Art School at Vitebsk, invited Lissitzky to return to his home town to become professor of architecture and head of the applied arts department. It was at this time that he became attracted to the Suprematism of Malevich which gave an impetus to his
architectural experiments. Lissitzky's word for his new art products was *proun*, "the interchange station between painting and architecture" (see Figures 485-488 and 493-497). The ideas behind the *proun* he later developed as outlines for building projects:

Our lives are now being built on a new communist foundation, solid as reinforced concrete, and this is for all the nations on earth. On such a foundation – thanks to the *Prouns* – monolithic communist towns will be built, in which the inhabitants of the world will live.

In 1922 he also discussed the various dimensions of the *Proun* suggesting it was a flat design as well as a three dimensional image with the potential for producing objects.

Proun is the name we give to the stage on the road to neoplasticism...

Proun is the creation of form (control of space) by means of the economic construction of material to which a new value is assigned.

Emptiness, chaos, the unnatural, become space; that is: order, certainty, plastic form, when we introduce markers of a specific kind and in a specific relationship to each other.

Proun begins as a level surface, turns into a model of three-dimensional space, and goes on to construct all the objects of everyday life.

In 1920 he designed the "Lenin Podium" and exhibited it at the International Theatrical Exhibition in Vienna in 1924 after which he gained interest among architects. He and Malevich, with their students, worked on a plan for decorating a square where the victory of the Revolution would

be celebrated. This project and others was published in the almanac Unovis.\(^1\) It was produced in the Vitebsk faculty of graphic arts. There were seven copies, in typescript with hand-printed lithographs. The red square became the special symbol of the Unovis group. The red square became the inspiration for a suprematist children's book entitled "Of Two Squares", which he wrote in 1920 and which was published in Berlin in 1922 (see Figures 489-492). He described his idea:

In this tale of two squares I have set out to formulate an elementary idea, using elementary means, so that children may find it a stimulus to active play and grown-ups enjoy it as something to look at. The action enrols like a film. The words move within the fields of force of the figures as they act: These are squares. Universal and specifically plastic forces are bodied forth typographically.\(^2\) (see also Appendix XLV).

Certain tendencies which resemble those of works by western European Dadaists appear in Lissitzky's work in 1923 and 1924. Optical effects related to perspective are used by both Duchamp and El Lissitzky in which simple abstract geometric compositions are ambiguously flat and three-dimensional. In Duchamp's work this appears in the Oculist's Witness in the bottom right hand section of the "Large Glass" as a series of discs and radiating lines (see Figures 528 and 529). Duchamp's piece entitled "To be Looked at (from the Other Side of the Glass) with one Eye, Close to, for Almost an Hour", 1918, (Figure 495) is closely related to this and is taken from charts used by opticians (called "temoins oculistes"). They were put into

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perspective, a drawing transferred to a silvered glass, of which part of the silver was then scraped away.

A similar moiré pattern is induced by means of lines crossing one another in a perspectival arrangement that similarly forms an element in both the first and the final version of Lissitzky's "Proun 99", c. 1924 (Figures 496 and 497).

In Hanover in 1923 Lissitzky printed a series of lithographs for the "puppet portfolio" for Kruchenykh's electromechanical peepshow "Victory over the Sun" (Figures 498-510). The device of matching lettering with geometric forms appears also in his political propaganda poster "Beat the Whites with the Red Wedge" (see also Figure 613). This was followed by a number of typographical and other projects (see Appendix XLVI). The idea and style of this work is similar to certain works by Duchamp, Picabia and those trends in Dada which are associated with the mechanical representation of the human figure in a humorous way and the Nietzschean and Bergsonian personality of a Modern Man consistent with the stage reached by Duchamp. They are geometrically represented ideograms of each of these personalities and recall the malic moulds of Duchamp's "The Bride Stripped Bare by her Bachelors, Even" ("The Large Glass") begun in 1915 and left unfinished in 1923 (see Figures 528-530). The resemblance is strongest in some of the figures especially of the title page (Figures 500 and 501) of Lissitzky's portfolio. They are drawn with very careful perspectival lines, in an anonymous space like the designs for "The Large Glass". Mechanical and biological
combinations in Lissitzky's sketches for the Machinery (Figure 539) recall both Duchamp's sketches for the "Sex Cylinder" (Figures 537 and 538 and his "Bride", 1912 (Figure 540).

Roussel's novel "Impressions d'Afrique" which had partly inspired Duchamp's work had among its themes certain mechanical devices which replaced natural functions. This science fiction element, reminiscent of Jules Verne, Roussel's favourite author, was similar to the theme of Matyushin's "Victory over the Sun". Mechanical scenery and figures had been designed by Malevich for the first performance of the same opera in 1913 (Figure 350); by L. Popova for the "Magnanimous Cuckold", 1920-21, (Figures 531, 532, 535 and 536) as well as various others by Tatlin which give an appearance of mechanical figures or puppets. At this time there was an interest in science fiction and the idea of robots. Lissitzky, and others (see Appendix XLVII) produced the mechanistic designs as portfolios of drawings in their own right, as imaginary characters for stage productions which were destined to remain on the pages.

In 1921 Lissitzky was summoned to Moscow to take over the faculty of architecture at the new Vkhutemas art school. Tatlin was also there and the new constructivist group comprising Klutsis, Alexander Rodchenko, Naum Gabo and others. They first exhibited as a group at the "Obmokhu" exhibition in Moscow and in 1922 at the Berlin exhibition.

1. The "Free State Artists Workshop" in Moscow was renamed Vkhutemas Higher Artistic and Technical Workshop in 1920 and Vkhutein in 1926. See Ibid., note. 11.
In 1921 Lissitzky travelled to Berlin via Warsaw with instructions to make contacts between artists in Russia and Germany. Lissitzky admired Georg Grosz and it is through him that he made contact with the German avant-garde. Grosz realised the possibilities of art serving revolution, he spoke against the expression of inner life which had created "isms" and favoured Dada reflecting the image of the times, propaganda art and applied arts. These ideas corresponded to those of Lissitzky. Berlin was full of Russians in the early 20s. As well as poets and intellectuals Gabo, Pevsner, Archipenko, Altmann, Sterenberg and Kosintsova-Ehrenburg the artists were there. It was during his time in Germany that Lissitzky stated Dadaism was the only significant artistic movement in Germany for centuries.1

Like the Dadaists of the West, Lissitzky transcended the bounds of separate disciplines. As well as by Lissitzky "photograms" of the 1920s were developed by Christian Schad, Man Ray and László Moholy-Nagy at about the same time. Pure experiments by Lissitzky and Moholy-Nagy were applied to advertising and for the first time in a poster designed by Lissitzky to advertise Pelikan ink (Figure 525).

However in the Publication "Object" he suggested that Dada was superseded by new aims that were more positive:

We consider the negative tactics of the "dadaists", who are similar to the early Futurists of the pre-war era as one pea is to another, to be anachronistic. The time has come to build on open ground.

1. See S. Lissitzky-Küppers, Ibid., pp.22-23.
We consider the triumph of the constructive method to be essential for our present.

"Object" will champion constructive art...

We have named our periodical "Object", because to us art means nothing other than the creation of new "objects".

"Object" regards poetry, plastic form, drama as essential "objects".

"Object" will, however, investigate examples from industry, new inventions, colloquial and newspaper parlance, sport-movements and so on...

"Object" stands equally aloof from all political parties, because it is not occupied with problems of politics but of art...however...we cannot imagine a creation of new forms in art unrelated to the change in social form.¹

In a later number (No. 3) 1922 Lissitzky criticised Archipenko of prettification and Kandinsky of lacking uniformity, clarity and subject.

The first Soviet publication of the tri-lingual Veshch ("Object") published by Skythen-Verlag at the beginning of 1922 was the result of collaboration between Ehrenburg and Lissitzky.

Lissitzky used new typographical ideas in this tri-lingual publication (see Figures 511 and 512). It aimed to familiarise Russian artists with western European trends and to give the west news of Russian art and literature. Contributors included Sergei Prokoviev, Charles Chaplin, Blaise Cendrars, Le Corbusier, Theo van Doesburg, Sergei Yesenin, Viking Eggeling, Fernand Léger, Mayakovsky, Malevich, Meyerhold, ...

¹. Introduction to Veshch, No. 1, Berlin 1922, signed Ilya Ehrenburg, El Lissitzky.
Ozenfant, Pasternak, Rodchenko, Shklovsky, Severini, Sternheim, Tairov and Tatlin.

Lissitzky also published at the Skythen-Verlag his book "Pro Dva Kvadrata" ("Of Two Squares") 1920, (see Figures 489-492) intended as a children's book. Doesburg at the Bauhaus in Weimar was a supporter of Lissitzky's work and reprinted "Of Two Squares" in the periodical "De Stijl". When the exhibition of Russian art left Berlin for Amsterdam Van Doesburg introduced him to Dutch artists and on his lecture tour he met J.J. Oud in Rotterdam. Oud's working-class housing-estate built in 1919 was of interest to Lissitzky. He further strengthened contacts with Carel van Esterene, Mart Stam, Huszar, Vantongerloo, during his second visit in 1926.

At the end of 1922 Mayakovsky invited Lissitzky to design and illustrate his book "Dlya Golosa" ("For the Voice" or "To be Read Aloud") (Figures 514-516) for publication in Moscow.

Mies van der Rohe and Hans Richter published a periodical called "G" (short for "Gestaltung" -"Form"), for which Lissitzky wrote an article "Wheel - Propeller and what follows" for the second number:

Wheel - Propeller and what follows 1923
Our creation of form - our systems of motion
First state
The human being walks, he strides. The movement is discontinuous, from point to point -
The whole sole must touch the ground.
The moving force -
the organic energy of the human body.
The moving apparatus -
the system of bones and muscles.
The Egyptian Pyramid: so that a point at a height of 150 metres could be reached, a stone mountain was piled up on top of a colossal foundation.
THAT IS THE FORMING OF THE WALKING HUMAN BEING.

Second state
The first invention - the WHEEL. The discontinuous walking changes into continuous rolling, the wheel touches the ground in one spot.

The moving force -
as in State 1, or steam, exploding gas, electricity.

The moving apparatus -
as in State 1, or the system of connecting-rod, cylinder, etc. of the machine.

Now systems of construction are being invented - not the piling up of material, but the arranging of it into supporting and separating agents. The Pantheon, the aqueducts, the great halls, the skyscrapers, the Eiffel Tower.

While buildings rise up and new energies are exploited, the speed of the rolling wheel increases and a new shape originates - MOVABLE ARCHITECTURE - the Pullman car, dining-car, ocean liner. The train - a rolling, collective dwelling.

THAT IS THE FORMING OF THE TRAVELLING HUMAN BEING.

Third state
The second invention - SCREW, PROPELLER. The continuous rolling changes into continuous gliding.

NAUEN Here the 250-metre aerial masts stand in one spot. The Egyptian Pyramid is obsolete.

The flying human being is at the frontier - at the frontier of the old conceptions. A new energy must be released, which provides us with a new system of movement (for example, a movement which is not based on friction, which offers the possibility of floating in space and remaining at rest). The new design must supersede the old machine, which is only an imitation of the human hand. Only inventions will move us forward. Only inventions will determine design. Even for revolutions new forms must be invented.

Lissitzky designed the cover of another periodical Broom published by the American Matthew Josephson.

In 1923 he exhibited in the Second Russian Exhibition in Berlin. Lissitzky conceived of the room given over to his own work at the Great Berlin Art Exhibition of 1923 "The

Proun Room" as a complete unit around which the spectator would pass and be taken through by the form of the exhibits giving to the exhibition its own unity and direction.¹

Lissitzky frequented the studio of Moholy Nagy where Raoul Haussmann, Hannah Höck, Hans Richter and Werner Gräff used to meet. That year many Russians left Berlin for Paris at the peak of inflation. Lissitzky remained in Berlin, gave lectures and published coloured lithographs.

After a period in hospital in Switzerland Lissitzky remained in Moscow from June 1925 to June 1926 returning to Germany when the International Exhibition took place at Dresden.

Lissitzky admired Eggeling's work on film.² Lissitzky was commissioned to design the Soviet section of the Stuttgart International Exhibition of the Werkbund, "Film und Foto", to be opened in 1929.

Eisenstein was invited. Lissitzky also became a friend of Dziga Vertov who had just finished his film "The Man with the Camera". They helped each other greatly. From Lissitzky's photographic experiments Vertov adopted the technique of photographic exposure, and in the periodical Building the U.S.S.R. Lissitzky presented his photographic illustration material like Vertov's running of a documentary film (see Figures 743 and 744). He continued to carry out official and other artistic and architectural projects until his death in 1941 (see Appendix XLVI).

2. Quoted in Ibid., p. 67.
Lissitzky's combination of the humourous and the mechanical appears also in his writing in the 1920s and some of his connections between pre-history and modern machines recall the Purists and the poetry of Cendrars:

My cradle was rocked by a steam engine. Since then it has steamed off to join the ichthyosaurs. Machines have ceased to have fat bellies full of entrails. Now is the time of the crammed skull of the dynamo with its electronic brain.  

We were brought up in the age of inventions. When five years old I heard Edison's phonograph - when eight the first tramcar - when ten the first cinema - then airship, aeroplane, radio.

In his essay "Suprematism in World Construction" 1920 he outlined the development of modern movements in the arts, described technological achievement and the future aims of painting to transform the face of the world as architecture.

We are now entering upon a fourth stage as we achieve economy and spatial diagonals.

we left to the old world the idea of the individual house individual barracks individual castle individual church. We have set ourselves the task of creating the town.

He mentioned the submarine, the aeroplane, the motors and dynamos of motive power in each part of a battle-ship to state that the legitimate origins of the counter-relief lies in "the economy of their form and their realism of treatment":

1. Typescript in the Lissitzky archive, Central State Archives for Literature and Art (TsGALI) Moscow No.58 "the film of El's Life", 1928, Quoted in Sophie Lissitzky Küppers, El Lissitzky, p. 325.


3. Typescript from the Lissitzky Archive.


Those of us who have stepped out beyond the confines of the picture take ruler and compasses - following the precept of economy - in our hands...if necessary we shall take machines in our hands as well because in expressing our creative ability paint brush and ruler and compasses and machine are only extensions of the finger which points the way.¹

Later in the same essay he pointed out the necessity to abolish differences between fine art and applied art.

The idea of "artistic work" must be abolished as a counter-revolutionary concept of what is creative.²

He concluded the essay with the following statement:

After the old testament there came the new - after the new the communist - and after the communist there follows finally the testament of Suprematism.³

Concerning the necessity of art itself in a democratic society which will serve to benefit everyone he wrote in lecture notes in 1922:

The question of whether art is really necessary has the following significance in our country:

In the new order of society in which work will cease to be slavery, in which there will no longer be small groups producing luxuries for a restricted stratum of society, but where work is being done by everyone for everyone, in such a society work is given free scope and everything which is produced is art. Thus the conception of art as something with its own separate existence is abolished.

Lissitzky considered that the utopian state was coming about in a reorganisation of the state, of economy and of science. He gave a concise survey of Russian art movements in the same lecture emphasising the rôle of Suprematism and its replacement of beauty by economy.

⁴ From "New Russian Art: a lecture" 1922. typescript from The Lissitzky Archive, Moscow, Quoted Ibid., p.330.
Lissitzky distinguished between two trends:

Two groups claimed constructivism, the "Obmo Khu" (the brothers Stenberg, Myedunyaevsky, Yoganson, and others) and the "Unovis" (Syenkin, Chazbonik, Klutsis, Ermolayeva, Khidersel, Kogan, Noshov, and others led by Malevich and Lissitzky).

The former group worked in material and space, and the latter in material and a plane. Both strove to attain the same result namely the creation of the real object and of architecture. They are opposed to each other in their concepts of the practicality and utility of created things. Some members of the Obmochu group (Yoganson, supporter of the idea of direct usefulness) went so far as a complete disavowal of art and in their urge to be inventors, devoted their energies to pure technology. Unovis distinguished between the concept of functionality, meaning the necessity for the creation of new forms, and the question of direct serviceableness. They represented the view that the new form is the lever which sets life in motion, if it is based on the suitability of the material and on economy.¹

In connection with the synthesis of architecture and construction he wrote:

In the years 1917-18 some young architects (Ladovsky Krinsky and others) painters (such as Rodchenko, Shevchenko), sculptors (Korolev and so on) organised themselves into a group, which sought to achieve a synthesis on these lines

ARCHITECTURE
+ SCULPTURE
+ PAINTING

= SYNTHESIS

However as with every approach to a synthesis, the first results were destructive. The several elements of design were already finding expression here, only they were disconnected and without a function. One was still caught in the trap. To this period belongs the design for a telephone kiosk by Rodchenko (1919).²

¹. Suprematism in world reconstruction 1920. Typescript from The Lissitzky Archive, Moscow, Quoted in S.L. Kippers: El Lissitzky, p.336.
². Ibid., p. 368.
Lissitzky expressed the attitude of many European architects in quoting Harold Loeb editor of Broom:

For a nation to create art, it must have its ideal, its god. America's god is the dollar: so its architecture has produced skyscrapers, its sculpture produces machines, its pictorial art is the cinema.

Lissitzky continues in the same article to say that:

Matthew Josephson discovered the great anonymous poetry of America - the verses and advertisements written in lights in the night sky of Chicago and New York.

Expressing faith in the functional architecture of America as opposed to the formal ostentation of the architecture that was considered respectable in America he wrote:

...it is precisely in America that Europe discovered a new guild of men... the engineers. Thus to the European mind New York became the new Athens, Manhattan the Acropolis, and the skyscrapers the Parthenon. It is true that New York itself knew nothing of this discovery. There they continue to build their temples to the Greek Gods over subway stations.

and later in the same article Lissitzky elaborated on this point stressing the importance of architectural engineering that was built for work. In this lay Lissitzky's utopianism and trust that it would replace human labour:

It was where work went on without the architectonic embellishments, where the engineer clearly defined his task, conscientiously observed the conditions imposed by his material and fulfilled the requirements of his construction, in the grain-belt of the Western States of Canada, that there appeared these elevators and silos which so astounded European architects. And

where in the West originated the works of Frank Lloyd Wright, America's only architect, who dared to discard all text-book precepts and create a new type of dwelling, which has revealed him as the father of contemporary architecture.

As a result of new methods a new kind of architecture is emerging. "American" techniques have opened the eyes of European architects...

In the new constructions the main achievement has been to free the walls from having the sole responsibility of supporting the weight of the superstructure."

Emphasising this point he describes the even more powerful and direct impression of almost invisible walls of the reinforced concrete airship hanger at Orly, near Paris. The De Stijl magazine reproduced a photograph of the largest aeroplane hanger in the world with a similar intention:

These are not the work of an artist-architect but of an engineer constructor Freyssinet, a man possessed of the same French spirit which inspired Eiffel.

Lissitzky summed up the aims of the new phases in Russia:

(a) Repudiation of art as a mere emotional, individual, romantically isolated matter.
(b) "Material" creation in the silent hope that later the resulting product will eventually be regarded as a work of art after all.
(c) Conscious fixity of purpose is creating an architecture based on previously worked out, objective, scientific principles, which presents a coherent artistic impression.

In order to apply his method of analysing form to the stages of creation Lissitzky clearly defined plastic elements as the cube the cone and the sphere applying them not only to pictorial construction but also to the construction of houses, bridges

1. Ibid., p. 370.
2. Ibid., p. 371.
and other "material" creations. In adding to this a consideration of material and colour elements he suggests that artistic and technological invention may be brought together:

ELEMENT AND INVENTION. 1924.
Two factors determine modern creative activity:
(1) ELEMENT, (2) INVENTION.

(1) ELEMENT
The modern designer examines the set task with regard to the functions which it has to fulfil. Thereafter he chooses for each function the element which is appropriate to it.

Plastic elements:
(A) Cube - it includes the flat surface, the edge and the right angle in three basic directions. Looked at standing on one of the surfaces, its outline becomes quadratic-static; when set on the point its outline appears hexahedral-dynamic.
(B) Cone - it rises on the base of the circle, the ellipse, with the outline of the triangle, the parabola, the hyperbola, the spiral. If we advance the vertex into infinity, it turns into a cylinder.
(C) Sphere - the crystallization of the universe.

These are the plastic elements for everything which is constructed, closed or open.
Closed: house (cube); silos, elevators (cylinder); balloon (sphere); billboard; antique sculpture; and so on.
Open: Eiffel Tower; bridges; aeroplane; illuminated advertisement composed of separate flashing letters: contre-relief (Tatlin) and so on.

When two or several elements are brought into contact, a tension results. The manner in which the tensile forces are brought into balance determines the construction. To the stresses of load and support has been added in modern times the concept of thrust. Thus originates the rib, openness. The modern style separates the parts under tension from the parts which outline it and enclose it. It does not seek to cover, mask or decorate. Its health is its naked form.

Material elements:
According to the resistance: concrete (pressure), iron (tension) and so on.

According to the treatment: aluminium (stamping) glass (founding) and so on.

According to the requirement for load-carrying or for external covering: Materials for covering are glass, vulcanized substances, pressed wood-panels. These determine the characteristics of the external surfaces;
the rough and the smooth, the grained and polished, the glossy, the transparent, and so on. Thus an optical and a tactile effect are produced simultaneously. This fact has particularly influenced the development of modern painting just as it has in general paved the way for various other spheres of activity.

Colour elements:
Our concern is with unmixed colours, therefore not with values and not with tone (the material itself possesses this), but with the colour which is aimed at a direct physiological effect; the fullblooded red; the colour of hygiene and of space - white; the black that blots out volume.

In the modern town colour can fulfil the function of a direction-indicator; all streets running in the same direction are given the same colour (on the upper storeys, for example), in this way meeting the need for orientation and also the requirements of the fifth-floor façade, the view from above.

In this way we possess a series of elements of design, which must be organized into a classified list, like the table of chemical elements. By virtue of themselves alone these elements would produce a material as good as all the reach-me-down historical rubbish that we have been playing with up to now. However, a mere loose combination of the elements can at best produce aesthetic stimuli, and we have no need of these today. It depends far more on the manner of combining them and this brings us to the second component of modern design.

(2) INVENTION
The modern designer examines the task he is set with a view to the function it has to fulfil. After that he finds the simplest 'obvious' compounding of the elements appropriate to the given function. This 'obviousness' is invention, so we must always be inventors. So the form originates as a result of the task; that is element and invention. We know no form in the abstract sense. As for the inventor, he makes his own new claims on the elements; and new materials, new colours, and so on, are created.

With the reconstruction of life going on at full pressure, technology has taken the road of element-invention. In the course of the past several centuries, art has no longer had any pressure from life; she became 'free' and with her freedom she got on to the path of parasitism and started exploiting the reserves of history. Thus we find ourselves today standing between radio and air-travel on the one side and an Egypto-Greco-Romano-Gothic masquerade on the other. The modern designer, while waiting for his new tasks in life, is forced to set such tasks for himself. For this reason the most important work today is still accomplished in the
laboratory. It is there that the mastery of 'number' and the logic of construction is developed; this means that the inventor has no need to calculate; he knows only that one and one exists, but his being contains in itself the clear and simple mathematical formula. Thus modern design attains to universal accomplishment, as with the aeroplane, for example, which is not only German or only French or only American. Invention is the universal force, the biomechanical force, which impels everything forward, overcoming all obstacles, along the path to progress. The two components of modern design—element and invention—are inseparable.

Lissitzky successfully synthesised the developments in the arts which had previously been disparate. The relationship of his typographic experiments to those of the printed texts of 1913 in Russia is similar to the relationship of the Bauhaus typography to that of Dada publications. Disintegrated syllables of zaum poetry which had been formerly handwritten and lithographed finally appeared as books printed typographically in their entirety by 1919. This was represented by Lakirovannoe triko ("Lacquered Tights") and "Milliork" (probably a merger of "million" and "New York") by Kruchenynkh (see Figure 513). Both were published in 1919 in Tiflis probably at the suggestion of Ilya Zdanevich a master of typographical art. Similar books had been published by Kruchenynkh before but the imaginative use of print was new and characteristic also of the stage of development reached in design by Lissitzky at the same time.

Lissitzky's influence in the Bauhaus was strong in this field especially through the intermediary of Moholy-Nagy.

Though Lissitzky abandoned the Lubok style of book illustration in favour of Suprematist forms he kept the narrative quality of the former texts but applied them to the various mutations of precisely geometric forms in "Story of Two Squares" and "Victory over the Sun". He did not remain attached to the flat square in Suprematist compositions but extended it into a cube in his Prouns. These idealistic representations of three dimensions he further extended into practical architectural design.

An industrial revolution only became obvious in Russia during the late nineteenth century. After the 1917 revolution and after the civil war it was not merely a new utopian faith in mechanised techniques that caused many Russian artists to abandon primitivism and other styles and often to give up painting altogether. It was the necessity to reconstruct Russian society and life into new forms. Many gave up painting to take up what seemed to them to be a more socially relevant activity of making constructions from "real materials" or of working with forms of applied art. The optimism of Russian artists at that time is in some ways comparable to that of Britain at the beginning of her industrial revolution.
Tretyakov Gallery, Moscow.
Figure 483. El Lissitzky. Illustration for "Ukrainian Fairy-tales". Lithograph 1919. Published by the Jewish section of the Ministry of Public Education, Kiev, 1922.

Figure 484. El Lissitzky: Illustration for the story "The Four Billygoats", c. 1919. Pen and ink sketch. Published Warsaw 1924.
Figure 485. El Lissitzky: Proun 1A,
*Bridge I*, 1919. Gouache.
8.5 x 15 cms. Coll. N. Estorick,
London.

Figure 486. El Lissitzky: Proun 1E,
The Town; from the Proun portfolio,
Moscow 1921. Lithograph. 50 copies
made. 22.7 x 27.5 cms Tretyakov
Gallery, Moscow.
Figure 487. El Lissitzky: Proun 1C, from the Proun portfolio, 1921. Lithograph. 23.2 x 23.3 cms.
Figure 488. El Lissitzky: Proun 23, No. 6, 1919. Oil on canvas. 77 x 52 cm. Coll. N. Estorick, London.
Figures 489 - 490. El Lissitzky:
"Of Two Squares", 1920 (published Berlin 1922).

Figure 489. Cover "Of Two Squares"
El Lissitzky.

Figure 490. The first page of the story.
"Here are the two squares".
Figure 491. Second page of the story.
"They fly to the earth from far away and"

Figure 492. Sixth page of the story
"This is the end – let’s go on"
Figure 493. El Lissitzky: Proun L.N.31, 
Forms, before 1924. Pencil, chalk, 
gouache. 91.5 x 68 cms. 
Yale University Art Gallery, 
Collection Société Anonyme.
Figure 494. El Lissitzky: Proun 93, Free-floating Spiral", undated. Pencil, ink, watercolour. Galerie Mortzburg, Halle.
Figure 495. Marcel Duchamp: To Be Looked at
(from the Other Side of the Glass)
with One Eye, Close to, for Almost an Hour, 1918. Lead, oil, rusted metal, magnifying glass and silver "scratching" on glass. 51 x 41 cms. (20 x 16 inches)

Figure 496. El Lissitzky: Proun before 1924
(probably a first version of Proun 99 (figure 491)).
Figure 497. El Lissitzky: Proun 99 c. 1924.
oil on canvas, 50.5 x 39,
Yale Art Gallery, New Haven.
Figure 498. El Lissitzky: Cover and title page of the puppet portfolio. The creation of the "electromechanical peepshow" Victory over the Sun, written as an opera by A. Kruchenykh, Moscow 1913. Published in an edition of 75 copies by R. Leunis u. Chapmann, Hanover 1923. Lithographs 53 x 45.4 cms.

Figure 499. El Lissitzky. Design for the cover of the Russian edition of Victory over the Sun, c. 1920.
Figure 500. El Lissitzky: Study for *The Machinery*
(Figure 495) Folio 1, *Victory over the Sun*. Hanover, 1923.

Figure 501. El Lissitzky: *The Machinery*
Title page, folio 1, *Victory over the Sun*, (Hanover, 1923).
Figure 502. El Lissitzky: Sentinel, folio 3, Victory over the Sun.

Figure 503. El Lissitzky: Radio Announcer, folio 2, Victory over the Sun.
Figure 504. El Lissitzky: The Anxious folio 4, Victory over the Sun.
Figure 505. El Lissitzky: *Globetrotter* (up to date) Folio 5, *Victory over the Sun*. 
Figure 506. El Lissitaky: **Sportsmen**

Folio 6, **Victory over the Sun**.
Figure 507. El Lissitzky: Troublemaker
Folio 7, Victory over the Sun.
Figure 508. El Lissitzky: Old Man (head two steps behind) Folio 8, Victory over the Sun.

Figure 509. El Lissitzky: Gravediggers Folio 9, Victory over the Sun.
Figure 510. El Lissitzky: Modern Man.

Folio 10, Victory over the Sun.
Figure 511. El Lissitzky: Cover for the magazine
Objet-Veshch-Gegenstand (1922)

Figure 512. El Lissitzky: Page from
Objet-Veshch-Gegenstand, No. 3,
Berlin, May 1922.
Figure 513. The cover of A. Kruchenykh: "Milliork" (Tiflis 1919).
41°
Figure 514. El Lissitzky: Cover design of *Dlya Golosa* ("For the Voice" or "To Be read aloud") by Mayakovsky, RSFSR State Publishing House, Berlin 1923.
Figure 515. El Lissitzky: A page opening showing the index of Dlya Golosa.

Figure 516. El Lissitzky: A page from Dlya Golosa showing "Third International".
Figure 517. Cover for *Die Kunstismen* ("The Isms of Art"), Edited by Hans Arp and El Lissitzky: Eugen Rentsch Verlag, Erlenbach-Zurich, Munich and Leipzig, 1925.

Figure 518. Page openings from *Die Kunstismen*. 
Figures 519 - 521.

Page openings from Die Kunstismen
edited by Hans Arp and El Lissitzky,
Leipzig 1925.
Figure 522. El Lissitzky: Cover of yearbook of Vkhutemas Art School, Moscow 1927.
Figure 523. El Lissitzky: The Wolkenbügel (Sky Stirrup) project, a skyscraper office block from Moscow, 1925 (Looking towards the Kremlin).

Figure 524. El Lissitzky: The Wolkenbügel (plan). Drawing.
Figure 525. El Lissitzky: Photographic poster for Pelikan ink 1924.
Figure 526. László Moholy-Nagy:
Three dimensional painting on white background and rear and front surface of transparent celluloid sheet 1926. 16" x 20" Collection Mrs. Sibyl Moholy-Nagy, New York.

Figure 527. L. Moholy-Nagy:
CHAPTER XXII

IRONY AND HUMOUR INSPIRED BY THE MACHINE IN THE WORK
OF CERTAIN DADAISTS IN THE WEST

Moods of both optimism and pessimism are suggested in works of art and mechanical illustrations of the eighteenth and nineteenth centuries. Similarly a whimsical, cynical style inspired by machinery and mass production in countries which had already achieved some degree of modernisation in Europe gave rise to Dada and the works of sophisticated artists such as Picabia and Duchamp. This presents a contrast to the earnest optimism of the Italian Futurists and most of the Russian Constructivists, though Popova's stage and costume designs give a humorous impression and are conceived in a similar way to Duchamp's inventive apparitions (see Figures 530-536).

Marcel Duchamp's work in glass, "The Bride Stripped Bare by her Batchelors, Even" (Figures 528-529); pictures of that time by Picabia and certain Dada collages resemble mechanical illustrations of two hundred years before and seem to choose the very serious quality of encyclopedia illustrations of that time to parody and to use as models for the absurd (see Figures 554-559). Mechanical illustrations have their own history and have developed parallel to the "fine arts", forming a kind of sub-culture in the history of art.1 The styles of these illustrations was naturally influenced by the fine art styles of their time and they

indicated various contemporary attitudes to the machine (see Appendix XLVIII).

In the second half of the eighteenth-century with the rapid development of technology, a style of mechanical drawing developed that was both aesthetically beautiful and scientifically clear. For example Beighton's Newcomen engine (Figure 555) is drawn as a realistic view reminiscent of contemporary topographical scenes of industrial and mechanical subjects. However, the side walls of Beighton's engine have been removed in the illustration to allow a full view of the mechanism, while the engine operator is shown sitting nearby while a spectator watches the operation of the pumpshafts. When the technique of mechanical illustration is applied to the human body it is even more disquieting as in the anatomical diagram (Figure 553, see also Appendix XLIX) in which a smiling man with a moustache is presented in the same manner as a machine and shown neatly cut open to reveal the organs of his chest and abdomen. As with mechanical illustrations colours are not naturalistic but bright and symbolic, red is used for arteries and blue for veins.

During a transitional period before the end of the eighteenth century inventions were not unfavourable to the small man and machinery was celebrated in prose and poetry as well as the visual arts (see Appendix L).

Saint Simon (1760–1825) held the view that the machine was to benefit mankind and could ultimately lead to a utopian society. He and his followers hoped for the
development of an industrial state directed by modern science. Many of the Saint-Simonists who broke up as a group in 1823 became famous engineers.

In contrast to this optimism there was also considerable change in the mood of British intellectuals after c. 1798. Machine wrecking occurred throughout the whole period of mechanical improvement from the mid-seventeenth century onwards but increased after this time.¹

Klingender points out that the mood of despondency which sprang from the unexpected frustration of the hopes placed in science and political reform led the revival for the eighteenth-century taste for the sublime. Mary Shelley created Frankenstein (1817) to express the fear that science might cease to be the willing slave of man and become instead his master destroyer.

Though many romantic poets and artists tended to reject imagery of the industrial revolution and preferred to it a past without railways or steamships trains, these subjects were variously represented throughout the nineteenth-century and at the beginning of the twentieth-century by which time it became possible to see the whole era in retrospect. Bergson stated that mechanical invention was the most essential factor of human intelligence and that the steam engine characterised a whole era (see Appendix LI).

¹. George Walker wrote that the Luddite riots had alarmed the manufacturing north and mentioned that the factories and all they implied in terms of human misery "are essentially requisite for the widely extended commerce of Britain."

Though its origins are much older mass production and a general substitution of manual work by mechanical method were not applied until the beginning of the twentieth-century. Professor Jack D. Rogers gives an optimistic account of mass production calling it a "market phenomenon" and stating that it is directly catering for "mass consumption". (see Appendix LII). The description ends with a reference to individual workers' at a conveyor belt:

Each worker along the line performs his job as the units move past and each part and tool is delivered to its point of use in exact synchronisation with the line...a number of individual assembly combinations are on the line simultaneously (see also Appendix LII). 1 

But the description recalls films such as Fritz Lang's "Metropolis" and "Modern Times" in which Charlie Chaplin performs the mechanical gestures of a worker, repeating the gestures automatically even when the conveyor belt stops bringing the machine parts.

The recognition of the absurd in mechanical activity was considered by Bergson to be the essential element of the comical. Bergson's essay Le Rire (1900 Eng. Trans. Laughter 1911) consists of an attempt to analyse laughter and the comic and to formulate a number of laws from his observations. His theory of aesthetics is also outlined briefly in this and connections between art and the comic are indicated. It is the first time Bergson published an application of his ideas to biology and anthropology. He saw the comic in whatever appears to be automatism and

mechanical inelasticity. That kind of automatism that produces blind habit and inadaptability to new conditions was seen to be a minor threat to society and laughter is the social response which restrains and corrects eccentricities and absent-mindedness. Yet he perceived something aesthetic in all that is comical, since it comes into being just when society and the individual, freed from the worry of self-preservation begin to regard themselves as works of art.

Bergson was a contemporary of the symbolists and owed as much to his observation of their work as to his knowledge of the European heritage of philosophy. Marcel Jean gave an account of humorous and mechanical art, and mentions Bergson as being one of the first to point out this relationship. He went on to indicate parallels in the work of Seurat, Chirico, Picabia and Duchamp and to say that Picabia mocks the machine as much as he exalts it in his mechanical paintings while Duchamp considers his "Bride Stripped Bare..." as a "hilarious picture."

Duchamp's "Large Glass" is reminiscent not only of a tradition of mechanical illustration that goes back to Uccello but also of the tradition of automata, the elaborate machines of Jean Tinguely and auto-destructive assemblages of the 1960's. The irony and ambiguity of Duchamp's work derives from late nineteenth century symbolism; from

Lautreamont's famous similies; from mechanical erotic novels such as Jarry's *Le Surmale* and from *Impressions d'Afrique*, the play by Raymond Roussel of which Duchamp accompanied by Breton saw a performance in 1911. It was after this that Duchamp began the elaborate preparatory notes for the glass which took him from 1911 to 1915. Charles Cros, inventor of the gramophone, photophone and colour photography and author of "*Principes de Mecanique cerebrale*" is mentioned also by Marcel Jean for the resemblance which Duchamp's work bears to his mechanical descriptions of physiology. Chirico was interested in Jules Verne at this time and science fiction was also popular during the early twentieth century.

The same spirit of creating hilarity out of impressive mechanical complications expressed in Duchamp's Glass and in the preparatory notes seems to be predicted in Bergson's essay on laughter. Bergson's introductory observations on humour might almost serve as a description of Duchamp's programme (see Figure 529).

Passing by imperceptible gradations from one form to another, it will be seen to achieve the strangest metamorphoses.

...(It) has a logic of its own even in its wildest eccentricities. It has a method in its madness.

Begotten of real life and akin to art, should it not also have something of its own to tell us about art and life.

Stressing that the comic does not exist outside the pale of what is strictly human, Bergson considered that although one

may laugh for example at inanimate objects such as a hat; what one is really making fun of is not the piece of felt or straw but the shape that men have given it. After pointing to the absence of feeling which usually accompanies laughter, having no greater foe than emotion, he interprets this group activity as a response to lack of elasticity, the result of rigidity - "mechanical inelasticity."  

The attitudes, gestures and movements of the human body are laughable in exact proportion as that body reminds us of a mere machine. To verify it directly, it would be sufficient to study closely the work of comic artists...We laugh far less at the drawings themselves than at the satire or comic incident they represent. But if we devote our whole attention to the drawing with the firm resolve to think of nothing else, we shall probably find that it is generally comic in proportion to the clearness as well as the subtleness with which it enables us to see a man as a jointed puppet. The suggestion must be a clear one, for inside the person we must distinctly perceive, as through a glass, a mechanism... The illusion of the machine working in the inside of the person is a thing that only crops up amid a host of amusing effects... To render it permanent, analysis and reflection must be called into play. - the art of the playwright probably consisting in setting before us an obvious clockwork arrangement of human events, while carefully preserving an outward aspect of probability and thereby retaining something of the suppleness of life."

The vegetative life of the "bachelors", (Figures 533 and 534), finely drawn symbols resembling chess pieces, is described by Duchamp in his notes as a "set of nine hollow uniforms or liveries designed to contain the lighting gas which takes nine malic forms". First comes the priest, then

1. Bergson: Ibid., p. 3.
3. Idem, p. 36.
the department store, delivery-boy, gendarme, cuirassier, policeman, undertaker's mute, flunkey, page-boy, station-master and priest, a "cemetery of uniforms and liveries," with a specific masculine dress and trades which, at that time, had no female equivalent. Duchamp's description of these "nine malic moulds" recalls a description in "Le Rire" of vice in comedy where stock characters are given titles in a similar way.

The vice capable of making us comic is, on the contrary that which is brought from without, like a readymade frame into which we are to step.

...many comedies have a common noun as their title: l'Avare, le Joueur etc.

The word "readymade" appears for the first time here in the English translation of 1911 where it is used several times. It was used for the first time by Duchamp in 1915, in reference to his mobile bicycle wheel on a stool.

The comic aspects of social masquerade which are discussed immediately after this seem to add more to the background impression of Duchamp's "malic moulds":

There is logic in the imagination which is not the logic of reason, one which at times is even opposed to the latter...It is something like the logic of dreams...

A man in disguise is comic. A man we regard as disguised is also comic. So by analogy any disguise is seen to become comic...

Any image suggestive of the notion of a society disinguing itself or a social masquerade, so to speak will be laughable. Now such a notion is formed when we perceive anything inert or stereotyped or simply ready made on the surface of society...

The ceremonial side of life must...always include a latent comic element, which is only waiting for an opportunity to burst into full view.

Bergson gave examples of a number of amusing happenings occurring as a result of the mechanical activities of

1. Ibid., p. 14.
2. ...the word 'readymade' did not appear until 1915 when I went to the United States. ... The word 'readymade' thrust itself upon me then.
3. Bergson, pp. 36-51.
uniformed officials then concluded:

Any incident is comic that calls our attention to the physical in a person, when it is the moral side that is concerned - the main point being that we should have lawyers, magistrates, and doctors and that all outward formalities pertaining to these professions should be scrupulously respected...no longer is it the profession that is made for the public, but rather the public for the profession. Constant attention to form and the mechanical application of rules here bring about a kind of professional automatism analogous to that imposed upon the soul by the habit of the body, and equally laughable...

...art has no other purpose than to brush aside the utilitarian symbols, the conventional and socially accepted generalities, in short everything that veils reality from us, in order to bring us face to face with reality itself.

An inevitably social rôle for art as well as for laughter is suggested here by Bergson. This rôle may be observed in practical terms in Chaplin's films and in the activities of the Zurich Dadaists during the First World War. However, Duchamp stated that he was never interested in any social question in his art. He has nevertheless brushed aside the utilitarian symbols and the whole quotation is applicable to his great glass and his attitude to aesthetics in general.

Bergson considered that behind laughter something less spontaneous and more bitter exists, the beginnings of a new pessimism. There is in this idea much that anticipates the early surrealism of which Lautreamont, Chirico and

1. Ibid., p. 54.
2. Ibid., p. 151.
3. Marcel Duchamp in conversation with the writer, September 1966.
Duchamp laid foundations. Bergson's association of the comic, the bitter and the play of ideas in dreaming also sums up the aims of this stream of art. Emphasis on dream work by Bergson and his remarks on playing with words summarise the activities of symbolist and futurist poets all over Europe as well as the visual puns of Duchamp and his contemporaries:

Comic absurdity if of the same nature as that of dreams... any play of ideas may afford amusement if only to bring back to mind, more or less distinctly, the play of dreamland. ... Many witicisms are reasoning of this kind. Such play upon ideas evolves in the direction of a play upon words... (also) gradually we come to take no account of the meaning of words we hear but only their sound.

Tatlin's interests in the calculations and diagrams of Tsiolkovsky's works on flight in its relationship to the flight of insects and birds helped him also to choose unusual and untraditional sculptural materials necessary to construct the organic forms of his glider "Letatlin". In view of Duchamp's probable inspiration from Marey's works on the physical movement of animals and men he may have extended his interests into further exploration of Marey's other writings drawing inspiration from the detailed and fantastic appearance of Marey's diagrams.

The second chapter of E.J. Marey's "Animal Mechanism" is entitled "Transformation of Physical Forces" and is concerned with the measurement of forces; units of heat and mechanical work; thermo-dynamics; measure of forces in living beings; successive development of force under this

influence and its application. The diagram on page 10 of that chapter (Figure 544) shows the transformation of the electricity of a battery into mechanical action, into heat, light and chemical action. The thickly engraved technique of this illustration is fairly typical of those found in the many popular scientific publications of the time, combining simplified, slightly primitive drawing with diagrammatic symbolism for the purpose of presenting information in the clearest and most concise manner. Each element is identified by a letter or number which is explained in the text and the arrangement of these elements or small objects is not altogether naturalistic but disposed one above the other in respect of the flatness of the page. At the same time the diagram is ambiguous in its suggestion of spatial recession as if each object might after all be arranged on a table one behind the other. This effect of space is made by local shadows of objects and by a perspective in each object which does not however provide lines converging at a vanishing point but lines which are parallel on the page like Lissitzky's Prouns. The general impression for illustrative purposes is very satisfactory but if looked at for some time the diagram gives at one moment the appearance of objects floating in space one above the other and at another moment they may be observed in an almost proper perspective of reality. This is also the general impression given in Duchamp's "Glass..." and its quasi-scientific objects have some affinities with those of Marey which show the transformation of electricity. The wheels, coils and mould-like objects through which the electricity
has to pass before being transformed into mechanical action, heat etc. is similar to Duchamp's myth of a fantastic erotic apparatus. The detailed description accorded to each object is also like the parody in Duchamp's notes for his art work.

If we take away loop No. 1, the current which passed through the loop is forced to traverse the elliptical circuit without passing through the surrounding apparatus. But if we afterwards remove loop No. 2, the current must traverse the apparatus M, which is an electro-magnetic motor. This apparatus will begin to move and will produce mechanical action.

Under the influence of the heating of the spiral by the current which traverses it, the air in the bottle dilates, and passes through a long tube, into the registering apparatus. The latter is composed of a drum of metal, closed on the upper side by a membrane of india-rubber. When the air penetrates into the drum the membrane swells, and lifts up a registering lever, which traces on a turning cylinder E, a curve whose elevations and depressions correspond with the rise and fall of the temperature. 

The fourth chapter states that motion is the most apparent characteristic of life and that it acts on solids, liquids and gases. Distinction between the motions of organic and animal life; structure of muscles; multiplicity of acts of contraction and their relation to muscular shocks are the main topics discussed in this chapter. Diagrams in this chapter show Marey's "Myograph", an apparatus designed to register movements and particularly flections of muscles onto a graph. One diagram in particular shows the apparatus at work on a prostrate frog (Figure 546) and may have suggested something of the eroticism of "The Bride Stripped Bare..." After examining contraction and work of the muscles;

1. Ibid., pp. 10-11.
2. Ibid., p. 32.
electricity in animals; animal mechanism and variability of the skeleton in subsequent chapters of the first book Marey deals in the second part with terrestrial locomotion in general as well as in men and horses. The second chapter is on the terrestrial locomotion of bipeds; the third chapter discusses the different modes of progression used by man and the apparatus used to note the methods of walking, running, galloping, leaping and hopping. Diagrams in these chapters show tracings of the impact and the rise of the two feet in walking, the transmission of an oscillatory movement to the registering apparatus and a runner provided with the apparatus intended to register his different paces (Figures 545-547). Galloping, trotting, ambling and walking by a horse are also analysed in a similar way.

In the third book, on aerial locomotion, the flight of insects is examined in the first chapter with reference to frequency of the strokes of the wing of insects during flight; optical determination of the movements of the wing; its trajectory; changes in the plane of the wing and direction of the movement of the wing. For these purposes an illustration representing an artificial insect is included in the second chapter entitled "Mechanism of the flight of insects". This chapter deals with causes of the movement of the wings of insects; their relation to air resistance, artificial representation of the movements of the insect's wing, the propulsive effect of the wings of insects; construction of an artificial insect which moves horizontally and change in the plane in flight (see Figures 548-550). Chapter three entitled "Of the Flight of Birds" deals with the conformation
of the bird with reference to flight; structure of the wing, its curves, its muscular apparatus and the muscular force of the bird as well as other morphological considerations. The fourth chapter is entitled "Of the Movement of the Wing of the Bird During Flight". As well as the movements, their frequency, durations of rise and fall and trajectory of the wing during flight, construction of the instruments which register this movement and elliptical graphs are described and illustrated.

The fifth chapter is entitled "Of the Changes in the Plane of the Bird's Wing at Different Points in its Course". Transmission of a movement by the traction of a thread instrument and apparatus to suspend the bird is described and illustrated (Figure 551). Experiment on the flight of a pigeon, analysis of the curves and a description of the changes of the plane of the wing during flight follow.

The sixth and final chapter, entitled "Reactions of the Movements of the Wing on the Body of the Bird" deals among other topics with theory of the flight of the bird and concludes with a discussion of the reproduction of the mechanism of the flight of the bird:

Winged apparatus has been seen in our laboratory... but this was only a very imperfect imitation...
Already a young and ingenious experimentalist, Mons Alphonse Pénaud, has obtained much more satisfactory results in this direction. The problem of aerial locomotion, formerly considered a Utopian Scheme, is now approached in a truly scientific manner.

The plan of the experiments to be made is all traced out: they will consist in continually comparing the artificial instruments of flight with the real bird, by submitting them both to the modes of analysis which we have described at such length; the apparatus will, from time to time be modified till it is made to imitate these movements faithfully.
[The reader] will no doubt be willing to allow that mechanism can always reproduce a movement, the nature of which has been clearly defined.

The topics analysed by Marey in his various publications were of importance to artists around 1910 especially the Italian Futurists and others representing motion. In addition the study of Marey's texts in order to represent movement would also have revealed the other interests such as flight and the inventive forms of apparatus he constructed. His book represents a stage in popularisation of science which immediately preceded and predicted the birth of the most spectacular inventions which excited the Futurists, Constructivists and their sympathisers in more individualistic genres. The discovery of his popular works by artists may not only have revealed the new forms of perceiving movement but also the fascination of elaborately constructed apparatus and the possibility of constructing a flying machine; though by indirect ways. If Duchamp had been representing motion with a method derived from Marey he may well have extended his study of the same author to assist his humorous and mechanical works of the post war period which formed a comic parallel of Constructivism.

Marey's analysis of movement and the "Nude coming down stairs" would have been a short step from the study of further works by Marey that revealed the apparatus itself. Moreover, in intuitively seeking to apply Bergson's mockery of the mechanical, Marey's popular publication with charming diagrams provided a vulnerable target.

1. Ibid., p. 278.
Figure 528. "The Large Glass"

The Bachelor's Odyssey: The Bride's desires had to overcome all sorts of obstacles before reaching the region where they confront the Bachelor's desires, but the journey of the Bachelor is even more tormented. Let us outline in synthesis the adventures of the "malic" element before examining each of the stages of the Bachelor's odyssey in detail.

When the "malic" element or illuminating Gas is cast into an image of Narcissus in Eros's Matrix, it hears the onanistic litanies of the neighbouring Water Mill. And as soon as the Gas has taken on its identity as Narcissus, it escapes from its matrix (the Malic Mould) through a hole in its top that opens into one of the Capillary Tubes (12), where it is frozen and cut into spangles and then converted into a semisolid fog.

The Capillary Tubes lead the Spangles to the opening of the first Sieve (16). Sucked by the Butterfly Pump (17), the Spangles pass through the seven Sieves, and in the process they condense into a liquid suspension. The liquid suspension falls into the Toboggan (16) and "crashes" at its base (19).

The Splashes formed by the fall of the liquid suspension are channelled into a stream by a Mobile Weight with nine holes (20), which directs the stream of Splashes to the Oculist Witnesses (21a to 21d). The Scissors (15e) control the impetus of the Splashes as they issue from the Oculist Witnesses. Some of these Splashes will then form a Sculpture of Drops (24) which will undergo the Wilson-Lincoln effect (25).

The reflection of the drops passes through the Bride's Garment (2) and is mirrored upwards towards the Bride's Domain.

THE BRIDE'S DOMAIN (upper half of the Glass):

THE BACHELOR APPARATUS (lower half of the Glass):

The additional elements would have been included in the Large Glass had it been completed.
Figure 529. M. Duchamp: The Bride Stripped Bare by her Bachelors, Even ("The Large Glass"), 1915-1923. New York. Oil, lead wire and foil, dust and varnish on glass, in two parts. 272 x 170 cms. (107 x 67 ins.). Philadelphia Museum of Art: Bequest of Katherine S. Dreier.

Design for the Bachelor Apparatus 1913 (Plan).
Provisional color - The main forces. They are provisionally pointed with red lead while waiting for each one to receive its color, like croquet mallets.
Figure 531. Liubov Popova: Design for the stage set of "The Magnanimous Cuckold". 1920/21.

Figure 532. L. Popova: Collage design - stage set for "The Magnanimous Cuckold", 1922. (George Kostakis Collection, Moscow).
Figure 533. M. Duchamp: Cemetery of Uniforms and Liveries No. 1. 1913. Pencil on paper. 31 x 40 cms. (12 x 16 inches) The Philadelphia Museum of Art (The Louise and Walter Arensberg Collection).

Figure 534. M. Duchamp: Nine Malic Moulds, 1913-14. Oil, lead wire and foil on glass. 66 x 104 cms. (26 x 41 inches). Collection of Mrs. Marcel Duchamp, New York.
Figures 535 and 536.

L. Popova: Actors' outfits
Nos. 4 and 5 for "The Magnanimous Cuckold", 1921.
Figures 537 and 538

M. Duchamp Sex Cylinder - (Wasp)
Ventilation: Heat produced by rotation of the pulac needle

Ventilation: Start from the interior

the pulse needle should live in peace in the life center of the body. (The body has a life center—the bachelors have not. They live on coal or other raw materials; drawn not from them but from these raw materials.)
Figure 539. El Lissitzky: The Machinery, Sketch for the puppet portfolio "Victory over the Sun", c. 1921. Gouache, Tretyakov Gallery, Moscow.
Figure 540. M. Duchamp: *The Bride*, 1912. Louise and Walter Arensberg Collection, Museum of Art, Philadelphia.
Figure 542. M. Duchamp: Chocolate Grinder No. 2
February 1914, Oil, thread and pencil on canvas. 65 x 54 cms. (26 x 21 inches)
The Philadelphia Museum of Art (The Louise and Walter Arensberg Collection).

Figure 541. M. Duchamp: Chocolate grinder No.1
March or April 1913. Oil on canvas.
63 x 65 cms (25 x 26 inches).
Louise and Walter Arensberg collection,
Museum of Art, Philadelphia.
Figure 543. M. Duchamp: Glider containing a Water Mill (in neighbouring metals). 1913-15. Oil, lead wire and foil on glass. 153 x 84 cms. (60 x 33 inches). The Philadelphia Museum of Art (The Louis and Walter Arensberg Collection).
Figures 544-551.

Pages from E.J. Marey: Animal Mechanism (A treatise on terrestrial and aerial Locomotion). (London, 1878,
ANIMAL MECHANISM.

manifestations of motion. Besides, the transformation of motion into heat, into electricity, into light, may be proved experimentally.

Fig. 1 represents the details of the experiment.

Fig. 1—Shewing the construction of the instrument of which the reader has already had an account.

Various instruments are so arranged upon a table that an electric current, generated by a battery E, may be made to pass through them. The current is conducted in an elliptical circuit on a small square board, represented in the centre of the figure. This circuit is formed of a thick copper wire; at certain points this wire is interrupted, and dipped into cups of mercury, from which other wires communicate with the various apparatus through which the current is to be conducted. In Fig. 1, the metallic bridges 1, 2, 3, 4, 5, connect the cups of mercury, and form a complete circuit, which the current may traverse without passing through the various apparatus placed around it.

If we take away loop No. 1, the current which passed through that loop is forced to traverse the elliptical circuit without passing through the surrounding apparatus. But if we

* Instead of the single element represented in the figure, it is necessary to employ a series of Brown's cells, to make the experiment perfected.

ANIMAL MOTION.

In order to explain thoroughly the function of the apparatus, let us reduce it in the first place to its essential elements. Fig. 2 shews a number of the views of a frog's leg, suspended by a clip by means of the bone to which the upper part of the muscle is attached. The tendon, t, of the muscle has been cut and tied by a thread to the lever, L, one end of which can be raised or lowered while the other remains fixed; the nerve, n, is susceptible of electrical excitation, which produces certain contractions followed by relaxations in the muscle, that is to say, the muscle is communicated to the lever, which is raised or lowered, ampli-

* De la Mesure, dans les Phenomhnes de la Vie, Paris, 1867, O. Bailhac.
CHAPTER II.
MECHANISM OF THE FLIGHT OF INSECTS.

Causes of the movements of the wings of insects. The muscles only produce a certain is and ha, the resistance of the air and the nature of the wing. Artificial representation of the movements of the insect wing; the possible effect of the wings in some cases. Contrivance of an artificial insect which moves horizontally—Change in the plane of flight.

1. Cause of the movements of the wing. These exceedingly complicated movements would induce us to suppose that there exists in insects a very complex muscular apparatus, but anatomy does not seem to be necessary capable of giving rise to all these movements. We merely find any but elevating and depressing forces in the muscles which move the wing: besides this, when we examine more closely the mechanical conditions of the flight of the insect, we see that an upward and downward motion given by the muscles is sufficient to produce all these successive acts, as well co-ordinated with each other; the resistance of the air effecting all the other movements.

If we take off the wing of an insect (fig. 83), and holding it by the small joint which connects it with the thorax, expose it to a current of air, we see that the phase of the wing is inclined more and more as it is subjected to a more powerful impulse of the wind. The anterior narrow region, but the membranous portion, which is prolonged behind, bears as account of its greater pliancy. If we blow upon the upper sur

2. Effect of the movement of the wing. The anterior region, which is prolonged behind, bears the down. If we blow upon the upper sur
Fig. 10.—Arrangement of the artificial lighthouse, to indicate the change of phase of surrounding light.

Fig. 11.—General arrangement of the heliometer. A plane is formed by the aperture of the object to be transmitted only to the secondary plane in the manner. The power is such that the angle of the earth is faintly discernible.
Figure 552. Longitudinal section of a double-acting Pumping Engine of 100 horse-power, designed in 1806 by Matthew Murray, of Leeds. (Industrial Museum, Newcastle-on-Tyne).

Figure 553. Baillère: Anatomical diagram. Late nineteenth-century.
Figure 554. Francis Picabia: *Amorous Procession*, 1917. Oil on cardboard.
38½ x 29½ inches.
Collection Mr. and Mrs. Morton G. Neumann, Chicago.
Figure 555. Engraving after a drawing by Henry Beighton of The Newcomen Engine ("The engine for raising water by fire") 1717. (Science Museum, S. Kensington, London).

Figure 556. The Magazine 291 No. 5-6, Cover by Francis Picabia. New York, 1915.

Figure 557. The Magazine 391, No. 8, Cover by Francis Picabia. Zurich.
Figure 558. Walt Disney: *Wolf Pacifier*, 1936.

Figure 559. Goldberg: An idea for keeping a buttonhole flower fresh.
Figure 560. Max Ernst: It's the hat that makes the man (the Tailor is the Style) 1920, Collage (14 x 18 inches. Papier collé. Museum of Modern Art, New York.
CHAPTER XXIII
OPTIMISM INSPIRED BY THE MACHINE IN THE IDEAS AND WORK OF
THE "PURISTS" IN WESTERN EUROPE

The Dadaists used machines as pictorial elements in
a destructive or whimsical way. Attention was drawn to the
absurdity of conventional classification. The irony of
Duchamp's work resulted from the association of two incongruous
subjects often united by an ambiguous title. Anti-artistic
tendencies of the Zurich Dadaists was associated with a
criticism of the society which had cultivated a certain
tradition of fine art. The values of the same society was
held responsible for the horrors of the first world war in
which the most striking feature was the extensive use of
mechanised armour. The anti-artistic tendencies of the
Dadaists were largely a continuation of the Futurist methods
of combining simultaneous views and of mixing satirical
images with urban and mechanical themes into montages of
photographs and other media. War and machinery was
applauded by the Italian Futurists, and military machines
also inspired the Vorticists and some of their French
contemporaries, notably Léger. After the war and especially
in the early 1920s, the period of reconstruction both in
Russia and Germany, coincided with the ideals of a minority
of artists to create new economic and functional forms and
to overthrow former values and categories of classicism.
In many respects this was a prolongation of the spirit of
Dada but its application was positive and came to be
associated more particularly with architecture and design
opposed to pure painting instead of the Dadaists' montage and readymades which had refuted the classical media.

As with the Futurists, the older forms of fine art with traditional classifications and divisions were viewed as if they were clichés that persisted in language. It seemed to the new generation of "Constructivists", "Productivists", "Purists", individuals such as Léger and artists associated with the Bauhaus that a new language relevant to the requirements of the period had to be created. The social ideals of this generation of artists inspired those who abandoned painting in favour of architecture and design, and in order to realise mass consumption and equal availability of objects, the concepts of a formerly distasteful mass production were applied. Therefore economy and mechanical forms replaced aesthetics in the minds of designers. Malevich had already applied this formula in his painting and theory of non-objective art and Duchamp had expressed it with readymade objects despite all else.

At the beginning of his book "Towards a New Architecture" Le Corbusier summarised his ideas of the inter-dependence that architecture and "the Engineer's Aesthetic" must have:

The Engineer, inspired by the law of Economy and governed by mathematical calculation, puts us in accord with universal law. He achieves harmony.

The Architect by his arrangement of forms, realizes an order which is a pure creation of his spirit; by forms and shapes he affects our senses to an acute degree and provokes plastic emotions; by the relationships which he creates he wakes profound echoes in us...

He considered the simplest forms to be the most beautiful and believed that engineers arrived at these geometric forms by calculation because they had to work according to strict needs of exactly determined conditions. He considered also that modern life required a new type of plan for towns and houses and that the spirit of the new period must "be met with particularly in industrial production". He saw styles to be false and considered that "our epoch is determining, day by day, its own style". This concept of necessity evolving the principle of economy he applied to architecture in relation to the aeroplane and motor car. This section ends with his best known statement:

The airplane is the product of close selection. The lesson of the airplane lies in the logic which governed the statement of the problem and its realization. The problem of the house has not yet been stated. Nevertheless there do exist standards for the dwelling house. Machinery contains in itself the factor of economy, which makes for selection. The house is a machine for living in.

But he did not consider himself to be a "functionalist" and stated what amounted to being a desire to translate the spirit of the time through the materials:

The business of architecture is to establish emotional relationships by means of raw materials. The necessity of the epoch in his opinion required mass-production houses.

The second chapter is entitled "The Engineer's Aesthetic and Architecture" and is prefaced by a photograph of The Pont de Garabit designed by Eiffel the engineer. In the summary at the beginning of the chapter he defined the

rôles of the engineer and the architect:

The Engineer, inspired by the law of Economy and governed by mathematical calculation, puts us in accord with universal law. He achieves harmony.

The Architect, by his arrangement of forms, realizes an order which is pure creation of spirit; by forms and shapes he affects our senses to an acute degree, and provokes plastic emotions;

The vocabulary with which he chose to describe his approach to architecture is frequently the same as that of Kandinsky and Malevich and indicates origins of the Purists and Constructivists are not as different from those of the abstract and non-objective artists as they might appear.

This separation of the aesthetic of the Engineer from the spiritual work of the architect has affinities with Malevich's aims in creating architectons which were not intended to be designs for buildings but extensions into three dimensions of his suprematist work and were inspired by the forms of functional achievements in modern building. He left the design of buildings to professional men. In Corbusier's view:

The Engineer's Aesthetic and Architecture - two things that march together and follow one from another.2

Describing the house as a tool, in the same chapter Le Corbusier elaborated his idea of tools being the result of successive improvement:

The tool is the direct and immediate expression of progress; it gives man essential assistance and essential freedom also. We throw out-of-date tools on the scrap heap...3

1. Le Corbusier: Ibid., p. 16.
Summarising the duty of the architect on the other hand he stated:

It is that architecture, which is a matter of plastic emotion, should in its own domain begin at the beginning also, and should use those elements which are capable of affecting our senses, and of rewarding the desire of our eyes ... These forms, elementary or subtle, tractable or brutal, work physiologically upon our senses (sphere, cube, cylinder, horizontal, vertical, oblique, etc.), and excite them.1

At the end of the chapter he called on painters of the avant-garde to pay attention to the problem of architecture.

In the next chapter he gave three reminders to architects, the first is that architecture is the mastery of masses. He illustrated the chapter with American grain elevators calling them "first fruits of the new age" in which engineers have used primary elements, thereby provoking architectural emotions.

Le Corbusier recommended skyscrapers for their economy and suggested setting them into avenues with parks to form a "city of towers".

Aeroplanes and other forms of the most modern machinery which had only been represented in the paintings of the Futurists continued to inspire. However the Constructivists and Le Corbusier desired a culture of real materials and regarded the objects of modern engineering almost as works of art and the best examples for their creations. In this respect the culture of real objects was not as far removed as its protagonists seemed to think from Malevich's non-objective architectons inspired by architectural engineering.

But both Tatlin and Le Corbusier studied the function and form of aeroplanes organically associating the machines with an extension of human physical activity to a greater extent than Malevich.

In his chapter entitled "Eyes which do not see" Le Corbusier included illustrations of steam ships and aeroplanes and demonstrated their superiority to traditional architecture.

...constructors of steamships produce palaces in comparison with which cathedrals are tiny things...  

The section entitled "Airplanes" begins:

The airplane is the product of close selection. The lesson of the airplane lies in the logic which governed the statement of the problem and its realization. 
Machinery contains in itself the factor of economy, which makes for selection.

In this connexion he made reference also to the efficiency of sleeping cars in comparison to the poor design of domestic architecture generally. This section is illustrated with photographs of aeroplanes of that time which display ideas current among younger architects:

...the construction must be shown...
...when a thing responds to a need, it is beautiful...

In the third section of "Eyes which do not see" entitled "Automobiles" he made one of his frequent references to the Parthenon stating that it is "a product of selection applied to a standard". In this chapter, illustrated entirely with

photographs of cars and Greek temples, his argument is that basic harmony exists in the best works of all ages:

Standardisation is imposed by the law of selection and is an economic and social necessity.¹

Le Corbusier suggested that there is a common denominator in great works of architecture: it is based on a common calculation:

If we are brought up short by the Parthenon, it is because a chord inside us is struck when we see it; the axis is touched.²

The chapter entitled "Mass-Production Houses" suggests that:

Industry on a grand scale must occupy itself with building and establish the elements of the house on a mass-production basis.

We must create the mass-production spirit.

The element of economy and utility are the basis of his "House-Machine" but Le Corbusier asserted that architecture is like the other arts an expression of ideas peculiar and appropriate to a particular time. The social need for large numbers of cheap dwellings in Russia inspired the avant-garde architects with the same spirit and their idea that human nature could be changed by propaganda is similar to Le Corbusier's complaint that "The right state of mind does not exist"³ for producing mass production houses.

The final chapter "Architecture or Revolution" contains an outline of the age of cottage industry run by individual enterprise on a family basis, and producing hand made goods. This is contrasted by industry bringing mass produced articles,

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3. Le Corbusier: Ibid., p. 211.
selective employment, specialization and precision of work required to fit automatically into the assembling of a whole. Despite the different organisation in modern work methods and the evolution of new tools and machines housing has remained at the "Snail Shell" phase, hindering him from following the same path in his leisure that he pursues in his work.

Works of Juan Gris in 1914 were composed with interlocking geometric planes, curves, arabesques and circles organised with clarity and precision into a pictorial formula. Though the compositions are intuitive, the intellectual control led to simplified mechanical shapes which elaborated tendencies suggested by Picasso and Braque in their synthetic cubist pictures. The paintings of Gris at this time formed a starting point for "Purism" created by Edouard Jeanneret (Le Corbusier) and Amédée Ozenfant (b. 1886). In 1916 Ozenfant began the Magazine "L'Elan" to criticise Cubism for indulging in purely decorative effects and loosening its formal discipline.

In 1918 Edouard Jeanneret collaborated with him and summed up his ideas in a critical essay entitled "Après le Cubisme". His magazine "L'Esprit Nouveau" (1920-1925) became the vehicle of the Purist movement. According to the Purists it was the rigorous forms of classical cubism that inspired their new art calling for discipline in a clear, precise rational style in keeping with modern machine civilization. The Purists considered themselves to be in the direct tradition of Ingres, Cézanne, Seurat and the Cubists. Within a system of elementary geometric forms they considered that the purest
effects could be produced. Geometrically standardised elements were to be the basis of the modern aesthetic consistent with mechanised civilization. There are affinities with the ideas of Léger and the Neo-Plasticism and in its association of art with radical aesthetic of economy and the machine it was of interest to the constructivists. Boris Ternovietz also remarked on its influence on the level of decorative art during the First World War:

Purism exercised a great influence on us during the first years of the Revolution at a moment when a concern with abstract forms dominated the USSR. The influence of Purism is reflected in the decorative frescoes of our young workmen's clubs, notably in Leningrad.

Ozenfant described similar constants in art to his friend Le Corbusier:

Our "Constants" is the problem on which I have tried to throw light, for that art into which they do not enter is the art in vogue, a distinction which has its value nowadays; for without and within, it is the ephemeral that matters to us.

The vast "constants" in mankind, these primeval cadences, I have related to the conception of "Tropisms".

I have sought to formulate those tropisms which are most clearly apprehended. On them I base the art that derives from "constants". I call it "Purism".

This book is in favour of "constants" and against the conventions dictated by circumstance: In favour of an Art based on our categorical and eternal feelings.¹

Ozenfant's style of writing is more picturesque, less conventional and concise than the composition of Le Corbusier's theories. Ozenfant used striking and unusual juxtapositions of ideas and photographs to bring out his points and he came close to developing an intuitive form of criticism attempted by his contemporaries in Russia.

Ozenfant's own tastes extended to surreal and fantastic tendencies. He considered that Baudelaire and the hashish eaters bequeathed to Rimbaud his legacy of dream-like imagery. He then quoted a statement by Rimbaud which not only illustrates this but also reveals ideas which were the direct forerunners of Russian symbolism and Futurism:

I loved senseless paintings, entablatures of doorways, backgrounds, the backcloths at fairs, signboards, popular colour-prints, out-of-date literature, church Latin, erotic books with no spelling, the novels of our ancestors, fairy tales, the little books of children, old-time operas, idiotic refrains, rudimentary rhythms. I invented the colours of the vowel. A, black; E, white; I, red; O, blue; U, green. I determined the shape and movement of every consonant, and, with instinctive rhythms, I flattered myself I was inventing a poetic formula that some day or other would be accessible to all the senses. The application I reserved for later.

First of all it was an exercise, I wrote of silence, night. I noted down the inexpressible. I mapped out my bewilderments.

The old-fashioned stuff of poetry played no small part in my alchemy of the word.

I innured myself to simple states of hallucination: without pretending I would picture a mosque in place of a factory, a drum-school for angels, see coaches rolling on the highways of the sky, drawing-rooms on the beds of lakes, monstrosities, mysteries; the title of a music-hall turn environed me with terrors.
And after, I revealed my magical sophistries by the hallucination of words.  

Ozenfant gave an account of literature in its lyrical aspects compared to painting and suggested that Rimbaud was the literary equivalent of Cézanne, while Mallarmé was the Cubist of that revolution. His account covered the poets associated with the cubists and the ideas of the Surrealists in such a way that links are made with a great tradition of art and considered that Leonardo's description of imagining imagery in the texture of old walls (see Appendix LIII) gave a fairly adequate idea of the modern poem. After discussing poetic vocabulary he described his arrival at the point of defining a precise art (see Appendix LIV).

Ozenfant associated the interest in "plastic values in contraptions and machines" shown by Duchamp, Picabia and Dadaists; the tendency toward geometricisation and the necessity for order with the development of Purism.

Geometry is sovereign mistress of our industry.

Trams, railways, motor-cars, equipment: all are reduced to a rigorous form.

His opinion that "machines are healthy and possess an implacable something that stirs us" was naturally shared by Le Corbusier. He referred also to the recognition of

2. Ozenfant: Ibid., p.120.
3. See also Ozenfant: Après le Cubisme and the review L'Esprit Nouveau, 1920-1925, edited jointly by Ozenfant and Jeanneret; also Pzenfant and Jeanneret: Le Peinture Moderne.
the beauty of machines by Fernand Léger and to Léger’s sympathy with Purism. Ozenfant’s section on architecture in "The Foundations of Modern Art" illustrated similar views to those of Le Corbusier’s and to ideals of the Constructivists in Russia:

The great undertakings of the Department of Roads and Bridges, utilitarian constructions, appear as impressive technical achievements. The aeroplane hangars at Orly (Freyssinet), the immense dams of the Panama Canal, the automobile track at Montlhéry, are the latest masterpieces of this specialised art which is in no wise inferior to the great achievements of the Romans.

The passage continued to describe the aesthetic of the engineer and machinery in the spirit of Le Corbusier:

Natural forms are mechanistic, for they are the product of universal forces. And these very forces are in their turn transformed by mechanism.

However he added a metaphor to this idea which introduced his poetic conception of "machines"as "relays" created by man:

The honey-bee is a relay that nature uses: mankind, too, is a relay like the bee: machines are relays created by man, and the collaboration of men and machines creates natural objects which artificially we call artificial.

Mechanical evolution is comparable with natural evolution, the law of mechanical selection is comparable with natural selection..."mechanical selection".

He envisaged the rôle of aesthetics as superfluous and put forward an argument similar to that of Malevich’s idea of "economy":

2. Ozenfant: Ibid., p. 151. See also L’Esprit Nouveau.
Aesthetics introduced into the sphere of mechanics, is always an indication of inadequacy somewhere. Old fashioned telescopes are aesthetic, but up-to-date ones whose capacity is infinitely vaster are in no wise so...

When the time comes there will be no place for aesthetic invention, which serves to hide the absence of knowledge.¹

In a chapter entitled "The Arts of Faith" Ozenfant described the human capacity to rationalise everything and determine everything by definite laws thereby making science possible. But with a note reminiscent of Malevich he continued:

Every use of language is inappropriate, for we know nothing...neither science nor philosophy are able to give us any absolute certainty. They can register the relation between apparent facts, and schematically group those which recur often, and only those: but never can they seize reality as it is, and still less satisfy our ardent curiosity as to the nature of things, or ourselves.²

His view of the effects of the machine is summed up in his following statement which appears in a later chapter, in which constructivist optimism is tempered with some almost dadaist pessimism:

The working day will diminish even more. Mankind will soon be better served by its slave machines than was any overlord of feudal ages by his serfs. A few chosen engineers will suffice to work out such new mechanisms as "progress" makes necessary, and machines will put them together under the supervision of a few mechanics. What will the rest of humanity do? Have holidays: immense periods of leisure in which to think? But thinking means inevitably seeing Death face to face.

The aim of both science and art is to create fantasies which solace us for reality.³

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2. Ozenfant: Ibid., p. 175.  
He observed that precision of timing ruled modern efficiency. This had led to mass production; to the desire for perfection and to habits of speed in daily life. Equipment such as clothing had become clean cut and art had also to be more dogmatic and precise.

To differentiate between "superfeation" of "decorative art" and forms that function as organs, Ozenfant pointed out that what to us often resembles decoration may really have been functional to begin with:

In the days when men lived in caves says the prehistorian Breuil, our ancestors perceived that: "To prevent the implement from sliding out of the hand and to make sure of a good grip it was necessary to modify the too smooth handle and introduce irregularity into it; whence the incisions on the edges or the more or less deep striations on the plane or curved surfaces. But these incisions are not made irregularly: man has observed the pleasure to be drawn from the regularity of markings and so he has been careful to make the incisions at regular intervals and parallel to each other, at times uniting them in recurring groups, the rhythmical arrangement of which he took pleasure in seeing".

Ozenfant defined three types of art:

1. Ornamental art is the relating of non-representational form and colour. Sensation is its main object. The interplay of geometric shapes stimulates the intellect.
2. Strictly representational art is imitation; its ideal is photography.
3. Representational-ornamental art. Here representation is treated as a simple theme, but this form of art tends more or less toward ornament, which endows it with a strong emotive attraction and gratifies our need for geometry; association plays a highly important part in it. Nearly all great art belongs to this category.

He believed that a universality exists in great art because common factors among all men produce and respond to certain

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lines of designs with a similar psychological impact. He illustrated this idea with a description of how the top hat is a conventional sign of nobility as a result of its cylindrical appearance based on a dominant vertical line. He further exemplified this idea by quoting Baudelaire's famous comment:

A painting by Delacroix, seen at a distance which does not permit of analysis or even understanding, even then produces a real impression on the soul.  

He went on to say that the eyes must overcome prejudices and attune themselves to new conventions of art. Later, after discussing the simplification and methodical geometry of Seurat he elaborated on the idea of other forms expressing a mood. This applied even to type face and mouldings of cornices among the psychological effects of signs worthy of study:

How can one blindly utilise the language of sounds without having first investigated the significance of each of them. (Stendhal)  

With examples of industrially applied colours he described the exciting effects of the colour red and the soothing effects of green. To illustrate these effects he described the consequences of the colours of photographic plates on workers at the Lumière factories; the use of "light baths" in a certain hospital and the effects of differently coloured lights on vegetables and animals. After discussing the different effects of colours, the inseparability of colour and form in our perception of reality and art and spatial

perspective of colour he turned to the psychological effects of form in his next chapter "The Constants of the sensations and elements of form in nature and art". He began this by describing a "Gamut of Straight Lines":

All forms can be grouped into four sensations. The two primary elements are Verticality, and its contrary, Horizontality: the other two related to them are Obliqueness and the curve. Let us study the straight line. We feel that

1. The communicable affects originating in the straight line are specific and exclusive to it.
2. Such affects are always augmented by other properties due to their orientation.
3. The vertical is a straight line which recalls the force of gravity: thus it is to some degree dynamic.
4. The horizontal is a straight line which emphasises the contrary of the vertical: it expresses inert stability, repose.
5. All obliques partake of these two states of feeling, to the extent of their divergence from each of the two opposing orientations.

The nature of curves are examined in a similar way before concluding that "all form is the echo in us of our awareness of gravity".2

An application of this idea to more complex and irregular forms follows (Figures 563 and 564).

His application of this argument may be summarised by a statement in his following chapter "Modalities":

When a particular kind of feeling is dominant in certain epochs, the general distribution of certain "modes" creates what is known later as its "style".

Modes depend on manners of thinking and feeling and not on technic: fashions of building, painting, writing are determined by modes of feeling and thinking.3

3. Ozenfant: Ibid., p. 266.
Following these discussions of how forms provoke abstract sensations, he gave the converse view "that there can be no such thing as non-representational painting":

Sensation: the substance of a work; the associations: ideas, sentiments.
Blue recalls the sky, because sky is blue: yellow, the sun: vivid tones, flowers. Ochres are forceful because earth is that colour. The colours of flowers are suitable to express grace and fragility.

Observe well the shop-fronts of oil and colour men. They hang out signs in various panels of different coloured paints. Here is a rectangle painted blue on top, green below: a lawn under the sky. And on the other side, it is blue below and green on top: water beneath trees;...  

The relationship between Ozenfant and Le Corbusier emerges in his view that both in objects of nature and of art the ordering of the universe reveals itself in their measure of adaption and that the observer recognised this instinctively. This idea is summed up by Ozenfant in a quotation from Diderot:

Michael Angelo gave to the dome of St. Peters at Rome the most beautiful shape possible. The geometer De la Hire, struck by this shape, drew it to scale, and found the outline to be the curve of greatest resistance. What was it inspired that particular curve in Michael Angelo, among the infinity of others he might have chosen? The day by day experience of life. This it is which suggests to the master-builder, as surely as the sublime centre, the angle of the buttress which is to save a wall from falling: and also teaches him how to set the sail of a mill at the angle most favourable to its rotation.

Ozenfant found this view to be applicable to motor cars, aeroplanes, ships and racehorses, adding later in the same text that whether artists are conscious of it or not

1. Ozenfant: Ibid., p. 76.
2. Quoted in Ozenfant: Ibid., pp. 281-283.
mathematics is present in the greatest works. This view is closely related to that of the Russian constructivists. Tatlin studied the function of natural forms in order to apply fundamental laws of structure to his constructions.

This view also recalls Malevich's principle of economy held much earlier and applied both in Russia in the Vkhutein and in Germany at the Bauhaus:

Pure art is not what is achieved: purity, as I understand it is a maximum efficiency, intensity and quality issuing from an utmost economy of means. Our brains are so made that we inevitably respond to the restrained eloquence that is able to express itself economically and finally. That same tendency determines primary forms, as, for instance, the egg, or the rocket's flight.¹

The fondness for terminology on the part of the avant-garde of the first quarter of the twentieth century has left a less clear picture of the movements than may have been intended. Manifestoes written by artists describing their work as "realist" include both Courbet and Gabo. Unsympathetic newspaper critics provided titles such as "Impressionist", "Fauve" and "Cubist", but perhaps the fashion for coining titles for new movements was given by Apollinaire. Self-styled movements with clear aims included Futurism in Italy, Rayonism and Suprematism. But few artists work for long within the rigour of a set style, moreover, division into categories and movements will often fail to show the affinities between work done under different group titles. The similarities between the ideas of the Purists and

¹. Ozenfant: Ibid., p. 300.
Constructivists may now be observed but the limits of Constructivism are less clear. Constructivism, principally a Russian movement, grew out of collage and assemblages of materials built into reliefs in Tatlin's case and Gabo's work originated in Cubism. Their ideas were also derived from the visions of the Futurists and tended either toward the production of architectural schemes or non-representational constructions. A number of artists, hardly ever called "constructivists", were producing figurative works and other variants with a similar method of spatial construction.
Figure 561. Charles-Edouard Jeanneret (Le Corbusier)
Nature Mortue à la Pile d'Assiettes 1920
(Still Life with Pile of Plates)
81 x 100 (32 x 39\(\frac{1}{2}\))
Kunstmuseaum, Basle, La Roche Bequest.
CHAPTER XXIV
THE WORK OF DAVID KAKABADZE AND OTHER FIGURATIVE TRENDS
APPROACHING CONSTRUCTIVISM

Alexander Archipenko, born in Kiev in 1887, is usually associated with Duchamp-Villon, Brancusi and the Cubists, probably because he went to Paris in 1908, but his origins are closer to those of Gabo and the Constructivists. His grandfather had been an icon painter and his father an engineer and inventor was professor at the University of Kiev. By the time he was fifteen years old he had realised certain connections between mathematics and art and decided on an artistic career inspired by "the fact that the creative genius Leonardo da Vinci covered not only art but the sciences as well as mechanics and considered mathematics to be the foundation of art."¹ He therefore began studying painting and later sculpture at the Kiev School of Art. His first exhibition was held in the Ukraine in 1906 and during the same year he went to Moscow where he exhibited in a number of exhibitions. On his arrival in Paris at the age of twenty he spent two weeks at the Ecole de Beaux Arts after which he studied independently at the Louvre, being most impressed by Assyrian, Egyptian, Greek and Gothic works. During the same year he worked in a Montparnasse studio where Modigliani, Gaudier-Brzeska and others studied sculpture with him. His bronzes of 1910 to 1912 are related to the works of those artists. In one or two works of 1910

even less well known work of his earlier period is often of a higher standard and the theories which date from his years in Paris are interesting if only as documents for historical comparison with the Purists and his other contemporaries.

David Kakabadze (1889-1952) was born in Kutaisi. His father was a poor peasant from the village of Kukhi in Western Georgia.1 David Kakabadze like other Georgian artists succeeded in acquiring an education through the assistance of progressive individuals among the Georgian intelligencia. He went to school in Kutaisi from 1902 to 1909, then studied natural science at St. Petersburg University and later lectured in this subject at Moscow.

Kakabadze became interested in painting while he was at school and took lessons occasionally from artists who happened to visit Kutaisi but from 1910 to 1915 he studied drawing and painting seriously at the Studio of Dmitriev-Kavkazski.

From 1920 to 1927 Kakabadze travelled extensively in Italy, Germany and France spending most of his time in Paris where he arrived in 1920 exhibiting abstract and other experimental works at the Salon des Independants. Katherine Dreier bought a painting and a three dimensional work from him for the Societe Anonyme, U.S.A.2 In 1926 or 1927

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1. See David Kakabadze, Tiflis, 1966, containing introduction text in Georgian by Levana Rcheulishvili with a brief summary in English, French and Russian. E. Steneberg Russische Kunst Berlin 1919-1932 states his date of birth to be 1890 and his birthplace as Kutais.

2. Most of the artist's work is owned by his widow and by the Art Museum of the Georgian Soviet Republic, Tiflis.
Kakabadze returned to Tiflis.

Apart from his involvement with painting he took an interest in historical studies of the ancient Georgian art of chasing and ornament, art criticism; invention in stereoscopic cinema and pyrotechnics, as well as with educational activities.

In addition to his wide range of landscape, genre, still-life, illustration and abstract composition reproduced in Soviet publications he also designed sets for the Mardjhanishvili Theatre in Tiflis. His articles were published in various magazines and pamphlets.

His earlier works show knowledge of contemporary art styles and a consciousness of folk art. A "Self Portrait in a Mirror", 1913 is composed with the simplified forms and oblique angles that recall early Degas portraits. His tentative use of blue shadows, and sharp angles, bear witness to familiarity with contemporary trends. The elongated diamond shapes of simplified colours in this resemble those of Saryan who was ten years older than him. The "Self Portrait with Pomegranates" (Figure 565) painted the same year is more intense in colour and though it is still fairly realistic it indicates the deep tonality of colours to be used during most of his life and especially in paintings of Imeretia: "Imeretia - My Mother", 1918 and "Imeretian Landscape with Red Road", 1918 (Figure 566). Works done not long before going to Paris show qualities of brushstroke and colour that resemble those of German Expressionists such as Kirchner but which are closer to the style of Larionov especially in his sketch for the mural painting "Khumereona"
1919 (Figure 567). Figures and their quirky poses resemble the early primitivist scenes of town life by Larionov painted about ten years before, while the figure on the extreme left recalls the same spirit of gentle mockery of the bourgeoisie in van Dongen's work.

Some of Kakabadze's most interesting work was done in 1913. It resembles work by certain artists of the Section d'Or group who were interested in the repetition of shapes and in the representation of subjects from everyday life. At that time he was in St. Petersburg where works by Goncharova, Popova, Rozanova and Malevich as well as work by Western European artists had been exhibited. Kakabadze's "Funeral at Imeretia", 1913 (Figures 569-572) painted in oil on canvas measures 5 feet by 5 feet.

The paint is fairly mat and thin with only slightly impastoed highlights. All the forms are thickly outlined in black and many gradually become identifiable as objects represented in the naturalistic colours of his landscapes and still lifes. Eventually many more objects can be identified or explained while others as is Braque's "Still Life with Violin and Pitcher" (1910) remain only partially real, similar to architectural cornices, stylised drapery or the repetition of certain rhythms.

The first clearly identifiable images are the red roses and fruit in the lower right hand portion below which fish and other food have been placed near foliage (see Figure 572). Directly above the fruit in the upper right hand portion of the canvas a number of loaves seem to float or take their place further back in space. To their right is the simplified
representation of a head with dark hair and above this in the extreme top right hand corner are the carriage wheels of the funeral car. Below the face and loaves of bread, candles are represented (see Figure 571). In the bottom left hand corner a melon is shown near some smaller green fruits and directly above it in the middle left part of the picture is a pair of high heeled boots probably belonging to the dead person. Coming from the top left hand edge of the canvas the paws and nose of a dog are recognisable. All these cryptically represented objects surround the dark forms in the centre of the picture revealed to be the coffin and all is arranged according to the conventional practice at a funeral in that region of Georgia.

The picture at the same time contains concise symbols of objects recording an old tradition in a personal way but avoiding very obvious primitivism. All the forms are outlined in dark paint and the coffin at the centre is the darkest part of the picture. The lines that run parallel to it become gradually lighter but it does not give a melodramatic or gloomy appearance and even resembles a cubist guitar or violin lying sideways.

A similar work of this period "Head" (Figure 573) is suggestive of the simplified forms of Malevich.

The period that Kakabadze spent in Western Europe caused the greatest change in his work and allowed him to absorb new ideas, first from the work of cubists such as Gris. This is evident in "Cubist Composition" (Figure 568) painted in oil on cardboard, while at the same time he worked at more realistic drawings and water colours. By 1921 his
compositions became abstract and he began to construct three dimensional reliefs by 1924 (Figure 574) often incorporating pieces of mirror, metal and glass. His "Sculpture" (1926) (Figure 575) now in the Brooklyn Museum is a free standing metal piece recalling the simple forms of Brancusi, the spiral composition of Duchamp-Villon's "Horse" and the enigmatic effect of a surrealist object.

The following year experiments in informal abstract painting derived perhaps from the early work of Kandinsky and Masson resemble the work done by American abstract expressionists in the 1950s. After returning to Tiflis he designed costumes and stage sets and began to paint his native province in the intense colours of former years. Around 1950 a few of his works commemorate industrial achievements in a socialist realist style.

David Kakabadze's manifesto "Du Tableau Constructif" was published in "L'Effort Moderne" in 1924, the year after the first appearance in French of Le Corbusier's "Towards a New Architecture", though an earlier version may have appeared in 1921 (see Appendix LV).

Although the paintings of Kakabadze do not resemble those of the Purists and he has not applied their ideas to his paintings he does appear to have adapted aspects of Purist theory to otherwise original ideas:

During various phases of human evolution, a time may be imagined when man only produced objects having an utilitarian character. At this period, even objects of which the surface was animated with lines and colours, had an immediate practical interest. But there was a time when objects of this nature lost their utilitarian interest, in order to acquire a special life of their own.

1. "...pour acquérir une vie particulière", Kakabadze Du Tableau Constructif [p.1]
It is the characteristic of our epoch to see man produce objects with surfaces animated by lines and colours of two categories:

1° Utilitarian objects (botanical charts, anatomical charts, photography etc.). 2° Things which are only the result of abstract reflexions or of philosophic perception (pictures).

By making this distinction he indicated that it is not merely by perception that distinctions between different kinds of representation is made but by the application of our intelligence to what we see and it is by means of our imagination that the identity of an object is altered:

Civilised men see most things through an accumulation of acquired knowledge.

In order to attain truth, the ideal object would be that which would react uniquely on our sensibility leaving us with a total sensation of its forms and of the substance without the aid of acquired knowledge.

He went on to say that the artificial limits of the conventional frame of a picture are of no use and discussed the larger surfaces used by primitive man in transposing images. He compared the gradual evolution to the limited picture format with the evolution of human dwellings from the open air to the modern houses and offices with their limited framed windows concluding:

If man's field of vision is not obstructed by artificial limits he perceived the objects in the total form...

3. This view of evolution is that of Kakabadze and it is of no relevance to this thesis to discuss its exactness or the validity of his comparison.
He was of the opinion that photographs give a fragmentary impression of reality and that all avant-garde art limits itself also to giving the same enclosed impression within the limits of a frame. He finally declared that pictures should occupy a space without the limits of a frame and should have the same quality as that of an object.

He illustrated the French text with two film stills which suggest a three dimensional collage in the space of the screen. Two of his works of 1921 show informal tendencies like the work of Arp but the shapes remain limited to a frame. The 1926 version in Georgian is illustrated with two architectural plates (Figures 576 and 577) that demonstrate common factors of architecture of various periods. Apart from these all the other plates are photographs of his relief construction in various materials with which the theory is concerned.

The essential difference between the constructions of Archipenko, Baranov-Rossiné and Kakabadze and those of Tatlin, Gabo and Rodchenko is the intensity with which the last three artists reduced their forms. In their desire to find the basic forms they tended to dismiss figurative sculpture at first and in the years following the 1917 revolution when their participation in the administration of the arts allowed them to develop utopian ideas.
Figure 565. David Kakabadze: **Self Portrait with Pomegranates** 1913, 103 x 170 cms. 
Collection of Madame Kakabadze.

Figure 566. D. Kakabadze: **Landscape with Red Road** 1918, 63 x 84 cms. 
Collection of Madame Kakabadze.
Figure 567. D. Kakabadze: Sketch for the mural painting "Khimereona", (a word derived from Chimera). 1919, 21 x 23 cms. Collection of Madame Kakabadze.

Figure 568. D. Kakabadze: Cubist Composition, 1920, oil on card. 50 x 60 cms. Collection of Madame Kakabadze.
Figure 569. D. Kakabadze: **Funeral at Imeretia**, Oil on canvas, 1913. 5 x 5 feet. Collection of Madame Kakabadze.

Figure 570. Detail of Figure 569.
Figure 571. Detail of Figure 569.

Figure 572. Detail of Figure 569.
Figure 573. D. Kakabadze: Head, oil on canvas
c. 2 ft. 6 x 3 ft.
Collection of Madame Kakabadze.
Figure 574. D. Kakabadze: Relief construction. 1924-25.
Figure 575.  D. Kakabadze: Sculpture, 1926.  
Polished metal.  
Brooklyn Museum, New York.
Figures 576 and 577.

Plates I and II of Du Tableau Constructif
(Georgian edition) Paris 1926.
Figure 578. Alexander Archipenko.
Sculpto-painting, 1917.

Figure 579. Alexander Archipenko:
Sculpto-painting, 1921.
Figure 580. Ivan Kliun: Composition with Saw. Watercolour and pencil. 7½ x 9 ins. (18.5 x 23 cms.) (Photo. Sotheby & Co.).

Figure 581. I. Kliun: Suprematist Composition c. 1916, oil on canvas, 34¾ x 28, Tretyakov Gallery, Moscow.
Figure 582. I. Kliun: Musician, 1917.
(Tretyakov Gallery, Moscow).
Figure 583. Vladimir Baranov-Rossiné:

**Dynamic Sculpture.** Painted wood and metal. Height 160 cms.
CHAPTER XXV
LUNACHARSKY AND THE ADMINISTRATION OF THE ARTS
AFTER 1917

On October the 26th, 1917 the Bolshevik Central Committee announced the members of the new government to the Second Congress of Soviets and Lunacharsky's important post as head of People's "Commissariat of Enlightenment". The full title of the commissariat was Narodnyi Komissariat Prosveshcheniya (po Prosveshcheniyu), usually shortened to Narkompros (Prosveshchenie – education or enlightenment).¹

Lunacharsky was born in Poltava in 1875 and went to the Kiev "Gymnasium" where he joined a Marxist revolutionary circle. After graduating he went to study with the philosopher Avenarius at the University of Zurich.

In 1898 Lunacharsky returned to Russia where he was arrested after joining a Social-Democratic group organised by Lenin's sister Anna, imprisoned, then exiled among Marxists such as A.A. Bogdanov (Malinovsky) whose sister Lunacharsky married, and V.A. Bazarov and Nikolai Berdyaev.

With Bogdanov and Bazarov he continued his interest in philosophy, debated against the idealist Berdyaev, and studied myth and the history of religion. He met Lenin in 1904, joined the Bolsheviks and became concerned with

ideas which he later summarised in the following statement:

Art and religion then occupied the centre of my attention, yet not as an aesthetic but as a Marxist.¹

It was in art and religion that he looked for the "emotional and ethical" to balance the ideas of Plekhanov whom he had met in Zurich.

Lunacharsky discussed the relationship of religion to Marxism in "Religion and Socialism" published in 1908 and 1911. He believed that Engels and Plekhanov had neglected Marx's emotional and ethical commitment to Socialism.

After a period abroad (see Appendix LVI) Lunacharsky returned to Russia in May 1917, participated in the non-Bolshevik paper Novaya Zhizn, headed the cultural-education section of the Petrograd City Duma, was arrested in July, readmitted to the Bolshevik party while in prison and elected Bolshevik candidate as deputy to the mayor of Petrograd.²

In March 1918 Narkompros was taken with the rest of the government to Moscow but some departments remained in Petrograd with Lunacharsky, including the arts department (IZO) and part of the theatre department.³

In 1920 Narkompros was divided into five sectors, one was Proletcult and the newsagency ROSTA and another for artistic sectors.

¹ A.V. Lunacharsky, Veliki Prevorot (Petrograd 1919) quoted in Fitzpatrick: Ibid., p. 3.
² Izvestiya VTSIK (Moscow 1918) No. 57, 26 March, p. 4. quoted in Fitzpatrick: Ibid., p. 8.
³ Izvestiya, quoted in Fitzpatrick: Ibid., p. 17.
Lunacharsky and his followers favoured an "orthodox progressive" European and American type of education which would be anti-authoritarian, non-scholastic, encouraging children's individuality. Pioneer groups and children's colonies were started as well as experimental schools specialising in the arts including Isadora Duncan's school in the early 20s and a great many other varieties of experiment in education (see Appendix LVII).

Lunacharsky's first declaration as Commissar of Education contained a virtual abdication of the powers of Soviet government institutions in the direction of cultural affairs.

The people themselves, consciously or unconsciously must evolve their own culture...The independent action of...worker, soldiers' and peasants' cultural-educational organisations must achieve full autonomy, both in relation to the central government and to the municipal centres.

Ideas on proletarian culture developed during ten years of thought which included the period spent with the Vpered group while in Italy (see Appendix LVI) were carried into Narkompros. The first conference on this subject was held in Petrograd 16-19 October 1917. The Bolshevik party took power a week later but Proletcultists maintained a great measure of autonomy.

Moscow also had a Proletcult led by Bogdanov, who similarly had not rejoined the Bolshevik party and it declared its autonomy at their conference in 1918. This

countered the central government and almost competed with Narkompros in its functions. The decision as to its subordination was debated for some time.

P.M. Kerzhentsev (1881-1940) spoke of a proletarian theatre with non-professional actors and a new repertoire. Kerzhentsev's real name was P.M. Lebedev. He was a graduate in history and philosophy, joined the Bolsheviks in 1904 and emigrated in 1912 returning to Russia in 1917. After the October Revolution he was active in Proletkult, head of ROSTA and a number of other important positions in the government always advocating proletariat monopoly in the arts. A follower of literary theorist Pereverzev, distinguished exponent of sociological criticism, he constantly defended the artistic left.

Bogdanov spoke of the uses of past culture:

The treasury of old art must not be taken passively... The proletariat must take the treasury of old art in the light of its own critical analysis, in its own new interpretation, uncovering their [sic] hidden collectivist elements and organisational sense. Then they will be a valuable heritage for the proletariat, a weapon in its battle against the very old world which created them...

Proletkult organisations varied in the organisation of departments. Workers were encouraged to practise the arts in studios. Narkompros approved of this and Bogdanov's recommended 19th-century Russian classical writers as models rather than Mayakovsky and modernists. Nevertheless,

the proletarian poets continued to admire Mayakovsky, Shershenevich and Balmont.

Despite claims by many Proletcult leaders to having no interest in Futurism and "Leftism", Bogdanov encouraged interest in new techniques of proletarian art - "photography, stereography, cinematography, spectral colours, recording, etc."¹

Zinoviev greeting a proletariat conference in Petrograd in 1919 criticised the infiltration of Futurism into Communist art and asked for more proletarian simplicity during the first year or two of Soviet power.

Artists and writers attacked "Narkompros" and one source of these attacks through the paper "Novaya Zhizn" came from Lunacharsky's former friends and colleagues including A.N. Benois, Petrov-Vodkin (see Figures 766 and 767), Nathan Altman (see Figures 587-603) and Mayakovsky (see Figure 611). Lunacharsky had not known Petrograd or its artistic life very well before taking office but was soon introduced to the theatre. The Proletkult however had no influence among the Petrograd intelligentsia.

When the Bolsheviks moved the administration to Moscow they were able to have more influence. Protection of art treasures and historical monuments as well as reorganisation of the theatre began in 1918. State theatres had previously become self-administering.

In November 1917 the "Union of Artists" rejected the

¹ "Paths of Proletarian Creativity (theses)" Proletarskaya Kul'tura (1920), Nos. 15-16, p. 50. quoted in Ibid., p. 100.
proposal that a state soviet on art should be established including non-artistic delegates and in April 1918 Lunacharsky replaced the Academy of Art with the "Free Artistic Studios" organised by Punin a left-wing member of the union. He and Mayakovsky had left the offended Union by this time.

On the 19th of April Lunacharsky addressed a meeting of the "Arts Union" and told them that the government stood for the complete separation of art from the state, for complete liquidation of all diplomas, titles, honours and exclusive privileges, and opposed state support of any artistic group or organisation on the grounds that it would inhibit the development of other groups.¹ The theatres also wished to maintain their autonomy. After independently resisting until the Autumn of 1918, Mayakovsky returned to Petrograd "finally understanding that the struggle for the new art could only be waged within Soviet organisational forms" and began to work in the art department (IZO) of Narkompros.²

Nikolai Punin was a leftist both politically and artistically. His views are expressed in "Proti Tsivilizatsii" ("Against Civilization") 1918. He attacked the French and English tradition and praised contemporary German discipline, mass organisation, harshness, mechanisation and scientific regulation to life.

¹. Reported in Novaya Zhizn, 21 April 1918, quoted in Fitzpatrick: Ibid., p. 115.
². Quoted in Ibid., pp. 120-121.
Punin met Lunacharsky in 1917 with Lourié at a performance of a play by Khlebnikov at the Hermitage Theatre.

Punin joined the Petrograd collegium of IZO, and Lourié became a member of the music department of Narkompros (MUZO) and later its head. Leftist domination in art was marked in IZO [Odtel Izobrazitel'nykh Iskusstv], led in Moscow by V.E. Tatlin and in Petrograd by D.P. Shternberg whom Lunacharsky had met in Paris in 1914. His paintings between 1914 and 1917 were related to naïve or primitivist French styles tinged slightly with Cubism (see Figures 584-586). His painting and left-wing political views qualified him in Lunacharsky's eyes. The Proletkultists were the chief enemies of the Futurists, and Shternberg criticised the lack of action on the part of the former and their failure to create a new art.

Elsewhere the conservative academic artists and "World of Art" group attacked the Futurists. In reply N. Punin underlined the revolutionary political nature of revolutionary art in destroying old ways.

In August 1918 the Proletkult "Art Production" subsection was formed and Olga Rozanova appointed as head of IZO's new department of industrial art. She drew up a programme and travelled around the country enlisting support for it, however she died in November the same year. During the following year Rodchenko replaced her and in April Inkhuk was established in Moscow by IZO.

INKHUK ("Institute of Artistic Culture") aimed at formulating an ideological and theoretical approach to the arts based on scientific research and analysis. This
inspired the development of "laboratory art". Members of the institute included B. Arvatov, O. Erik, W. Kandinsky, Popova, Rodchemko, Stepanova and A. Vesnin. Altman was active in the Petrograd section of IZO and Rodchenko was appointed to its head in Moscow and became director of the Museum of Artists Culture. Also as head of the "Vkhutemas", Rodchenko reorganised the Department of Metalwork according to his principles of industrial art and mass production.

Though Lunacharsky denied being a Futurist he was tolerant of them and had wide tastes. However by the time Petrograd IZO published the fourth issue of Iskusstvo Komuny appearing on December 29th 1918, he confessed to being embarrassed. Contributors included Mayakovsky, Shternberg, Nathan Altman, Punin, Mark Chagall and Malevich and the journal expressed attack on all past art which seemed to members of the government to contradict the policy of preserving Russian cultural heritage.

Lunacharsky was criticised also when he allowed the Futurists to decorate the capitals for revolutionary festivals in 1918, and to design monuments to revolutionary heroes of the past. Lenin disliked the cubist and futurist monuments, thinking them "straight-out mockery and distortion" of the original notion of celebrating the revolutionary tradition, and held Lunacharsky partly to blame. Lenin was also very irritated when some futurists painted the trees in the Aleksandrovsky gardens outside the Kremlin in bright colours for the Mayday holiday, especially as the paint turned out almost impossible to remove.1

Lunacharsky saw Futurism as an offspring of the decay of capitalism, an artistic phenomenon of imperialism. Even in 1919 he wondered whether futurism could develop into a proletarian art form:

The dynamism and methods of collective creative work which are so characteristic of futurist art certainly stand in some sort of relationship to what the proletariat may create in the artistic field. If we cannot speak of futurism as a whole as proletarian art, we can talk of individual artists of futurist persuasion as artists close to the proletariat. And we already see that this young art is winning its place in the proletarian artistic ideology...

A year later he wrote that the Futurists had proved unacceptable to the masses, although they showed much initiative during popular festivals, good humour and capacity for work of which the "old artists" would have been absolutely incapable.

The Futurists had been a powerful revolutionary force co-operating with Narkompros. At the other extreme and also supported by Lunacharsky were intellectuals protecting art treasures. Mayakovsky had called them "preservers of old junk", and they were generally hated by the Futurists. Alexander Benois was on good terms with Lunacharsky though opposed to the Bolshevik government and nationalisation of art collections. They worked to build up the Hermitage collection.

As for the administration of the theatre, the problem that faced Narkompros was the administration of the state.

theatres and the status of private theatre. The leftists supported nationalisation – hoping that theatres would be more accessible to the avant-garde.

From a practical commercial point of view many small theatres favoured nationalisation and Narkompros was pushed into it against its will.

In July 1919 Yuzhin, Stanislavsky, Nemirovich-Danchenko, Tairov of the Kamerny Theatre and E.M. Novomirsky of the Bolshoi issued a statement claiming that nationalisation was impracticable and "irreconcilable with the principle of freedom of creative work".¹

In 1919 Galkin called for an end to subsidization of the state theatres saying: "it would be better to use the stage of the Bolshoi theatre for agitation propaganda".² This and similar proposals to include plays of "revolutionary content" was rejected mainly through Lenin.

To Kerzhentsev's suggestion that the proletariat theatre would be created through rejection of "the monuments of the past", Lunacharsky replied that the proletariat actually preferred the classical theatre to the "revolutionary".

In the second half of August 1920 Lunacharsky was sent to the Kuban on the agitation train "October Revolution". In Rostov he met Meyerhold, recently released from imprisonment by the Whites. Lunacharsky brought him back to Moscow and appointed him head of TEO (the theatre

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¹ Quoted in Fitzpatrick: Ibid., p. 143.
of Narkompros).¹

Though previously tolerant he was now "possessed by the spirit of iconoclasm".² He announced the slogan "Theatrical October":

[It] meant full nationalisation of theatres, liquidation of the state theatres, introduction of revolutionary plays according to the directives of a general repertoire plan, struggle against false ideology in the theatre, and the development of theatrical technique. Its artistic imperatives were "the abandonment of literature, psychology and representational realism" in the theatre, and use of techniques of Cubism, Futurism and Suprematism.³

Lunacharsky subsequently took measures against this attempt to monopolise by the leftists.

Lunacharsky's mystical tendencies appeared to emerge in his own creative work. For relaxation he wrote plays during the Civil war years "The Magi" [Magi] and "Ivan in Heaven" ["Ivan v Rayu"] and a third play "Cromwell", a historical melodrama intended as a "revolutionary" play acceptable to traditional theatre.

Kerzhentsev attacked "Cromwell" and the mysticism of "Magi":

Magi is a mystical and philosophical play. Under the occult and mystical veneer, its essence appears to be that everything in the world is one, that God and the Devil are equal, that high and low are the same. If we decipher its symbolism we find a typical petty bourgeois anarchist philosophy which is ready to accept the whole world, and to praise equally the right and the left, Communism and the Whiteguards, Lenin and Wrangel.

He continued to criticise the contradiction between the

¹. Ibid., p. 150.
³. Quoted in Fitzpatrick: Ibid., p. 151.
plays of Lunacharsky and his public profession.

He was also attacked by "Pravda" for the unorthodox ideology of his plays.

Lunacharsky denied that revolutionary art had necessarily any connection with revolutionary politics. He was also strongly attacked by the Futurists while he in turn claimed that they had dropped behind "and were captives of the Paris cafés". Lunacharsky was also accused of being inconsistent but he claimed a right to individual creative freedom, a term defended mostly by reactionaries at that time. In December 1920 the creation of a separate Commissariat of the arts was supported by left and right delegates at the All-Russian Conference of Heads of Sub-departments of the arts which included Kandinsky.

Lunacharsky defended "Narkompros" against criticism during the civil war which was causing lack of reserves and material. Food was severely rationed and heating was a problem.

Lenin thought the Proletkult misdirected its own energy and that of its students theorised about the creation of "proletarian science" and "proletarian culture" instead of facing the urgent problems of turning a semi-literate country into a working democracy. Lenin also feared "political heresy" in Proletkult and he thought A.A. Bogdanov whom he knew from his days of exile to be too powerful an influence. Therefore Lenin decided that

"Proletkult" must be subordinate to "Narkompros" under the general leadership of Soviet power.

In October 1920 the Politburo prepared a commission to prepare an ideological statement on "Proletkult". Futurist and non-Marxist ideologies of proletarian culture were condemned, explaining that the years 1905-1917 had developed perversions of Marxism, notably "Machism" and Lunacharsky's synthesis of religion and socialism, "God-building".

Abuses had flourished in Lunacharsky's period. On December the 8th the plenum of the Central Committee decided that "art like science must be subordinated to the general tasks of the state" and in 1921 the Party meeting on education decided to abolish the arts sector of "Narkompros", of which Lunacharsky was president transferring it to "Glavpolitprosvet" ("Chief administration for political education under Narkompros"). With the exception of P. Voevodin of "Foto-kino" none of the former heads of the "Narkompros" arts departments moved to "Glavpolitprosvet". This reorganisation of the arts was intended to remove Bogdanovists, Futurists and cultural iconoclasts from "Narkompros" and "Proletkult".

Resulting from Lenin's plan "Glavpolitprosvet" an "Extraordinary Commission for the Liquidation of Illiteracy" replaced previous political agitation but often employed similar agitational banners, speeches and parades in 1921 and 22.

The N.E.P. began in 1921 and continued until the end of the 'twenties. It followed a change in government policy towards the peasants and tax replaced grain requisition, thus leaving them a surplus to trade. Free market and
private trade and a drop in government income resulted. Private enterprise began again in publishing and the arts and new journals started. Education suffered and theatres, which had always needed financial backing, did not welcome the N.E.P. The Proletkult Theatre lost its subsidy from "Narkompros" in 1922 and lost its premises in the Hermitage Theatre. Theatrical private enterprise of the '20s produced an abundance of all kinds of little theatres of the cabaret and farce type, whose "light" repertoire and frivolous manner of presentation were specially designed for "Nepmen" [The N.E.P. bourgeoisie].

Tatlin played a considerable part in art education after the 1917 revolution. In January 1919 he was appointed to a professorship at the Petrograd Svomas and was commissioned by Narkompros to design a monument for the III International. However in November 1921 his studio was closed and he was appointed professor in the Department of Sculpture in the Museum of Artistic Culture in Petrograd. Then in 1927 he was made director of a course of "Information and Culture of Materials" for the Ceramics Department of the "Vkhutein" in Moscow. Other courses such as the "Theory and Application of Wood and of Metal" were run with the aim of differentiating between industrial arts and artisan crafts. In the Autumn of 1929 Inkhuk was closed in Leningrad.

Figure 584. D.P. Shterenberg: *Supper*, 1914.  
(formerly Yastrebtsova Collection, Paris).

Figure 585. D.P. Shterenberg: *Etude*, 1914.  
(formerly Yastrebtsova Collection, Paris.)
Figure 586. D.P. Shterovertseg:

Easel Painting, 1917.
(formerly Izobrazitelnoe Iskusstvo Foundation).
Figure 587. Nathan Altman: Jewish Funeral, 1911.

Figure 588. N. Altman: Portrait of Anna Akhmatova, 1914.
Figure 589. N. Altmann: *Volumes and Planes of Colour*, 1918. (Formerly Gavronsky Collection, Moscow).
Figure 590: N. Altmann. *Volumes and Planes of Colour*, 1918. (Formerly Izobrazitelnoe Iskusstva Foundation).

Figure 591: N. Altmann: *Portrait*, 1918.
Figures 592 and 593.

N. Altmann: Design for Postage Stamps, 1918. (See Izobrazitelnoe Iskusstvo No. 1, 1918, pp. 50-52, Appendix LVIII).
Figure 594. N. Altmann: Petrokommuna, 1919.
Figure 595.

The Winter Palace, Petrograd, 1917.
Figure 596. Mutinous soldiers carry a revolutionary banner inscribed 'Liberty, Equality, Fraternity,' in the Petrograd streets during the February Revolution of 1917.

Figure 597. In the winter of 1917 an official vehicle is commandeered in Petrograd, and a demonstration takes place at the Winter Palace.
Figures 598-603. Nathan Altman's designs for decorating the great square in front of the Winter Palace in Petrograd, for the celebration of the first anniversary of the October Revolution of 1917.
Figure 604. Alexander Vasilyevich Kuprin (1880-1960)
Art. Sketch for a panel painting, 1918.
(60 x 71 cms.)

Figure 605. N. Lakov and G. Greenberg: Sketch
for a Birth of New Peace to be
painted on a fence (30.9 x 64 cms.)
Moscow, 1918.
Figure 606. K.K. Chebotarev: Marseillaise, Sketch for a painting. Kazan 1922.

Figure 607. Majolica pottery produced at Abramtsevo reproduced in the "World of Art" magazine Mir Iskusstva, 1902, No. 4.
Figure 610. A.M. Lavinsky: "How Then should Production be organised." ROSTA window poster, Moscow, 1920.

Figure 611. V.V. Mayakovsky: *Foundation* ROSTA window poster, Moscow, 1921.
1. ЧТО ЗНАЧИТ ОРГАНИЗИ- 
 ВАТЬ ПРОИЗВОДСТВО?

2. ЭТО ЗНАЧИТ 
 "СИЛ ЭРГ НЕ ТРЯТЬ".

3. ВСЕ НАД ЧЕМ 
 НАДРЫВАЛОСЬ ТЕЛО.

4. НАДО ЧТОБ ЧЕЛОВЕК 
 МАШИНОЙ ДЕЛАЛА.

САВСЕВ

ХОВ

САВСЕВ

ХОВ

САВСЕВ

ХОВ
Figure 612. V.V. Lebedev: "Red Army and Navy, defend the boundaries of Russia."
ROSTA window poster, Petersburg, 1920.
Figure 613. K. Malevich: "What Have you done for the Front?" ROSTA window poster, Smolensk, 1919.
А что ты сделал для фронта?
Отдай последнее тем, кто умирает, защищая тебя.

СМОЛРОСТА.
Figure 614. El Lissitzky: Propaganda board at a Factory, Vitebsk, 1919.
Figures 615 and 616.

The 'Red Star' Agitational-Boat.
Figure 617. An Agitation-Instruction train:
"The Red Cossack."
Figure 618. S. Tikhonov's designs on the Propaganda train "The Red Cossack", 1920.

Figure 619. "The People's Theatre" part of an agitational-instruction train used for Soviet cinema.
Figure 620. A train fitted out as a mobile school to tour remote districts of the Soviet Union. A photograph taken in the early 1920s.

Figure 621. The Propaganda train "V.I. Lenin" 1920.
Figure 622. Agitprop tram in Vitebsk with designs by Malevich, 1918.
CHAPTER XXVI

CONSTRUCTIVISM AND PRODUCTIVISM AFTER THE 1917 REVOLUTION

Lenin favoured the most extensive propaganda and for the closest contact with the factory class and its grievances, but he was the first builder of a totalitarian party. A brilliant scholar, he had boldly preached his principles throughout the 1914-18 War, at first with very little effect. The first thing he had to do was to bring order out of the chaos in Russia after the fall of Tsardom.

The Bolsheviks at the outset did not dare to hope for any permanence of their power. In accordance with Marxist principles, the factories were at once handed over to the control of the workers. The Marxist formula was at once applied "From everyone according to his ability, and to everyone according to his need".

The shortage of food in the towns enabled the government to make subsistence depend on service, advantage in distribution went to the manual workers, the next to brain-workers in the service of the government. Propaganda did more than anything else to break up forces of resistance in Russia and Lenin demanded monumental propagandist works rather than easel paintings.

By 1921 the civil war, the war with Poland and the German and Allied intervention had come to an end. The country had suffered seven years of war and isolation only to be followed by terrible famines from 1921 to 1922.

By 1921, military struggle within and without the country was over and the Communist Government had practically established its authority. Fantastic inflation, hopeless deficits, industrial and transport crises followed.
Therefore in 1921 Lenin carried through the New Economic Policy (N.E.P.) retaining Communist government but modifying it in practice where necessary. A stroke led him to retire in 1922 and he died in 1924. The triumvirate of Stalin, Kanenev and Zinoviev then took over and Trotsky was left out.¹

Ilya Ehrenburg described the spiritual isolation in Russia in 1921 and how French connections had been blocked off for seven years. Though many of the activities of the Russian avant-garde before and during the Great War were similar to those of the Dada movement that established itself in Zurich in 1916 the Russians were isolated from its direct influence.

The only number of an art revue passed from hand to hand, an article by Albert Gleizes on Dada, was translated without even knowing what "Dada" meant. Later, in France, Ehrenburg came to the conclusion that despite the absence of communications and the differences of the environment the French and Russian artists had arrived at the similar results. Differences, he thought, lay in the fact that life in Russia was harder and that the French as usual were prevalued by their culture in their plastic arts and their essentially pictorial sense. In Russia avant-garde art was no longer a sect but had become a large scale movement.

During the first two years of the revolution avant-garde art (called in Russia "Leftist art") dominated everywhere.

¹ See Sir Bernard Pears: A History of Russia.
This happened because the partisans of academic art had lost face. The academy and all the official art schools were closed. Most of the more academic and conservative artists were given posts as curators in old castles transformed into museums and younger artists had been given opportunities to show their work to the masses, above all in the decoration of the towns during festivals.¹

Many people found avant-garde art acceptable because they thought it was close to popular art. Propagandist and revolutionary styles developed. Sculpture, a comparatively new art in Russia, evolved a monumental cubist realism (Figures 608-609) akin to Zadkine's (Figure 772) and even to Abramtsevo pottery (Figure 607).

The academic painters painted portraits of high commissars, while other artists followed their own experiments. Ehrenburg² said that it was clearly not the government that pushed the evolution of art but the Revolution itself. Already in 1910-1914 in little Parisian circles the disquieting problem of the relationship between art and life was discussed. Each year art had been moving a little further from real life, "painters could only work for the prison of collectors or for the cemetery of the museums". Even avant-garde art became not only unpopular but anti-popular.

As a result of this, painters wishing to be involved in useful practical activities gave up making easel pictures

altogether as it seemed to be a luxury product hardly connected with the reality of the post-revolutionary days and the period of re-construction. Rozhdestvensky summarised the position by stating that construction is the modern exigency to organise and to utilize material in a reasonable way and art a form of mathematics. The constructive life is the life of tomorrow. The work of constructivists was concerned with "real" materials either aimed at a construction which employed these materials according to qualities peculiar to them, similar to the idea of truth to material; or it had a utilitarian application in mind. Therefore industry became the chief pre-occupation of young artists. The artisans of Russian villages conserved traditions of popular art but in the newly organised artistic activities in the towns an effort to adapt design to an industrial scale and to plan for mass production was assumed; applied art production was given over to artists to design, and manufacture of porcelain which had worked for the Imperial Court was transformed. (see Figures 623-630).

The number of technical and mechanical innovations that followed one another after the end of the nineteenth century was drawn to the attention of progressive artists. The realisation that easel painting was becoming more and more detached from a world based on technical innovations caused artists to try to adapt to the qualities of the new inventions. These qualities included speed, mechanical

techniques and utilitarian structure and function. To understand this, their conclusion was a study of new materials and research into the forms which might produce an art adaptable to modern life. The most important technological innovations had been the development of automobiles in the 1890s; steel frames and reinforced concrete in buildings at about the same time, and successful development of aeroplanes after 1900. After 1910 development became even more rapid and cheaper motor cars were produced as a result of mass production. In 1914 the beginning of mechanised warfare made use of the new developments and tanks, lorries and planes were used.

In 1920 de Freysinet developed pre-stressed concrete and by 1930 mechanical transport replaced older forms just as the film was replacing the theatre in public entertainment.

The economic and social effect of the growth of mass-production industries was felt mostly in transport and light industry. Once motor vehicles, particularly cars and light lorries, were available in reasonable numbers the process that began in the railway age was completed.\(^1\)

Gan in 1922 affirmed that "Constructivism was born from the meeting between painters of the left and ideologists of mass action". Mass production, unlike hand production is intended to produce a massive quantity of objects which pre-supposes a massive public. Also mass production unlike the production of goods by hand as single objects implies the minimum wastage of material in the design of an

\(^1\) See J.D. Bernal: *Science in History*, p. 588.
object. Hence mass production implied a redesigning of the object in terms of the new circumstances.

Ilya Ehrenburg's book *A vse taki ona vertitsya* ("And yet it moves") contains some ideas similar to those of Le Corbusier's *Vers une nouvelle Architecture* which was published two years later in Paris, but written in a more lyrical and verbose style, lacking Le Corbusier's precision. Many of the same photographs taken by a French company, were used in both publications. The interest of large aeroplanes such as the Goliath "Farman" and the giant double-winged sea-plane "Caproni" lay not only in the fact that they were great technological achievements but that the simplicity of their undecorated forms aided their function. Perhaps the fantastic and absurd aspects of these planes only exists long after they have ceased to be functional. The appearance of these planes inspired artists with the ideas of large scale sculptural and architectural projects most of which were never to be realised except on paper.

In his memoirs Ehrenburg referred to his book in an apologetic way:

In 1921 I wrote a book called "And yet it Moves", in praise of machines, industrial architecture and constructivism. Léger did a drawing on the cover. When I try re-reading it now much of it strikes me as comic if not foolish.

Even in those distant years before the First World War, Léger used to ask me puzzled: "Why do you go to museums? You're a young poet, you'd be better to look at aeroplanes, athletes, factories, circus acrobats."

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Various definitions of Constructivism by contemporary critics were formulated: the three principles of Ladovsky were "a link with actuality", "the firm determination to serve architecture, by wherever possible applying science and technology to it" and "the formal principle of architectonic organisation."¹

As early as 1922, Arvatov in formulating a criticism of the periodical "Object-Veshch-Gegenstand" the magazine put together by I. Ehrenburg and El Lissitzky, attacked the notion of an art in production as being a fundamental contradiction:

The arts of the left continue to debate among themselves in the morass of artisanship and of individualism. It is true, thanks to the great successes of techniques, the western abstractionists are, so to speak, technicised, that is to say they have absorbed technology on a purely ideological plane, they have begun to trace plans already drawn out and to make use of geometric and technological forms, but all this always within the limits of the easel painting.²

Arvatov considered that human nature could not be transformed in two or three years and he accused machine aesthetics of being merely another fetish.

The fault lay in the society which was not yet ready for a mature "art of production". Arvatov practically prophesied their destruction, and considered them to be the last of the artists of their kind:


². B. Arvatov's Criticism of Veshch, in Pechat i Revolutsiya, 1922, No. 7, Quoted Ibid., p. 29.
"...iconoclasts of aestheticism, [the Constructivists] are condemned to aestheticism..."

Two trends are visible in Constructivism, the first and earlier tendency is a pictorial one and the other which was developed with the "Productivists" was aimed at utilitarian production in applied art.

Gabo defined his form of Constructivism more recently:

Constructivist art (which is also falsely called abstract) does not intend to represent an object or a view already seen and known to you. It aims to convey to you the visual image of an experience, and the visual image of an experience of an object is something different from the object itself; it is an event in our consciousness, and our consciousness allocates to each event a different existence in space and time.¹

You can find the understanding of the meaning of such a work of art in the same way as when you ask yourself what is the meaning of a tree, of the grass, of the water in the pond which you look at and admire or dislike. The source of it is in your consciousness.²

Gabo's definition refers to those aspects of constructivism which were nearer to pure art of the kind conceived by Malevich, nearer that is, than the Constructivism which pursued utilitarian ends, known usually as "Objectism". This movement was developed in "Inkhuk". Tatlin's scope was very wide and his design of real material objects such as his stove and worker's clothes separated him from any specific group. Tatlin worked very little with the Constructivist groups though they came nearest to his ideas.

The Constructivists worked in materials, but in an abstract fashion, as a formal problem mechanically

2. Op.cit., p. 120.
applying technique to their art. Constructivism did not take into account the organic relation between the material and the tensile capacity, its working character. Essentially it is only as an outcome of the dynamic force resulting from these mutual relations that a vitally inevitable form is born.

Various members of INKhUK followed "collateral" activities, such as theatre design, Popova, A Vesnin, Altman, Stepanova and others, or figurative painting, Popova, A Vesnin, Rodchenko, Stepanova, Exter who organised the exhibition "5 x 5 = 25" in 1921.

The main tendencies in constructivism may be described as artistic until 1923 after which the development of constructivist architecture became distinct.

A summary of the main events of constructivism shows that at first activities were centred around exhibitions organised by members of the new teaching establishments, and then applied art, theatre and architecture.

The first Obmokhu exhibition was held in Moscow in the spring of the same year. Obmokhu, "the Society of Young Artists" comprised students of Pevsner and Tatlin who worked with spatial constructions and studied the quality of materials. It held four exhibitions. Contributors included K. Medunetsky and Rodchenko who had just constructed his first circular and polygonal shapes as mobiles (see Figures 632, 647 and 648).

A second Obmokhu exhibition took place in May 1920, exhibitors included Rodchenko, Kliutsis, Medunetsky and Shternberg. Kliun showed structures to be hung in space.

"Colour constructions" and industrial patterns predominated. Also in 1920 Tatlin finished his model for the III International (Figure 664) in the old studio of the Petrograd Svomas and it was opened to the public on the 8th of November.

Gabo and Pevsner published their Realist Manifesto (see Appendix LXI) during August the same year being principally an attack on mass in sculpture and a recommendation of structured forms inspired by engineering. This manifesto was countered by the "Productivist Manifesto" issued by Rodchenko and Stepanova in Moscow. Rodchenko, largely under the influence of Mayakovsky began "Productivism" in 1919. The chief aims of the movement were the utilitarian planning of objects, architecture, town planning, stage design and other spheres of applied art, thus removing art from a pure and elitist zone and giving it a practical place in society.

During the winter of 1920, Gabo made his first "kinetic sculpture" (Figure 694) a presentation of volumes determined by the vibration of a metal rod at high speed. Constructivism began to enter the theatre by this time and in 1921 Alexandra Exter's sets and costumes for Tairov's production of "Romeo and Juliet" (Figure 724) at the Chamber Theatre, Moscow, indicated the possibilities of the application of constructivism to the classical theatre.

The third Obmokhu exhibition opened in Moscow in May 1921 and included free-standing works by Rodchenko. This was followed in September by the fourth and last exhibition of "5 x 5 = 25" also in Moscow. Rodchenko's exhibits included three canvasses painted blue, yellow and red
respectively. Productivist statements were included in the catalogue corresponding to principles of industrial aesthetics being developed at the Bauhaus in Germany. In November a group of artists led by Popova and Rodchenko left INKhUK advocating "the absoluteness of industrial art and constructivism as its sole form of expression" and entered industry and applied art.

Adapting constructivism to the theatre Yakulov made constructivist sets and the costumes for the operetta Giroflé-Giroflà (see Figure 738) produced by Tairov at the Chamber Theatre in Moscow in 1922. A. Exter helped with the project and took part in further constructivist designs and scenery. The same year Alexei Gan's book "Constructivism" was published.

In February 1923 El Lissitzky and Ladovsky drew up the statutes of ASNOVA "The Association of Revolutionary Architects" in Moscow. This was the first group of avant-garde architects with a constructivist aesthetic.

In 1922 the magazine LEF ("Left") was constituted by Mayakovsky. It continued until 1929. Participants included Aseev, Tretyakov, Kamensky, Pasternak, Kruchenykh, Neznamov, Brik, Arvatov and other writers. Constructivist artists in the group were Rodchenko, Stepanova, and Levinsky, and the film makers were Kuleshov, Dziga Vertov (Figures 743 & 744), Eisenstein. The review LEF was published by this group which also called itself LEF. It appeared in seven numbers followed by Novy Lef ("New Left") which was continued until 1928.

During the winter of 1923 in Petrograd Tatlin produced
designs for "Zangesi - Poetic Action in Stellar Language" by Khlebnikov with Tatlin's constructions and costumes interpreting Khlebnikov's alphabet (Figures 686 and 687).

In 1927 MASRFOR, theatre of free laboratories stages "Dance of the Machines", with rhythmic mechanical actions, electro-acoustic sounds and jazz, Forreger and Kliun being largely responsible for the work, and in April the same year Gabo and Pevsner created scenic constructions for "La Chatte" produced by Diaghilev at the "Theatre of Monte Carlo".

Rodchenko under the influence of the dominant personality of Mayakovsky began the productivist activity, mainly in the form of graphic designs and prepared to carry out studies in linear structure for industrial objects. The first phase of his productivist activity followed his painting "Black on Black" (1919). Characteristically he drew up manifestoes and graphic compositions of word arrangements, projects for furniture, public squares and palaces for revolutionary manifestations in Moscow. His first teaching post at the "Vkhutemas" was as professor and dean at the metalwork ("Metfak") which initiated the "object-industry".

A. Abramova wrote:

The Shtembergs studied the expressive possibilities of various materials and exhibited at the Obmokhu exhibition "Chromatic constructions" and integrated constructions. They were laboratory attempts to give an aesthetic interpretation of engineering construction and of technical forms in general, but with the prospect of transferring the form, rhythms, chromatic solutions and methods to real construction.

Typical of the first productivists were the two Shterenbergs Georgyi and Vladimir. Their first experiments consisted of set designs for operetta, the cinema and the circus in the years immediately preceding the revolution. During the celebrations of 1918 they made a series of decorations for public buildings including some for the central post office, designs incorporating abstract geometric elements in colour combined with such propaganda slogans by Mayakovsky as: "The streets are our paint brushes, the city squares our canvasses". At "INKhUK" they signed the manifesto of the "I Group of Work" of the constructivists also at the "Obmokhu" exhibition. Medynetskii launched the declarations and programmes which were an attack on "pure art" by the constructivists:

Constructivism will lead mankind, with the minimum waste of energy, to the highest conquests in the camp of culture.

They supported the productivist trend and helped organise the "Laboratory of Constructivists" where they carried on research on form, colour and its relation to function and construction. They worked with Meyerhold on the set for "The Magnanimous Cuckold" which was completed by Popova. In 1922 they began to work for Tairov.

As for theatrical set designing they maintained:

The use of all material resources of the stage with an exclusively utilitarian scope, with the intention of using the minimum "construction" to obtain the maximum "scenic" possibility.

Osip Brik agreed with the exponents of "Proletkult".

They maintained that it was not enough to teach art to a proletarian in order
to obtain proletarian art. Just as in any other form of production he claimed that art would only be a dilletante hobby.

In Brik's view the proletarian artist was a mixture of talent and proletarian consciousness. He was distinguishable from the bourgeois artist, not because he worked for another type of consumer, nor by the fact that he derived from another social milieu, but by his animation with regard to his gesture against what was already accepted as art itself.

Brik further stated that the bourgeois artist considered creation to be his personal question, the proletarian artist considered that the problem was a collective one:

The bourgeois artist created to manifest his own ego; the proletarian artist created to fulfil an important social function.

The bourgeois artist considered the crowd to be an element foreign to him, whereas the proletarian artist sees his own people face to face.

The bourgeois artist repeats for the thousandth time the imprints of the past; the proletarian artist always creates the new because that is his social function.\(^1\)

Punin during a debate in November 1918 maintained:

The bourgeoisie has transformed art into a sacred thing, the bourgeoisie has begun to consider art as a temple.

This is in contrast with the proletariat who possesses the 'materials' of life:

The proletariat...manufactures the objects and the basic conceptions of their application...the

proletariat will create new objects and new streets... proletarian art is not a temple, where one is limited to contemplate...but a factory where useful objects are produced for all.  

Tarabukin's lectures and publications define the aims and ideas of Productivism in a clear perspective and are worth applying in detail to the position reached in Russia by this time. On the 20th of August 1921, a few days before the "5x5=25" exhibition, he gave a talk at INKhUK entitled "The Last Picture has been painted".  

(See Appendix LXII). It began with an account of the gradual removal of anecdote from painting and an increasing concern with "real material structure of the canvas, that is to say the colour, texture, the construction and the material itself" since Cézanne. He continued by describing the development of contemporary art movements in Russia and their departure from the flat picture plane into constructivism stating finally that the aesthetic had been consciously banished by his contemporary artists and that art is "shut in a terrible impasse". He criticised the Constructivists for wishing to be associated with art but not understanding the techniques of industry sufficiently well to do so. He stated that Futurists and other modern movements despite their intentions were destined for museums and art historical accounts. He considered that the art of the future should be socially justifiable in all its forms and referred to a meeting at INKhUK on the 24th of November 1921 at which Ossip Brik had presented a report on the transference of the

1. "Temple or Factory?" an account of the debate on art (24 Nov. 1918) in Petrograd, in Iskusstvo Kommuny No. 1 7 Dec. 1918.

Commissariat of Education (Narkompros) to the Superior Council of National Economy after which twenty-five leftist artists gave up easel painting for "Productivism". While prepared to classify Tatlin's "Tower" as museum art he conceded that the difference of approach between Tatlin and Picasso lay in the general name each gave to their works. Picasso called his constructions "pictures" whereas Tatlin described his own as an "assortment of materials". But it was not sufficient to remain attached to the object as such, the work of the engineer artist was different from that of the artisan engineer, and the object of Productivist mastery was different from that of the industrial object. Seen from this point of view, Constructivism was capable of social meaning in the way that specialised treatment of materials was the chief concern. Mastery of technique had a utilitarian end in view. Tarabukin also criticised the artificial separation of art and applied art:

If the picture, as far as being an aesthetic conception, has lost its vital direction in the present cultural conditions, it is not in the transference to chintz or a porcelain plate that it will discover itself again.¹

The remark referred obviously to the application of Suprematist designs to porcelain and other objects by Malevich and his followers. This application was recognised as taking the form of a decoration rather than the integration of art and design or the productivist aim of designing useful objects for manufacture:

The problem of Productivist mastery cannot be resolved by a superficial liaison between art and production, but uniquely by their organic rapport, by the liaison of the very process of work and the creation.²

The title of section No. 16 of the same essay "Art Work - Production - Life" indicates the direction of his argument that art should no longer be a precious activity of "art for art's sake" removed from the masses to a specialised and esoteric genre:

This means that every man who works, whatever the form of his activity - material or purely intellectual - ceases, from the moment when he is animated by his will to do his work to perfection, to be an artisan-worker to become a master-creator.¹ Similarly the artist is capable of stopping his fabrication of objects for museums to become intimately involved in production. Tarabukin derived his idealism of every member of society working with maximum efficiency and minimum waste in his design and activity from Taylor's rational use of energy in work and he believed that the benefit of these methods should reflect not only in work but also in the worker himself. The idea of productivist mastery goes beyond the bounds of aesthetics and ideas formerly envisaged:

Ruskin's project for changing life with the help of art only extended to the aesthetic level; Dostoyevsky's idea of "beauty which will save the world" arose out of mysticism, and William Morris who dreamed of the fusion of art and life, did not situate his life in the future, but in the Middle Ages.²

While art was being admired in the museums, objects of every day use were still unpractical, badly designed and life disorganised. The artist-productivist has the reconstruction of life in mind, taking note of both the static and kinetic forms in life.

The position of the artist during what Tarabukin saw to be a proposed period of transition was described by him as tragic in that an individual artist may be neither adaptable to nor attracted to techniques and methods of any of the various types of factory work. Nevertheless his rôle could be envisaged as a propagandist and laboratory worker during this phase. The idea of innate talent and inspiration should be replaced by artificial cultivation and artists were to train at technical establishments:

In the future when the interest in "pure art" will be weakened under the influence of the growing "Americanisation" of life, instead of being artists, people of talent will be practical men.¹

Tarabukin noticed that Spengler, in his book "The Decline of the West", though starting at a different position, arrived at similar conclusions to the Productivists. The German philosopher Spengler (b. 1880) had studied mathematics, natural history, with history and art and had consequently drawn unexpected parallels between scientific truths of physics and mathematics and the artistic and other cultural achievements in an epoch of modern history. Tarabukin quoted the following remarks from Spengler's best known work "The Decline of the West":

"Epochs without philosophy and without true art may nevertheless be great epochs."²

After discussing the degeneration of art Spengler said:

"The people who are concerned with practical, industrial, organisational and other affairs, write better, more truthfully and more profoundly than the majority of litterati who have made style a sport."³

¹ Tarabukin: Ibid., p. 57.
"If the men of the new generation occupy themselves with technique rather than poetry, with navigation rather than painting, with politics rather than theory of knowledge - one could wish them nothing better."

"For highly intellectual forms of striking purity, for a fast steamship, a steel-works, machines, I would be prepared to exchange all the stylistic nonsense of contemporary literary industry, with a bonus of painting and sculpture thrown in."

"I consider that the touch-stone of value of a thinker is his degree of comprehension of the great facts of his time."3

"This opens grandiose perspectives for men of action; obviously for the romantics and the ideologists who cannot seize their rapport with the world in any other way than in composing verses and painting pictures, it is a hopeless perspective."4

Tarabukin next went on to discuss mass-production mentioning in a footnote5 Lissitzky's magazine "Object", "Der Sturm", the Viennese review "Ma", "Brood" (New York) and "L'Esprit Nouveau" which had arrived at similar conclusions.

The same progression that made naturalistic painting an anachronism after the arrival of photography was to replace artisanship with industry. The object would lose all individuality in the process of production. Just as naturalistic painting had been replaced by photography and the cinematograph, the production of useful objects would replace the handicraft of the artist. Tarabukin added however that what would then be called art, namely objects of production, would not disappear but would be more and more appreciated in comparison with the formerly hand made

Section 20 entitled "The 'Object' disappears from Large Industry" is concerned with how separate commodities would be replaced by a co-ordinated system in the way that electricity had replaced numerous methods of producing light, heat and energy from solid materials. This led Tarabukin to write of the new concept of "mechanism" ("appareillage") and the idea of dematerialisation of contemporary culture described in a series of lectures by E. Kushner at the INKhUK as well as in public lectures. The conclusion of mass production is recognised here as leading to disposable objects:

The object loses its raison d'être in ceasing to be conceived for an important time of use and in becoming a thing which is used up on one occasion: it is no longer an "elephant" but a "butterfly-ephemera".¹

He went on to emphasise that this did not simply concern paper towels but that in the United States the application of disposable elements extended to carriage wheels and rails being made of compressed paper instead of steel. He blamed poor production techniques in Russia for the necessity of having to repair goods unlike the Americans' policy of replacing the complete item:

[In America] the locomotives themselves are not repaired but replaced by new ones, and those which have deteriorated go directly to be broken up. Generally a car is not used for more than a year: at the end of that time it is replaced by a new one. At present, the Ford factory has undertaken the fabrication of cars from cotton fibre.²

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Tarabukin pointed out how this attitude had even reached the concepts of architecture and quotes from Corbusier-Saunier: "L'Esprit Nouveau":

"The Home will no longer be an enormous immobile mass which strives to defy the centuries, it will be a necessary tool as the car has become. In dismissing from our minds the idea of the immobile house we come to the "house-tool" which is possible to be produced in a series. The "Voisin" aeroplane factory is already preparing houses of a new flexible and comfortable type. In three years time a vehicle will be able to bring us the elements after a telephone request, and three hours later the house will be ready to be lived in."¹

Tarabukin concluded that the architecture crisis would not be resolved by the appearance of a new Palladio but by progress in building techniques:

Its style will not be found in the archives of "the history of art", but suggested by technique.²

The precise rôle of an artist in a factory was disputed between Tarabukin and Kushner. In Tarabukin's opinion the aim of those who work in production is the production itself which is only a method of fabricating objects, but for the artist-engineer who forms the production in its entirety the two moments - the product and the manufacture - condition each other mutually:

Under this rapport, non-objectivism is a characteristic phenomenon of our time which reveals the essence of contemporary culture.

Non-objectivism is inherent in all processes of work, to the extent that the master uses a material and a method to work it, for the essence of all processes is to be non-objective. Non-objectivism in painting is only a means of unveiling the procedure...³

¹. Tarabukin: Ibid., p. 62.
As for arts such as the dance, Tarabukin thought that probably the dissolution of all specifically scenic elements and the rendering of a universal movement with functional movement replacing the scenic qualities that detached it from life was the equivalent of a reformation of this art. He thought that with the disappearance of "parasite classes" of feudal nobility which created and maintained the conditions for the existence of art, art would die. The bourgeoisie imitated the aristocracy whose privileges it aimed to achieve and when the revolution finally destroyed class structure and established a new socio-economic basis where the class system would be banished, easel-painting would be derived of its foundation. Cinema and theatre, which were in advance of Western Europe, were in the forefront of arts in Russia according to Tarabukin due to its popular and public appeal.

The separation of fine art from applied art and technology is comparatively recent in the history of civilisation and with regard to the future Tarabukin summarised the basic view of the productivists:

Those who build the transatlantic liners, the aeroplanes and the express trains do not know yet that they are the creators of a new aesthetic.¹

In connection with this he added a footnote to the effect that the idea of passing by the necessity for art runs through Russian philosophical thought. After Dmitri Pisarev, Tolstoi developed the same idea and later in B.L. Bogayevsky: "Zadachi iskusstvoznannya" ("Aims and

¹ Tarabukin: Ibid., p. 73.
Methods of Art History") published by the "Institute of the History of Art", Petersburg, 1924, the idea is developed further.

The replacement of contemplation by action is next described in section 25 - "The Old Pegasus and the Ford Car":

Ancient art was **contemplation**. Its philosophy was metaphysics. Productivist mastery is a practical, real activity. Its philosophy is the philosophy of action, that is to say of technique.

If art is recognised as having an organisational rôle, it may be said that ancient art organised our contemplation of reality. The landscape is a look at nature with the intention of setting it in order. The novel is this same look at the relations between people, their thoughts and feelings. Now science and politics will replace this rôle of organisation of consciousness. Formerly philosophy was the great priest, the oracle predicting destiny. Now this rôle is revived in science: in studying economics, Marx "predicts" the future of social forms, dictated by the dialectic of the development of economic factors. On the basis of mathematical calculations, the astronomers "predetermine" the passage of planets and of comets in their orbits.

In 1916 Tarabukin wrote "Towards a Theory of Painting". At the end of his introduction entitled "Methodological Problem" he summarised his ideas:

The theory of art is not a philosophical discipline. Recently again, aesthetics has been considered to be a part of philosophy. But, philosophy comes from a vision of the global world, while "Kunstwissenschaft" is a particular science of forms and of the means of expression of artistic creation.

As art is no longer closely integrated into a Society as much as were various "primitive" art forms it has developed separately, and theories of art, music and other activities have also become dissociated activities with their own vague vocabularies. Beginning with the basic

physical structure of a work of art he said that the form of a work consists of the material (colours, sounds, words) and the construction by which method the material is organised to acquire its artistic logic and its meaning. In a picture the elements of form are the colouring, texture, the representational form and the construction as well as the form of the external world except, of course, in the case of abstract art. In his opinion the contemporary artistic consciousness gave three answers to the question of form. The first he described as "realist-naïve", the second "rationalist" and the third "intuitive" in creation and "formal" in theory. "Naïve-realism" determines the pictorial form as "the form of the object of the visible world fixed on the canvas by paint". (e.g. Cézanne).

The second gradation in the evolution of the concept of form he described as follows:

The artistic form is the projection on a flat surface of the form of an object of reality.

In this case the external world is only a pretext for the work and the object is transformed on the canvas by the artist (e.g. Cubism).

His formula for the third gradation was:

The pictorial form is the form of the work of art itself independent of the lines of relation that are habitually traced between reality and the work of art. ...the elements of the form are the elements of the work itself. 2

In this case reality does not dictate the forms but the artist invents them freely. He considered that these three

approaches could be used in analysing works of art and that the theory was based on the three approaches used by artists.

The second section of the essay which is on colour begins:

The sum of the relations of colours placed together by the creative will of the artist is a pictorial whole and perceived by us as a synthesis of coloured composition having their laws and their internal logic, constitute the colouring of the work of pictorial art.¹

His discussion on the various ways colour has been used and the relationship of colour systems to music included a mention of the theory of correspondences.

In his third section "Faktura" (texture), Tarabukin discussed perspective, line, surface as well as the type of lines characteristic of certain painters. This approach is reminiscent of Malevich's "additional element":

Composition gives line its character and indicate the types as well as the direction of them. The oval line of the Leonardine Mona Lisa is as characteristic as the straight horizontals and verticals of Perugino.²

According to different artists and media different textures are appropriate. Various old masters and various media are discussed concluding with the treatment of Rodchenko's painting "Blue on Black":

The strength and the diversity of one and the same colour is due to the diversity of the use of texture obtained for example in the works of Rodchenko. Thus on his boards, Rodchenko resolves the problem of black on black concentrating before everything on the treatment of the texture of each particular tone, rendering the tone of the most "profound" black, which seems literally to open on to an endless gulf, by a rough surface - and with a surface of a lustrous appearance, covered with a dense coat of varnish and

¹. Tarabukin: Ibid., p. 110.
². Tarabukin: Ibid., p. 118.
added to with plaster creates sonorous accord of black tone. It may be said that colour and texture condition one another mutually.

After discussing more unconventional surface textures such as Braque's newspaper collage fixed to canvas he adds that there is hardly a dividing line between texture and colour and that artists should develop a feeling for materials and for the inherent qualities of each material which condition the construction of the object by their own characteristics. Each material imposes its own characteristics and dictates form to the artist. The study of various materials therefore constitutes an important and autonomous question.

The fourth section, "Composition and Construction" begins by differentiating the laws of reality from those of painting:

Art has its rules of organisation, its logic which often contradicts the "logic of things": space in painting is rendered by the illusion of perspective, time by rhythm, light by colour etc.

The creative organisation of elements in a work of art combine to express by means of their internal "order", a logic external to the relation of the parts. He called this compositional construction. For Constructivist artists at that time he stated that there was no distinction between composition and construction. The "real" elements of the construction became the forms of the composition.

The fifth section entitled "Rhythm" begins:

Rhythm in art is that invisible pulse and present in the heart of an artistic work which gives it the "quiver" of life. In general a particular sensitivity is needed to feel the effects of this pulsation. Being an element of life in the work rhythm is entirely connected to the moment which Bergson, Rikkert and Spengler name "becoming" ("Werden") as opposed to the "fixed" or the "already become" ("Gewordenes").

He went on to emphasise that rhythm is difficult to analyse and that it reveals itself more truly in the organic than in the mechanical. It is sensed internally: "The soul not the skeleton". He also mentioned that time and space were combined in arts as a result of rhythm. But he remarked that the Futurist (meaning Italian Futurist) device of expressing movement was naïve:

In defining rhythm as an element of movement on the level of spatial forms in art, we have a very concrete solution to the particularly misty problem of the "fourth dimension" sliced in such a naïve manner by the Futurists who crumbled every object in representing it by a series of consecutive static moments, in the manner that may be observed on a halted cinematographic strip.¹

The sixth section entitled "The Subject considered as an Element of the Form" discusses various methods of representing anecdote; in a linear strip form as in Egyptian art; in perspective as in European art and in psychological suggestion of action lying outside the represented scene in paintings such as Repin's "Ivan the Terrible" and "They did not expect Him".

In his seventh section, "The Content of Art" he classified various kinds of content as purely pictorial in Suprematist painting; psychological in Vrubel's "Demon";

¹. Tarabukin: Ibid., p. 132.
religious in Giotto's frescoes, and philosophical in Stuck's "War" adding that "The content of art is born from two factors - form and idea -".

He summarised the elements of a pictorial work as material elements (colour line etc.); organisational elements (colouring - texture, form, construction etc.) and thirdly the conceptual elements (idea, theme).

A section discussing the definition of art and its possible distinction from applied art is followed by the final, ninth section entitled "The Problem of Reality in Painting". The difficulty of finding an objective definition of reality in view of its various interpretations by the naive realist, the rationalist, the idealist, the positivist, intuitivist etc. is the subject of the first paragraph.

In painting also various schools have asked the question of what reality is, including the naturalists, classicists, eclectics and Impressionists, Futurists and Cubists. Many of these including the "primitive Futurists" are described as having represented their visual perceptions and others such as Cubism as representing what is known to exist in reality while, thirdly, other forms are described as "constructive" in that they are fabrications of new constructions rather than being representations of nature.

If painting is only a vision of the world, and not a "fabrication", as I explained, numerous parallels could be established between pictorial tendencies and philosophical conceptions. If the naturalists are compared with the naive realists, the impressionists, with the empiricists and the solipsists descended from Hume, the cubists should be considered as the Kantians,
and the Ressists ("objectivists") as intuitivists of the Bergsonian type. 1

Though Bergson’s idea of humour has been compared with that of certain dadaists (see Chapter XXII) who took a less positive view of the machine cult in contrast to the constructivist and productivist stream, Tarabukin’s is not inconsistent with this. Bergson’s idea of dynamism as opposed to mechanism is applicable to Russian Productivists in their radical adaption to new necessities. Viktor Shklovsky agreed with Punin’s view that they were on the threshold of a new "iron age" in art and strongly opposed to accepting conventions and cliches of past art forms for the new age was the "authentic saint of 'Komfuturizm'," the inspired obsessed Tatlin. 2

2. V. Shklovsky: "Monument to the III International" in Knight’s Move, Moscow 1923, quoted in V. Quilici: Ibid.
Figure 623. W. Kandinsky. Design for Cup: State Factory, Petersburg, 1919.

Figure 624. Porcelain from the State Factory, Petersburg (1918-1922) From the catalogue of the Erste Russische Kunstausstellung, Berlin, 1922.
Porzellans der Staatsminister von Petersburg (1918–22)
Figure 625. (top) Porcelain from the state factory at Doulev, government of Moscow. Sketches for trays by N. Altmann (centre left), and by Frentz (centre right) Dresses designed by N. Larionov (bottom left) and by A. Exter and V. Mouchina (bottom right.)

Figure 626. Porcelain from the state factory, Petersburg (1918-1922. From the catalogue of the Erste Russische Kunstausstellung, Berlin, 1922.
Figure 627. C.V. Chekhonin: Plate with emblem of hammer and sickle among flowers. State factory, Petersburg, 1918.

Figure 628. N. Altmann: Plate with the inscription "The Land to the Workers" State factory, Petersburg, 1918.
Figure 629. A.V. Shchekotikhina-Pototskaya: Plate bearing the inscription "Festival of the First of May, 1921, in Petersburg". State factory, St. Petersburg, 1921.

Figure 630. A.V. Shchekotikhina-Pototskaya: A dish showing a peal of bells and the inscription "Long live the 8th Congress of the Soviets"; State factory, Petersburg, 1921.
Figure 631. Cover, designed by El Lissitzky, for the catalogue of the "First Exhibition of Russian Art" held at the Galerie van Diemen, Berlin, (Erste Russische Kunstausstellung), 1922.
Figures 632-634.

Pages from the catalogue of the Erste Russische Kunstausstellung, Berlin (1922).

Figure 632. K. Medunetsky: Spatial Construction.

Figure 633. V. Tatlin: Counter Relief.

Figure 634. N. Gabo: Spatial Construction C, (model in iron and perspex)
Figures 635-640.

Ilya Erenburg: *A Vse Taki Ona Vertitsya* ("And yet it Moves")
Helikon press. 1922.

Figure 635. Fernand Leger's design for the cover of *A Vse Taki Ona Vertitsya*. 
ИЛЯ ЭРЕНБУРГ
А ВСЕ ТАКИ
ОНА ВЕРТИТСЯ

Ю. ВО «ТЕЛИКОН»
Figure 636. Pages from A Vse Taki.... showing an American locomotive snow-plough.
сей, но ясно, что теперь она думает, что нет, она не Господи, не человеческого. Стока. Ворота, что открыто на черном, жест — завязать. След, бешен и "CAFE DE LA PAIX", значит, всё вперед.

Конечно, когда же ни дайся таким татуировкам, ведь, чтобы остановить время, свои лица, Надюшки... Кажется, что поло- шей от улыбок на face де Пуан, все же не будем Надю с кем. Он ждет остановить свои запросы, но в ответе. И все, влюбленные к 50-ий, не верховным словом, могут не изменять: когда в меди и даже — (какой перевод) — на северо-восток идти — 21-ый — 22-ый, и за ними, ус зависящий от кабинет вакханалий.

Всё, а возвращаясь к художественной мастерской, изображённой и описанной выше:

а все-таки она движется!

И вниз, не понимая, не буквосочетанием и, резким движением, и физиологически истинами ладони, и все, недавно получивший, руки, разнесло, разшепленное, еще не вынесено. Она ждёт ещё клас- сификации, когда перелот пауза, врея, сама себя опоздала в голове, задержавшее и до недавнего изображения. Не же, с каждым другим, когда что-то похожее вставляется сводное, образует все, или вновь, заживо образована своей пры.

Я же о нём написал, но о нём и в нём уже не скажешь в живом. Почему часто саморазгадыва- ется. Понимается, предложив основные меры нового...
Figures 637 and 638.

Pages from *A Vse Taki*... showing the Goliath Farman and the Caproni Sea-plane.
ПАРИЖ СТАЛ ВЕРСАЛЕМ.

Честно, неплохо воспоминание: видеть она всю в красках, и едва верится — в каком! Поглядишь, не вернётся! Чтобы вновь видеть всё не вынести! Никогда не увидишь, как восстанавливается город. Давно, давно ветерки на город. Часто Париж, он так мечтает, зелёный, не в этом мирном покое.

В покровные нити нам стало интереснее. Дёшево в этом случае. А какое это все влечение, и расслабиться его, философию по буквам, читать. Сообщают своими присутствием в сандах и ковриках,

Его в его приступе.

Нравоучительная история о посрамлённых плутах и о похитивших ребятах

Было в древней Греции говорено: „Национализм — это первая ваминость глушица и последнее убежище плута.“

Значит эта глава о том, как убежище дёшево в может извольство они как рогатые и французский страж арестовывать.

ПРОДОЛЖЕНИЕ ПОДАЧИ ЦЕЛЯ НАркоза. ПОПОЛНЯЕТСЯ на основании того, что в Лондоне туннель, а в Рыбаке и серебро, что альпинисты любят ползать, и альпинисты — особенно, что МАРИНС не могли долететь до Парижа, в ДОСТОЕВСКОЙ из французского посерьёзны ГАРЬЕНКО и занято обнюхивали бы Наркозу с Грюновским. Иван с Катей, в Альпах, невозможно на свободу, на Лоне (2-2-1-1) до- ехать гранитным францем. Все это всю команду. Дело давно не нашлось, но закон (закон реформы). „Достоевский“ подозревает, увлажнённый волевая формул, „сопровождённый мерцание“, а ведь взято кусок дёшево.

Судя, правда, как и в котором его, на дёшево убытки. Конечно были какие-то другие как каменный, фиолетовые волны вместо „на смерть дёшево“. Но здесь привели слова подобной фразы.
осолони к корола (в. размножены) или королевского,
ны и трубы, трубы, молотковые, серебряные.
иты, цена блюда калача, есть убойство обнаружено. Они не видели, что вы в 1790 году
инаграду, но и в окопах, были не видны, что в
природу — виновных за промывало, а не
только в ковше, добытое, или в хлебе
картиной. Это поясняет видимость, когда они думали
об археологах. Но, как и прежде, осла — не
циклонам. Я был гордым
шарть: скопище собирать.
3-й горизонт
трансатлантическим
пароходом
"Аквитания"
(Cunard Line), который перевозил 3-го класса, ко
торый в 1839 году.
награды, но и в окопах, были не видны, что в
природу — виновных за промывало, а не
только в ковше, добытое, или в хлебе
картиной. Это поясняет видимость, когда они думали
об археологах. Но, как и прежде, осла — не
Figure 640. Pages from *A Vse Taki*....
showing a monument in concrete by
Theo van Doesburg of *De Stijl* group.
Расширение: подобно тому, как писали ораме памяти и приятных воспоминаний, романах Михаила Лермонтова, феномен «Пиковая дама», «Сказка о мёртвом», музей Державина, пьесы Федина, Оперный театр новому периоду и др. 

В поэме есть … 

Надо отметить, что все остальные общеин стихи, причем в ряде случаев, приведенные нередко, приведенные нередко, что было уже искажено по извеждению вагога (реконструкция текста). 

1. Речь может быть получена. Соответствует ли по инструменту. 

(реконструкция текста, реконструкция текста) 

2. Имеет место следующий экстремальный вариант переключения, полезный, полезный, театральный театр и т.д. 

3. Квазитекстовой. Следует ли ясной, образной, вторичной, легко? 

4. Как уже названное, включение и деконструкция, а возможно, и деинструментация. 

5. Окончание. Примечание. Несколько мнений, уважаемых мнений, нужных мнений, конечных мнений, т.д., т.е. восхваляющие патриотизм, атеизм, неразрывность, новую культуру, утверждение нивелиров. Описания дол.

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Figure 641. A page from *Be Stijl* magazine (1923) showing the biggest telescope in the world (built in America).
Figure 642. P.A. Mansurov: "Bichromatic formula of a curved line" (tempera on paper, 25.3 x 16.3 cms) Petersburg 1916. (Private Collection, Basle).
One of the first studies of optical perturbance of curved lines shown at the 1923 exhibition of Mansurov by INKhUK.
Figure 643. Studies for simplification of forms carried out by students at the Vkhutemas, 1920.
Figure 644. Studies for the simplification of forms carried out under Kandinsky at the Bauhaus, Dessau, 1928.
Figure 645. Chromatic exercises by Mislin a student of Klutsis, (Vkhutemas 1926).

"Achromatic scale: Analyses of achromatic gradation of four materials: Indian ink, gouache, charcoal pencil and graphite. The construction of the gradations of the shades are in a geometrical allignment ("utility"). Achromatic norms of the system."

Figure 646. A construction done as part of the "foundation course at the Vkhutemas (1926-27) under the spatio-volumetric section: exercises under spatial construction". 
Figure 647. Alexander Rodchenko, Construction, 1920, gouache on paper, private collection.

Figure 648. A. Rodchenko. Hanging Construction, 1920, wood, private collection, U.S.S.R.
Figure 649. A view of the first Obmokhu - Society of Young Artists - exhibition held in the Vkhutemas, Moscow, in May 1920.
Figure 650. An arm-chair in tubular aluminium and hemp canvas made at Vkhutemas under the tuition of A. Rodchenko.

Figure 651. B. Semilyanichy: A folding chair, 1927-28. Set as a diploma subject on the theme of "Furniture for a captain's cabin" made at Vkhutemas under the tuition of El Lissitzky.

Figure 652. A Rodchenko: Project for a combinable lamp (for the spectacle Niga, 1929).
Figure 653. A study by A. Arkin under the tuition of N.A. Ladovsky, 1922:
"Exercises on the physico-mechanical representations of the formal properties of mass and equilibrium".

Figure 654. Study for a hydraulic reservoir by I.V. Lamkov under the tuition of N.A. Ladovsky, 1921:
"Productivist exercise on the representation of volume (above) and space (lower part)."
CHAPTER XXVII
TATLIN AND GABO

Though Tatlin worked separately from the Constructivists, Constructivism has its origins in his early work with various materials.

In Moscow in 1913 he made the first "Relief-constructions" and some "Polychrome-reliefs"; it is from this year also that a "picture-relief" was constructed by Tatlin while he was still painting Cézannian landscapes, nudes and faces reminiscent of Modiglianis.

In Petersburg in 1914 he constructed his first "Counter-reliefs" poised in space by balancing masses of equal weight. These reliefs are the first to be composed of geometric forms with no reference to reality. Their sources may depend to some extent on Tatlin's familiarity with the reliefs that Picasso was making at the time and which were reproduced in "Soirées de Paris". According to Larionov¹ Tatlin went to Paris only once, in 1912 or 1913 as a musician in a troupe of Russian folk-singers. The visit was very brief and he also went to Germany. While he was in Paris Tatlin went to see Picasso and asked him to employ him as an assistant in order that he might stay in France for a longer period.

As well as Picasso's three-dimensional collages, relief constructions of wood, glass, string and other materials in 1913, the Futurist Sculpture Manifesto of the previous year

had declared that sculpture should abandon conventional materials. Instead of confining itself to one material the Italian Futurists proposed the creation of works from glass, wood, cardboard, iron, cement, horsehair, leather, fabrics, mirrors, electric light bulbs, etc. The idea of this art was to create plastic figurations in space; Classical sculpture disposed around an axis was obsolete and sculpture must be defined as "transposing into material forms the spatial planes that enclose and traverse an object". The first exhibition of Italian Futurist sculpture was held in the Galérie "La Boetie" in Paris in 1913 and included Boccioni's sculpture "Development of a Bottle in Space" of 1912 (Figure 58). Like Tatlin's tower of 1917 the sculpture is composed of two spirals moving around a central axis. This is clearly visible from above the sculpture. The spiral appears to be cut in the bottle, starting with the plate and continues upwards. In a drawing of 1911 toward the sculpture a succession of spiral lines is shown rising. In these respects similarities to Tatlin's tower suggest that he may have seen Boccioni's sculpture and absorbed the idea behind it.

After the February Revolution in 1917 Tatlin, Georgiy Yakulov and Rodchenko, decorated the "Cafe Pittoresque" in Moscow (Figure 662). A section of this took the form of a corner relief combining a figurative imagery most probably designed by Yakulov with non-representational three dimensional spheres constructed from flat circular discs and segments probably by Rodchenko and Tatlin while the overall idea of a corner-relief may have come from Tatlin. Painted directly on to the wall is the representation of a woman in
contemporary clothes dancing. The figure consists of arcs and straight lines in dark colours and expresses the idea of movement by means of its unfinished appearance in a similar way to Yakulov's depiction of a galloping horse and trap entitled "Sulky", 1916–17 (Figure 661). The curves and dark gradations of which the figure consists suggest the position of a girl caught in the movements of a dance such as the Charleston. Her face and other small details are painted in a light colour and in a naturalistic way. The male dancer is placed across the corner from her in order to appear to be dancing opposite her. The male figure is a free-standing construction in painted metals placed against the wall. The forms of which this figure is constructed are much more angular, being mostly of curved and bent sheets of metal held together with a set of rods joined together. One of these rods, the longest, points from top right to bottom left at the feet of the painting of the dancing partner. The rods are arranged as lines of force and the main part of the male figure's trunk forms a large arrow like shape with similar effect. The corner-relief is no longer confined to an enclosed composition but rises up from a triangle pressed close into the corner between the dancers and spreads out into an arrangement of circles, discs, spheres and triangles above the head of the male figure. Some discs are suspended from the ceiling and others fixed to the wall. The relationship between the painted and constructed figure with the non-representational discs suggests figures dancing to a background of music as if the non-representational discs create a dynamic accompaniment
to the suggested movements of the figures. A similar effect was intended in Picabia's painting "Udnie" (Figure 663) in which movements of a dancer have been set as if in a blue-print against other abstract shapes that are intended to suggest music.

In 1918 Tatlin was elected leader of all artistic organisations in Moscow (Head of "Narkompros" board for plastic art) and on January the 1st 1919 he was appointed as head of the department of painting at the Free Studios in Moscow.

In 1919 the Department of Plastic Art under "Narkompros" commissioned Tatlin to design a project for a monument for the IIIrd International (Figure 664) (The International is a name given to political and trade union associations between the "workers' parties" in different countries and at different times.) Tatlin conceived of a new type of monumental construction combining a purely creative form with a utilitarian form. The projected design was described by N. Punin:

Three rooms able to move at different speeds the lower storey, which is cubic in form, rotates around its own axis at a rate of one revolution per year. This is intended for legislative assemblies. The next storey which is pyramidal, rotates around its axis at a rate of one revolution per month. Here the executive bodies are to meet...the uppermost cylinder which rotates one revolution per day is reserved for centres of an informative character.1

Tatlin is reported to have created a second version (1925). In this he tried to approach the original idea,

as reflected in the first drawings, in which the spirals are self-bearing, supported only internally by some V-shaped girders.¹

Nikolai Punin who was one of the best informed critics wrote a monograph on Tatlin in "New Journal for All", Petrograd 1915, (Appendix LX). N. Punin was appointed to the Professorship of Aesthetics at INKhUK after the revolution. In 1920 he wrote an essay on Tatlin's Monument² and another entitled "Tatlin - Against Cubism".³

In writing of the synthesis between different forms of art Nikolai Punin gave further details of the purposes of the monument:

Tatlin the most forceful and clear sighted Master of our age, has entirely denied the artistic value of the monuments now being erected; he proposes an entirely new and as I see it mathematically true form of monument.

He considers that one should do away once and for all, with the human figure.

Artist Tatlin proposes a project already worked out in its essentials, for a monument to the great Russian Revolution. As regards its appearance, the form of the monument corresponds to all the artistic forms discovered in our age. These forms are the simplest possible: cubes, cylinders, spheres, cones, segments of circles, spherical planes, sections from these etc.

... ... ...

A succession of the simplest forms (cubes) is to contain halls for lectures and gymnastics, premises for agitation and other rooms which can be used for different purposes as required; these premises, however, are not to be museums or libraries of any kind, their

3. Tatlin-protiv kubizma. (Petersburg, Gosudarstvennoe Isdatelstvo, 1921).
character should preferably be shifting the whole time. The monument contains also an agitation centre from which one can turn to the entire city with different types of appeals, proclamations, and pamphlets. Special motor-cycles and cars could constitute a highly mobile, continuously available tool of agitation for the government.

On one of the monument's wings...we can also attach a giant screen on which it would be possible in the evenings with the help of a film reel - visible from a great distance - to send the latest news from cultural and political life throughout the world. For the reception of instant information, a radio receiver of world-wide range is to be installed in the monument, together with an own telephone and telegraph station (not too large) and other possible information apparatus. In accordance with the latest invention, one part of the monument is to be equipped with a projector station that can write letters in light in the sky...it would be possible to compose different slogans in connexion with current events. Also the monument is to contain various small centres whose function is mainly artistic; it will include a typography workshop...electric heating lifts...all modern technical aids to promote agitation and propaganda and secondly it should be the centre of a concentration of movement...people should be...mechanically led around up and down: sometimes there will be glimpsed the powerful and laconic expression of an agitator, sometimes messages, decrees, regulations, the latest invention, an explosion of clear and simple thoughts, creating, only creating.

Troels Andersen does not consider the question of whether or not Tatlin was familiar with Boccioni's sculpture to have been of great importance. The comparison shows that part of the language of forms used in the tower can be assigned to a given stage in the development of painting and sculpture.

It is possible that he was familiar with this sculpture if he was in Paris at that time. At least he would have been directly or indirectly familiar with the studies of spirals

by Giacomo Balla in connection with the study of movement.

Tatlin's "painterly" reliefs were made the same year as Duchamp's ready-made, a bicycle wheel on a stool and Duchamp's ready-made bottle drier and dates from the same time. The Bicycle Wheel seems to parody the great wheel of Paris and the bottle drier to resemble the Eiffel Tower. Both have a slight resemblance to Tatlin's idea. Tatlin tried to establish a relationship to the real object on a plane that was as abstract as linguistic structures, and which contained as many possibilities of combination.

Troels Andersen mentions that paradoxically Tatlin's efforts soon tempted other artists to use objects in an associative non-abstract manner. In a couple of "alogical" pictures of 1914 Malevich used a wooden spoon and a thermometer as elements of a collage. He later removed the wooden spoon and painted it on the canvas. This is the sharpest conceivable contrast to Tatlin's ideas. The same is true of Malevich's pictures with illusionistically painted forms and Faux-bois, which seem like direct answers to the reliefs. T. Andersen considers that, indirectly, Tatlin's reliefs opened the door to Suprematist painting, and that Malevich's desire to date the appearance of Suprematism to 1913 may be rooted also in this fact.

Malevich recognised that Cubism exercised a great influence on the Constructivist movement. Tatlin himself maintained that he saw in this monument only a construction of iron and glass, he passed over its utilitarian function in silence.

The material was always selected according to a feeling
for the artistic impression, not in relation to utility.¹

El Lissitzky in writing on constructivism in 1930 said that in building up the object, the starting point was the material used on any given occasion. The leader of this movement (Tatlin) assumed that the intuitive artistic mastery of material leads to inventions on the basis of which it is possible to build up objects independent of the rational scientific methods of technology.

An ancient formal construction, manifested for instance, in the Sargon pyramid in Korsabad, has here been recreated in a new material and given a new content.

The work and a succession of subsequent experiments with materials and models gave birth to the term "Constructivist". The "Constructivist" generation of professional architects now saw these works as formalistic or even as "symbolic".²

Ilya Ehrenburg writing in 1922 said that when it was exhibited at the Union House, it struck if anything terror and evoked ridicule. The majority of communists greatly preferred Marx's plaster beard.³

In Tatlin's text of 1932 he confesses to an interest in curved paths:

A series of forms determined by complicated curvatures will demand other plastic, material and constructive

1. Nova Generatsiya No. 8, 1929, Kharkov.
relationships - the artist can and must master these elements, in that his creative method is qualitatively different from that of the engineer.

Boccioni made his sculpture with the bottle and plate in 1912. The bottle and plate are markedly architectonic. The Rotating bodies in the inner parts of the tower are reminiscent of the basic elements of Cubism. Malevich in his brief commentary maintains it is cubist in origin.

The Eiffel Tower inspired a number of poems and paintings and there can be little doubt that the Eiffel Tower itself was the most important starting point for Tatlin's monument.

The one-thousand foot Eiffel Tower, erected for the Paris exhibition of 1889, viewed from the standpoint of construction is an adaption of the tall supports of iron bridges. Its large dimensions made it necessary to compose the structure of four members meeting asymptotically at the top and embracing an enormous space. The four pylons are anchored to separate foundations. Lifts run in the interiors of the supports. The four arches which connect the supports are mainly decorative, reminiscent nevertheless of Eiffel's original intention of carrying the tower on four bridge arches.

It is noteworthy that revenue from the entrance fees declined after the enormous success of the exhibition in 1889, to rise again steadily from 1904, which corresponds with the time when the interest in flying machines began to

l. V. Tatlin catalogue, p. 7.
arouse public curiosity.¹

To an extent previously unknown in architecture, outer and inner space are interpenetrating in the Eiffel Tower, and it was a return to this principle that Tatlin realised in his project and that Gabo applied to sculpture in theory and practise.

The Eiffel Tower was for some time the subject of protest by artists speaking in the name of good taste, but by 1910 it became the symbol of the "Grande Ville".

At that time there was no artistic formula that could claim to express the plasticity of the Eiffel Tower. Under the laws of realism it crumbled, and the laws of Italian perspective could not catch it...But Delaunay wanted to find a plastic interpretation. He dismembered the tower so that he might enter within its frame; he truncated it and inclined it to make it express the vertigo of its full three hundred metres; he took ten standpoints, fifteen outlooks; he looked at this part from below, that from above, the surrounding houses from the right, from the left, from the wings of a bird and from the bed of the earth.²

Duchamp Villon also praised the Eiffel Tower:

This masterpiece of mathematical energy rose from its scientific conception into the unconscious realm of beauty. It is more than a mere cipher, for it contains a vital element; our spirit surrenders to it as when it is emotionally moved by the art of sculpture or architecture.³

In France, poets such as Cendrars, Apollinaire and Max Jacob also used this subject matter in their pictorial poetry. Other comparisons and sources have been suggested.⁴

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3. "L'Architecture et le fer", in Poème et Drame (Paris), January to March 1914, Quoted Ibid.
4. The tower of Babel, Rodin's Tower of Labour and a symbolist sketch of a tower by Herman Obrist see C. Giedion Welcker Moderne Plastik. Zurich 1937, pp. 120-121.
Ivan Alexandrovich Askenov (1884-1935) was an active poet and theoretician in the "Centrifuge" group from 1915 until their decline soon after. Like Apollinaire his poems are shaped like pictorial forms and words contrast like colours. He borrowed directly from foreign poets and painters. The two poems that end his book "Invalid Foundations" published 1916 ("La Tour Eiffel I and II") seem to be poetic variations on Delaunay's paintings of the subject. Askenov was also planning a book on Delaunay.¹

Trotsky described the practical reconstruction of the towns and the slowness of the progress after the Revolution:

The authors of gigantic projects in the spirit of Tatlin must take an involuntary rest for new thought, correction, or radical revision.

As soon as the most necessary and immediate requirements of existence have been met and a surplus recorded, the Soviet state will take up the question of those gigantic buildings in which the spirit of our age is embodied in a monumental manner. That Tatlin in his project has excluded the national styles, allegorical sculpture, stucco-work, ornamentation, decoration and all sorts of nonsense, and has tried to subordinate his project to a proper, constructive use of the material - in this he is unreservedly right. The construction of machines, of architecture, of the houses and indoor markets has always been like this. It remains only to be demonstrated that Tatlin is right in that which is his personal invention: the rotating cube, the pyramid and the cylinder of glass.

At any rate the time situation will give him respite to seek the necessary arguments.

Maupassant hated the Eiffel Tower, in which we need not follow him. But the Eiffel Tower undoubtedly makes a divided impression: it stimulates us by the technical simplicity of its forms, but it alienates us by its purposelessness. There is an inner contradiction in the purposeful exploitation of the material for such a higher tower - but for what? This is not

¹. See V. Markov, Russian Futurism, pp. 270-272.
building, it is an exercise. As we know the Eiffel Tower is used at present as a radio station. This gives it a meaning, makes it aesthetically more harmonic. If, however, it had been planned as a radio station from the beginning, then one would probably have achieved a greater purposefulness of form and consequently greater perfection.

Trotsky also questioned the necessity for the rotating rooms and the scaffolding appearance:

I remember in my youth seeing a wooden temple built into a beer bottle. It utterly engaged my imagination, at that time I failed to ask for what purpose? Tatlin is going the other way round. He wants to build a glass bottle for the International World Council inside a temple of ferro-concrete. Now, however, I cannot avoid asking: For what purpose? Or more exactly - we would probably accept both the cylinder and the rotation if this were combined with a simplicity and ease of construction, i.e. the arrangements for rotation did not crush the complete performance.

Ilya Ehrenburg writing in 1921 on art after the revolution referred to "an epidemic of monuments" that existed in Russia "as in France":

The communists put up everywhere "propaganda monuments" to different people from Spartacus to Jaures. The heroes are a little more modernised... but still fundamentally archaeological reconstructions. For once one can rejoice when the material is at fault; the monuments are built in plaster and the wind and rain disperses them quickly.

Tatlin explained with some measure of success to the communists that their monuments did not attain the goal that they were assigned. Firstly because of the enfeeblement of individualism in our epoch monuments to individuals are no longer admissible, but only to the epoch, to popular movements, also because these out-of-date toys are not noticeable in a modern town. From the aesthetic point of view, the absurdity of human forms naked or in jackets is evident among the geometric forms of our towns. It has something akin to reconstructed mammoths.

His monument has the same practical beauty as an industrial crane or bridge...The predominant form for

expressing the static of the Renaissance is the triangle; the dynamism of our epoch, he expresses in an admirable spiral. As material besides iron which has already entered modern building he has taken the daring glass. Without knowing it in Petrograd he arrived at the same conception as the German engineers who projected workers' buildings in glass.

By 1921 there was a certain amount of conservative antagonism against Tatlin. He therefore tried to rally the radically thinking modern artists. In November he was appointed professor at the "Department of Sculpture" and on December 1st he travelled to Moscow with Pavel Mansurov to speak to the "Institute for Artistic Culture" led at that time by Rodchenko and Lissitzky.

Tatlin himself recognised a connection between his own ideas and the development of Russian literary and linguistic theory previous to 1920.

In 1923 in memory of the writer Khlebnikov, who was a friend of Tatlin's, he arranged a performance of Khlebnikov's poem "Zangezi" at the institute (see Figures 686 and 687). Tatlin took part with students of the Academy and a technical school. The well known phonetician Yakubinsky spoke before the performance.

Associations between the arts continued after the revolution but on a different level. With a rise in the scope and status of the avant-garde the emphasis moved to a scientific attempt at studying relations between art forms, more particularly with regard to the relationship between art and language.

In the spring of 1920 in Moscow, The Briussov institute

was founded for the purpose of experiment in language. The director was Valery Bryusov, poet, writer and dramatist. New philological methods were adapted. A word was broken down and analysed into fundamental elements with the intention of purging it of any mysterious quality. The institute was in three sections: "Productivity" with a three year course concerned with formation of poets, writers, critics and translators. The "Instructors" department prepared scientists, publicists and politicians for mass education. The first seminars in the study of linguistic-semantics in contemporary poetry took place. Rodchenko, Mayakovsky, Kornely, Zelinsky and other authors of experimental poetry lectured there. In 1921 Kruchenykh could speak of a Zaum school of Russian poetry and published work in Moscow with Soviet poets. In 1923 Mayakovsky organised the "Lef" ("left front group"), a kind of Communist futurist group, which lasted for two years and was revived as Novy Lef (New Left Front) in 1927.

On his performance of "Zangezi", Tatlin wrote:

On 9 May this year, in the Museum of Painterly Culture (Isakievskaya Square No. 9), are being arranged one theatrical production + one lecture + one exhibition of material constructions.

As a theme I have chosen Khlebnikov's last work to be published before his death, "Zangezi". This piece constitutes the peak of Khlebnikov's production. In it, his work with the language and with the study of the laws of time have fused together in super-new form.

N. Punin will be giving a lecture on Khlebnikov's laws of time. The phonetician Yakubinsky will be speaking of Khlebnikov's word creations.

The Zangezi production is to be realised on the principle that "the word is a building unit, material a unit of organized space". Khlebnikov himself characterized this super-narration as an architectural work.
built of narrations, and each narration as an architectural work built of words. He regards the word as plastic material. The properties of this material make it possible to operate with it to build up "the linguistic state".

This attitude on the part of Khlebnikov gave me an opportunity to do my work in staging it. Parallel with his word-constructions, I decided to make a material construction. This method makes it possible to fuse the work of two people into a unity, in spite of their having different specialities, and to make Khlebnikov's work comprehensible to the masses.

Khlebnikov took sounds as elements. They contain the impulse to the birth of the word. The hard C sound, for instance, gives birth to cup, cranium, container. All these words have to do with the concept of a sheath. One body enclosed in another. The sound P has to do with a diminishment of energy which stands in relationship to the area in which it is used; as in paddle, position, palm, porringer.

In one of the "planks of the plan", the "planks" of which Zangezi is built up, we find a succession of "thing-like sounds", as in the "Song of the Astral Language":

There a swarm of two green KHA
and EL of clothing in flight
GO of skies over the games of men
VE of groups round an invisible fire,
the LA of labour and the PE of games and song...

To emphasise the nature of these sounds I use surfaces of different materials, treated in different ways.

"The Song of the Astral Language", and everything that Zangezi is saying, is like a ray moving slowly downwards from the thinker to the uncomprehending crowd.

This contact is established by means of an especially designed apparatus. Parts of Zangezi represent an ultimate tension and energy in verbal creation.

I have had to introduce machinery which by its movement forms a parallel to the action and fuses into it.

Zangezi is in its structure so many-faceted and difficult to produce that the stage, if it is spatially enclosed, will be unable to contain its action. To guide the attention of the spectator, the eye of the projector leaps from one place to another, creating order and consistency. The projector is also necessary to emphasise the properties of the material.

The actors are young people: artists, students from the Academy of Art, from the Institute of Mining, and from the University. This is intentional; actors are brought up in the traditions of the theatre, ancient or modern. Zangezi is too new to be subordinated to any
existing tradition whatsoever. It is therefore best, if one is concerned to realize Khlebnikov's work as a revolutionary event, to mobilize young people who have had nothing to do with the theatre. 1

In 1924 Tatlin built a stove. The critic Isakov described it and published the photograph of Tatlin in front of the stove. Tatlin was shown wearing clothes that he had designed and made himself (Figure 672). Though at first sight Tatlin's suit and its accompanying pattern resembles the 1914 "Anti-neutralist" suit of Giacomo Ball (Figures 673-676) its intention is quite different. While the Italian Futurist's suit is intended to be aggressive, stream lined, dynamic and of short duration the emphasis in Tatlin's design is on economy and productability for the benefit of the common man. Like his stove which was designed to give the maximum heat out of the minimum fuel by storing warmth in its walls like a storage heater, the suit was designed according to the most simple and practical requirements.

In 1925 Tatlin accepted an appointment at the department of theatre and cinema in Kiev, where he stayed for two years. Returning to Moscow in 1927 he entered the "Department for Wood and Metal" at the Art Studios, which had now been re-named the "Higher Artistic Technical Institutes" ("Vkhukein" instead of "Vkhutemas")

He also taught in the ceramics department. In 1929 he illustrated children's books by the Leningrad writer Daniil Kharms and the same year began working with ideas for a form of glider. In 1930 and 1931 the tower of the

Novodevichy monastery in Moscow was placed at his disposal and it was there that he developed his "Letatlin" flying machine (Letat - Russian - to fly + Tatlin = "Letatlin") (see Figures 677-679).

As the predecessors of Tatlin's flying machines, many contemporary critics quoted the experiments both of Leonardo (Figure 680) and Lilienthal (Figure 681). Tatlin also mentioned that Icarus had been the first flier.

The analysis of motion in men, animals and birds had been of interest during the second half of the nineteenth century and some of the inspiration for "Letatlin" probably came from such sources. The subject of aeroplanes had been popular with painters and poets in Russia since the first decade of the century, but the transformation of this subject into the new form of a constructed object could only be done with careful attention to materials and techniques. One of the most popular students of the methods employed by birds and insects in flight had been Marey (see Figures 548-551). The method of attaching levers to the wings to record the movement resulted in elaborate inventions. Also in Russia two articles had been written by a pioneer of rocket research, K.E. Tsiolkovsky.1

2nd article: "Aeroplan, ili ptitsepodobnaya (aviatsionnaya) letatel'naya machina" in "Nauka i zhizn", Nos. 43-46, 1894 (St. P) Published in book form 1895.
Tsiolkovsky analysed the possible wing positions in insects in relation to their forward and upward motion. He found three basic wing positions: a positive, a negative, and a zero position, all three of which were used during flight.

While the wings of insects are fairly fixed, those of birds are in reality so pliable and consist of so many parts that a bird flying slowly has ten or more different wing positions. Tsiolkovsky posited the rule that the curvatures of the wings correspond to those of the body and that the most slowly flying organisms have the most concave wings. He wrote that:

The different parts of the vibrating wing do not have the same speed. This demands a wing surface that is not entirely even, and which is not equally pliable in all its parts.¹

When asked at an interview how one of the machines was built Tatlin replied: "Like a glider, my wing can achieve three sorts of movement, like a bird, apart from the tail". He worked also with materials of different hardness to achieve a wing structure corresponding to Tsiolkovsky's description.

Tsiolkovsky did not entirely reject the possibility of flight without a motor. With a high initial speed, the amount of energy needed to keep the apparatus in the air becomes less. This is the principle of gliding, which Tatlin also cited. Gliding was extremely popular in the 1920s and curiously designed models were developed some being airworthy constructions with moving wings.

Tsiolkovsky had taken an interest in Lilienthal's artificial wings and similar experiments in the 1890s.

¹ Tatlin catalogue, op.cit.
From observations of birds and insects he arrived at an exact calculation of air resistance, wing surface and the amount of energy required to propel a flying machine.

In 1932 "Letatlin" was exhibited in Moscow. Tatlin presented his ideas at a meeting of the writers' association and met with mixed responses, some strong criticism and also great interest.

An introduction to the exhibition of Tatlin's work during that year included the following account of "Letatlin" by K. Artseulov:

The hardest part is the orniopter - the fuselage - is manufactured on the "basket-weave principle" of bent, elastic components, which makes it possible to expose it to hard jolts and blows without damage. The wing stays are formed as a complicated octagon of bent wood, and have great powers of resistance vis-a-vis the rotations and twisting of the wings. They are strengthened with a strip of whale bone, which is very pliable and can be straightened out again without becoming deformed. The bent details of wood required many special mould matrices in which the wood was placed for pressing with the help of steam and moisture: when it had dried it preserved in satisfactory manner the curvature given.

In this entire construction material has been selected on the principle of function and best possible use. The wood was therefore not sawn but cloven to the desired thickness to preserve the fibres in their full length. According to the demands made of the material, there were used ash, linden, willow, cork, silk ropes, duralumin, whalebone and even white-tanned leather. The moving parts were mounted on ball-bearings. The fabric is of silk. The constructor has paid great attention to the ratio between the weight of the wings and the total weight, which is exactly 1:6; this corresponds exactly to the ratio in most birds.

| Total weight of the construction | 32 kg. |
| Surface of wings | 12 sq.m. |
| Lodd per sq. m. | 8 kg. |

We look forward with great interest to trials with these boldly conceived and executed wings for humans.1

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1. From the catalogue to the exhibition of Tatlin's work, 1932, quoted in V. Tatlin exhibition catalogue 1968, p. 76.
In 1932 Tatlin wrote the following comments in connection with the technological inspiration of his art:

**TATLIN:** Art out into technology

During the epoch of reconstruction technology determines everything.

The existing forms used in the art of building (architecture), in technology, and above all in aviation have assumed something of a locked and schematic character. There is normally a tension between simple rectilinear forms and forms determined by the simplest curves.

In architecture, the use of curves and forms, determined by complicated curvatures created by a complicated movement by a straight line or curve, is still of a fairly primitive character; the whole thing is limited to a common section of the simplest forms. This leads to monotony in the constructive and technical solution; it shuts in the artist, as it were, in a narrow circle of accepted building materials. This is clearly reflected in projects for world-wide competitions in modern architecture. In the case of the "small forms", a little group of formal results from the past - non-objective elements - have completely dominated artistic creation, even though they were the results of primitive forms of artistic thinking: they have not developed in any more complicated manner into synthetic, vital things.

A comment. The "Constructivists", in inverted commas, also operated with material, but secondarily, for the sake of their formal tasks, in that they mechanically attached also technology to their art. "Constructivism", in inverted commas, did not reckon in its work with the organic connection between material and concentration. In reality, it is only as a result of these dynamic relationships that a form necessary to life emerges. It is not very remarkable that the "Constructivists", in inverted commas, threw themselves upon decoration and graphic art.

Work in the field of furniture and other articles of use is only just beginning: the emergence of new cultural institutions, vital in our daily lives, institutions in which the working masses are to live, think and develop their aptitudes, demands from the artist not only a feeling for the superficially decorative but above all for things which fit the new existence and its dialectic.

The conditions of aviation (the mobility of the machines and their relationships to their environment) create gradually a greater variation of forms and construction than static technology. All this excited my attention, and caused me to make the closer acquaintance of flight.
After studies, I drew the conclusion that in the qualitative sense there really exist certain other variations of curved forms and tension in the material in this field than there do in the forms of architecture.

I believe, however, that the use of curved surfaces, and experimental work on this, are also inadequately developed.

Therefore:

1. The lack of variation in the forms (which is not in reality necessitated by technical requirements) leads to a limitation in the use of materials, to a monotonous use of materials, and creates to some extent a ready-made attitude to the cultural and material shaping of objects; this in its turn leads to monotonous solutions to the constructive tasks set.

2. An artist with experience of a variety of different materials (who, without being an engineer, has investigated the question which interests him) will inevitably see it as his duty to solve the technical problem with the help of new relationships in the material, which can offer new opportunities of concentration; he will try to discover a new, complicated form, which in its further development will naturally have to be technically refined in more detail. The artist shall in his work, as a counterpart to technology, present a succession of new relationships between the forms of the material. A series of forms determined by complicated curvatures will demand other plastic, material and constructive relationships - the artist can and must master these elements, in that his creative method is qualitatively different from that of the engineer.

The further consequences are these:

1. I have selected the flying machine as an object for artistic composition, since it is the most complicated dynamic form that can become an everyday object for the Soviet masses, as an ordinary item of use.

2. I have proceeded to material constructions of simple forms to more complicated: clothes, articles of utility in the environment - as far as an architectural work in the honour of the Comintern. The flying machine is the most complicated form in my present phase of work. It corresponds to the need of the moment for human mastery of space.

3. As a consequence of this work, I have drawn the conclusion that the artists' approach to technology can and will lend new life to their stagnating methods, which are often in contradiction with the functions of the epoch of reconstruction.
4. My apparatus is built on the principle of utilising living, organic forms. The observation of these forms led me to the conclusion that the most aesthetic forms are the most economic. Art is: work with the shaping of the material in this respect.

5. Work has been completed in accordance with my project. I have consulted Comrades M.A. Geyntse, surgeon, and A.V. Leev, pilot instructor. The apparatus has been built in the experimental scientific laboratory for the culture of material with the assistance of A.S. Sotnikov and I.V. Pavilionov. (1932).

Kornely Zelinsky writing on Tatlin in 1932 said:

Tatlin and the Russian Constructivist artists (Rodchenko and others) were united in spite of their subjective "Soviet attitude", as friends with Léger, Lipchitz, Severini, Corbusier, Ozenfant, Doesburg and other of bourgeois capitalistic fitters.

... For two years Tatlin laboured at it ["Letatlin"] with two of his pupils. A. Sotnikov and G. Pavilionov, previously students at the Vchutein.

When asked about the practicability of the Glider Tatlin said:

"I don't want people to take this thing purely as something utilitarian. I have made it as an artist. Look at the bent wings. We believe them to be aesthetically perfect".

"I count on my apparatus being able to keep a person in the air".

- By what principle does the apparatus fly?
- Like a glider. But my wing can produce three sorts of movement...
- How did you come upon this idea?
- It's a thousand years old, from the time of Icarus. I started from an organic form. I observed young cranes, how they learn to fly. I bought some cranes and went to school with them.

In 1933 Tatlin and other modern artists suffered violent criticism, all individual groups having been dissolved.

1. V. Tatlin exhibition catalogue 1968, pp. 75-76.
by a party decree the previous year. "Letatlin" was exhibited in Moscow at an exhibition on the occasion of the 15th anniversary of the Revolution, but in a special department for "formalism". In about 1934 to 35 Tatlin worked for various theatres including the Kamerny Theatre, the Detsky Theatre, the Second Artists' Theatre etc. During the late 1930s he began to paint again and between 1939 and 1940 he worked on the décor and costumes for "The Case" by A.V. Sukhovo-Kobylin performed at the Red Army Theatre in Moscow. "The Case" was supposed to be a play set in Tsarist Russia. Characters included "the Authorities/powers" "the suppressed/insignificants or private persons" and "non-man".

Tatlin designed costumes and faces. The décor consisted of enormous heaps of paper on tall cupboards. "The Case" was assumed to be the acceptance of social realism by Tatlin.

In his models for the play "Deep Reconnaissance" (1944) he built up the laboratory of a group of geologists in a wooden barrack. Tatlin died in Moscow in 1953.

The influence of philosophy and science on artists of the 20th century has been considerable but the changing attitudes that science takes, appear to be inspired by the same events as those which also inspire art. In the opinion of J.D. Bernal the laws, hypotheses and the theories of science have a wider bearing than the objective facts they claim to explain. Most of them necessarily reflect in large part of the general non-scientific intellectual atmosphere of the time by which the individual scientist is
inevitably conditioned. The result is that the phenomena of Nature and of the manual arts are interpreted in social political or religious terms. Thus Newton's theory of inertia came from the prevailing rational interpretation of religion, and Darwin's natural selection from the current conception of the natural justice of free competition.¹

This is perhaps why artists seem to have at times arrived independently at similar conclusions as scientists and why philosophers arrive at the same conclusions as poets. If it may be assumed that their background or environment was similar it may be only the medium into which each individual translates his observations of what he considers to be significant reality that differs.

Naum Gabo was born in Russia in 1890. In 1911 he gave up medicine to study natural science and in 1912 began studying under the German art historian Wülfblin. In 1910 he met Kandinsky who had just begun abstract improvisations and a few years later met other artists in Paris while visiting his brother Anton Pevsner. In Norway in 1915 he began to make constructions such as "Constructed Head No. 1", (Figure 690).

This, like the work done at the same time by Tatlin in Russia was an attempt to go much further than Cubism. He returned to Russia in 1917 and in 1919 and 1920 designed a radio station (Figure 693) which resembled both the Eiffel Tower and that of Tatlin. This also was the year of his first kinetic construction (Figure 694) and the "Realist Manifesto"

Like most of the Russian avant-garde from 1922-3 he lived in Berlin and later in Paris until 1935 when he came and broadcast for the B.B.C. during the war. He has lived in America since 1946.

Quilici suggested that much constructivist architecture may be traced to a fusion of Futurism and Rayonism translated into the concept of iron. Its forms are especially in the direct tradition of Rayonism.

As links in the chain from Rayonism to Constructivism Malevich's Suprematism led later to his spatial designs which, despite their impracticability (which was not so different in degree from Tatlin's) introduced abstract forms, or more precisely, the pictorial method of Suprematism to architecture.¹

With Lissitzky the tendency toward a technological language was more marked. The Proun constituted an intermediary step between the pictorial anticipation and the architectonic projection and it retained a state of ambiguity.

In Naum Gabo's project for a radio station dating from 1919-1920, the system of lines diagonal to the spiral may be seen as an attempt to put in the structural lines of force of this architectonic sculpture-object but it may also be read as a composition of diagonal traces or intersecting segments, reminiscent of "Rayonist" compositions, especially as reflectors, projectors and beams of light were to be used in the composition of such work.

¹ see V. Quilici: Ibid., pp. 38-40.
It was certainly Tatlin's aim to realise a work which would be "a synthesis of the principles of painting, sculpture and architecture".\footnote{Cfr. A. Abramova, Tatlin in Dekorativnoye Iskusstvo 1966, No. 2, Quoted \textit{Ibid.}, p. 40.}

Similarly in Lavinsky's designs for a "city of the future" the figurative futurist synthesis is recognisable in the diagonal lines, the intersections the symmetry and in the luminous dynamism Rayonism is also visible.

In calling their programme "The Realist Manifesto" in 1920 Gabo may have been implying that the definition of reality changed from one period to another. This did not correspond with Lenin's demands in the N.E.P. speech of 1921 for a realist art comprehensible to the masses. But Gabo may have been conscious of this in calling the manifesto "realist", presuming that it would not immediately be associated with the extremes of formalism, and that the association with reality in his sense would make itself evident. Already in his design for a radio station Trotsky's criticism of Tatlin's Tower seems to be predicted to some slight degree. Lenin's interpretation of "realism" was certainly nearer the nineteenth-century model. On the other hand Chernyshevsky's statement that "Reality is a hundred times more beautiful than art" might as well coincide with the aims of Gabo and the Constructivists as a realistic painting.

Unlike Constructivism, Malevich considered that his Suprematism was "additional" and formulated possibilities which could be integrated into life. His "tectonics", architectural forms were quite consistent with this view and
are not intended as models for a new Suprematist architecture but as laboratory ideas leaving others—real engineers—to work the suggestions out to a practical reality. Some of Gabo's works resemble scientific models. The vibrating rod of 1920 (Figure 694) which creates a form in space by means of its rapid vibrations, and in a similar way constructions strung like a harp creating forms through the multiplicity of lines in space as well as certain later works of Pevsner are strongly suggestive of Einstein's imagery of constructions with rods and curvilinear motion which he uses to make inferences from his general theory of relativity where time is considered on a spherical surface instead of an Euclidean plane:

Are these beings able to regard the geometry of their universe as being plane geometry and their rods withal as the realisation of "distance"? They cannot do this. For if they attempt to realise a straight line they obtain a curve which we "three-dimensional beings" designate as a great circle.¹

His further discussion of the spherical universe in two and three dimensions led Einstein to describe a concrete model of the type that both Gabo and Pevsner introduced from mathematical structure into art:

Suppose we draw lines or stretch strings in all directions from a point, and mark off from each of these the distance \( r \) with a measuring-rod. All the free end-points of these lengths lie on a spherical surface. We can specially measure up the area \( (F) \) of this surface by means of a square made up of measuring rods.

At first the straight lines which radiate from the starting point diverge farther and farther from one another, but later they approach each other, and

finally they run together again at a 'counter point' at the starting point. Under such conditions they have traversed the whole spherical space. It is easily seen that the three-dimensional spherical space is quite analogous to the two-dimensional spherical surface. It is finite (i.e. of finite volume), and has no bounds.¹

The idea of "elasticity" of bodies which was begun in art by the Futurists especially Boccioni in his sculpture and which was continued by the Constructivists in various forms and probably derived from Bergson's statements correspond to Einstein's physical theories:

The subtlety of the concept of space was enhanced by the discovery that there exist no completely rigid bodies. All bodies are elastically deformable and alter in volume with change in temperature.²

Einstein's "Relativity" was first published in a popular form in 1920. Gabo's constructions appear to have affinities with Einstein's space time continuum and there are a number of similarities between Gabo's remarks about the measurement of space published in his Realist Manifesto of 1920 and Einstein's theory published the same year.

At the beginning of the "Realist Manifesto" (Appendix LXIV) is a discussion of the unity of space and time and its measurement:

Like all spiritual manifestations art should also be firmly rooted in the true laws of life. • • • •

All expressions of life are spatio-temporal. It is the task of art to give plastic form to these expressions. The task of our creation is the realisation of the new expression of life through the exact forms of space and time. • • • •

¹. Einstein: Ibid., p. 112.
². Einstein: Ibid., pp. 142-143.
We deny size to be the form of space. Space can as little be measured by form as liquid by the yard. Depth set to material limits is the sole expression of space.

We deny the millenial error of assuming that the static represents the sole element of art. We point to kinetics as a new element of art, as the fundamental of a true expression of time.¹

This concept of space is similar to that of the Italian Futurists and even more to that of Tatlin when in their third point they deny space to be measurable by size.

Einstein was dissatisfied with the inadequate Newtonian definitions of motion and space and Gabo expressed a dissatisfaction with the scientific explanation of the phenomena of weight and speed because they are nothing to do with the experience of the events or ideas. Gabo denounced scientific laws of nature and its symbols as merely laws of physics or chemistry.

'It is the boy who throws a ball...who is the original scientist, and not the man who calculates the trajectories of missiles.'²

'It is the experience of planets' movements that drives us to create geometries of their celestial orbits.'³

Probably in reference to his 1911 Physics course Gabo remarked in his first Mellon lecture:

My learned teachers in their sincere efforts to satisfy my searching consciousness succeeded in estranging me further from the world...they abandoned me in that vast, deserted boundless continuum

I realised that in my scientific journey I had been under the power of a magic spell of a work of art whose reality was just as true as the verity of the image in an artists vision.⁴

In his second lecture he attacked monopolist claims of scientists:

I am personally involved in this dispute inasmuch as I have to defend my art from the accusation which I often hear — that my sculptures are mathematical formulas.¹

Both Gabo and Malevich were part of the intuitivist stream that was dissatisfied with Positivism. There is something akin to Malevich in Gabo's elevation of art and in his view that "he who wants to find the ultimate wisdom has to soar above all heights and cease to be".²

Neither Malevich nor Gabo considered that art may be based on science but that they were equal and activities having different aims. Malevich's comments on Matyushin's colour charts bring out this point. Gabo's definition of art in his Mellon lectures is akin to this in the manner in which he places it on a separate but equal level:

I denote by the word art the specific and exclusive faculty of man's consciousness to conceive and represent the world external to him and within him in form and by means of artfully constructed images — conceptions... all the other constructions... be they scientific, philosophical or technical, are but arts disguised in the specific forms of their particular disciplines.³

I accept the image of the world which science is constructing, not because that image is the only true reality of Nature and life, but because it is a beautiful work of art, perfectly performed.⁴

Gabo contrasted the use of scientific symbols for conveying a piece of information quantitatively whereas the artists symbols act immediately on our experience:

In the artist's hand, when he transfers an image of his experience into a painting or a sculpture, these means are no longer scientific abstractions but concrete forces in action. (see Appendix LXIV).

The Realist Manifesto described a new kind of sculpture deliberately emphasising space as a structural part of the object so as to convey volumes.

His introduction of time into sculpture was, he claimed, a different idea from the "idea of contemporary science space time...Time for use is the faculty of expressing the continuity of the present".
Figure 655. M. Larionov: Portrait of Vladimir Tatlin 1913-14, oil on canvas, 35½ x 28½, collection: Michel Seuphor, Paris.
Figure 656. Vladimir Tatlin: The Sailor, 1911-12, oil on canvas, 28½ x 28½, Russian Museum, Leningrad.
Figures 658 and 659.

V. Tatlin: Two views of

Painting Relief: Selection of materials 1916, iron, plaster, glass, etc., presumed destroyed.
Figure 664. V. Tatlin: Monument to the IIInd
International 1919-20, wood, iron
and glass, remnants of this maquette
are stored in the Russian Museum,
Leningrad.
Figure 665. A wall manifesto showing Tatlin's project for the III International.
Figure 666. A model by students in the architecture section of the Vkhutemas. It represents a tower for the manufacture of Alkali for a Chemical factory. The project was under the direction of Professor Ladovsky.

Figure 667. Plan and elevation of Figure 666, showing cylinder stairs, frame and conduit.
Figure 668. B.D. Korolev. Monument to 'The Fighter of the Revolution'
V.G. Saratov.

Figure 669. Joseph Chaikov: The Bridge Builder, c. 1928.

Figure 670. J. Chaikov: Tractor Factory, 1932.

Figure 671. G. Yakulov with his model for the "Monument to the twenty-six commissars of Baku", 1923.
Figure 672. A page from "Krasnaya Panorama", No. 23, 1924, p. 17. Tatlin standing in front of a home-made stove; models of clothes sewn by himself; and Tatlin wearing jacket and suit.

This newspaper cutting was headed Tatlin's New Way of Life. The stove was one, specially designed by Tatlin in the hard days of 1918-19 to consume the minimum of fuel while giving maximum heat.
Illustrations of ANTI-NEUTRAL SUIT MANIFESTO (See Appendix LXIII).

Figure 673. Red-white-green suit of the Futurist "parolibero" [free-word poet] Marinetti (Morning).

Figure 674. Red-white-blue suit of the Futurist "parolibero" Cangiullo (Afternoon).

Figure 675. Warlike and festive modifiers.

Figure 676. One-piece red suit of the Futurist painter Carrà.
Green sweater, and red and white jacket of the Futurist "rumorista" [noise-maker] Russolo, voluntary cyclist.
Red-white-green suit of the Futurist painter and sculptor Boccioni (Evening).
Figure 677. V. Tatlin, Design for *Letatlin*, 1923.

Figure 678. V. Tatlin, Design for a constructional detail of *Letatlin*, 1923.

Figure 679. V. Tatlin, Element in laminated and bentwood for the framework of *Letatlin*, 1923.
Figure 680. Ornithopter design by Leonardo da Vinci: c. 1485.

Figure 681. One of Lilienthal's monoplane hang-giders: 1894.

Figure 682. Henri Farman flying the first circle in Europe: January 13th, 1908.

Figure 683. First large multi-engine aeroplane, The Sikorsky Bolshoi (first form, with engines back to back in pairs): 1913.
Figure 684. V. Tatlin: Hall in the Castle, Design for a backcloth for: Emperor Maximilian and his son Adolf, 1911, cardboard, water-colour, gum-paints, gouache, 31½ x 36½. Tretyakov Gallery, Moscow.

Figure 685. V. Tatlin: Wood Sketch for a backcloth for the opera: Ivan Susanin 1913, gum-paints, cardboard, 21⅔ x 37⅔. Tretyakov Gallery, Moscow.
Figure 686. V. Tatlin: Project for the stage construction of the first moment of "Zangezi" by V.V. Khlebnikov performed at Inkhuk in St. Petersburg 1923.

Figure 687. V. Tatlin: Stage construction for the second moment of "Zangezi" by V.V. Khlebnikov, St. Petersburg 1923.
Figure 688. V. Tatlin: Model Stage.

Figure 689. B. Vialkov: Constructivist Setting for "The Count of Monte Cristo".
Figure 690. N. Gabo: *Constructed Head, No. 1*, 1915, Wood.

Figure 691. N. Gabo: *Torso*, 1917, Sheet iron treated with sand.
Figure 692. Naum Gabo (Pevsner).

Head of a Woman 1916–17, celluloid, metal, 24\(\frac{1}{2}\) x 19\(\frac{3}{4}\), The Museum of Modern Art, New York.
Figure 693. N. Gabo: Project for a Radio Station 1919–20, pen and ink on paper, private collection, USSR.
Figure 694. N. Gabo: Kinetic Construction, 1920
metal rod vibrating by means of a motor.
Figure 695. N. Gabo: Design for Kinetic Construction, 1922, Pen and ink. 
The construction is an oscillating rod which in movement forms a volume.
CHAPTER XXVIII
THE DEVELOPMENT OF AVANT-GARDE THEATRE IN RUSSIA

Until the last quarter of the nineteenth-century stage sets were usually illusionistic being derived from seventeenth-century Italian Baroque architectural and paintely origins. The theatre then passed through a series of influences from the Meiningen group, Naturalism, Symbolism, Stylistim and Expressionism, Constructivism to Sythentic Realism. In France naturalistic stage settings were criticised by the Symbolists who held that sets should be merely visible signs of ideas. Encouraged by Mallarmé, Verlaine, Henry de Régnier, Jean Moréas, Verhaeren, Alfred Valette and many others Paul Fort opened the "Théatre Mixte" in Paris in 1870. It was later called the "Theatre d'Art".1 In 1892 he gave it up, and Lugné-Poë its new director became increasingly influenced by German and Russian producers. According to the French Symbolists the scenery had to complete, by means of analogies between the colours and shapes of the décor and the spoken lines, the aesthetic illusion created by the poetry of the play. In 1905 Meyerhold repeated the experiments in the Moscow Studio Theatre started by Stanislavsky. In 1906 he resumed work at the Komisarzhevsky Theatre, Petersburg. Puppets were eventually used to replace the natural human figure which seemed to clash with the non-naturalistic decors. Mamontov's

romantic and impressionist scene painters influenced Diaghilev's choice of artists by 1907 when he first produced "Boris Godunov" in Paris. Later Diaghilev collaborated with French and other foreign painters as well as most avant-garde Russian artists such as Yakulov (who designed "Le Pas d'Acier") and Gabo and Pevsner who built the constructivist set for "La Chatte."

In the German Commercial Theatre the influence of Russian painters was expressed in a production of "Sumurun" by Max Reinhardt. Bakst's influence during and after the first world war in Britain and Paris extended to couture. Before 1900 the idea of a three dimensional sculptural and simplified setting was first created by the Swiss artist Adolphe Appia. He considered that the essential element of the drama is action, and the presence of living characters prompts that action. To give full value to the artistic presence of the human body on the stage, it is desirable to get rid of everything contradictory to such a presence. Plastic three-dimensional settings were preferrable to painted scenery and lights to give the right emphasis to the actor's body, positions and movements. In his sets, Appia "stylised" the forms of nature. He devised combinations of lights, setting them at various angles and wrote that "painting and lighting are two elements which exclude each other.

To think concretely (sachlich) in three dimensions so as to be able to subject the decorative and pictorial elements to the dramatic substance of the theatre.

Cubism had a paramount influence on stage design after 1918.

According to Marinetti theatrical performance should consist of:

...purely geometrical movements produced without any excitement by geometralised volumes which... could surpass the human muscular possibilities.

Mechanical sounds and abstract intonations could be used by the actor. Masks and stiff clothing was used to incorporate the actor into Abstract-Mechanical theatre. Prampolini and Balla made the first Italian Futurist décor at the Teatro Costanzi in Rome in 1912; Picasso painted sets for Diaghilev's "Parade" by Satie; Cocteau painted sets for "Tricorne" by Falla, and Gris, Laurens and Léger designed settings for the Ballet Suedois in 1922.

The idea of completely mechanised theatre was also developed by Gordon Craig with his Uebermarionette and in Germany in the 1920s by Farkas Molnar and Moholy Nagy (see Figures 737-742). Molnar's theatre had four stages: the first and most important in the middle of the auditorium; the second behind and a little above the first; the third behind the second, with a curved wall at the back for pictorial effects and the fourth, overhanging the second was for sound effects and acrobatic exercises.

The settings of the Expressionist-Realists in Germany were a synthesis of influences of the Cubists, Van Gogh, Kokoshka, Appia and Fuchs being composed of forms to "wake up the emotions" giving the play partly realistic and partly symbolic significance and usually consisting of fragments of architecture or a single object set in space and isolated
by lights. Ludwig Sievert, Leopold Jessner and the painter Emil Pirchan were the best known exponents of this idea.

In 1912 there appeared almost simultaneously, three separate reformers who set to work, on not dissimilar lines at a revival of the Russian Stage, they were Evreinov, Mardshanov and Taïrov. Evreinov's book published at this time, "Das Theater an sich" ("What the Theatre Stands for") summarises his ideas that the theatre is a valuable and fundamental aspect of life:

What the audience needs is imagination, not naturalism — an image of the object not the object itself — a concept of the action not the action itself. The essence of the theatre is illusion; the stage has its own realism, but this has nothing whatever in common with the realism of actual life.¹

Mardshanov's particular aim was to do away with the specialising tendency which separated the functions of the stage from those of the actor, and put the dancer in a different category from the acrobat; he resolved to create a "Synthetic Theatre", which would be capable of presenting tragedy, farce, opera and pantomime with equal facility.

He dreamed of a universal artist who would be singer, dancer and actor in one; this type, he maintained, had existed not only in classical antiquity but also in the Middle Ages and down to a quite recent date.² However his "Free Theatre" had a short existence but his idea persisted and was developed by Tairov who had been one of Mardshanov's producers. One of Tairov's aims was to free theatre from the domination of literature and to develop a technique of expressing ideas and

¹. Quoted in Miller and Gregor, The Russian Theatre, p. 54.
². see Ibid., p. 55.
emotions through movements of the body. Tairov became the originator of Russian expressionism in the art of the theatre.

The "Kamerny Theatre"\(^1\), Russia's most revolutionary theatre, was founded mainly by Alexander Tairov at the age of thirty-three after studying law as a profession. His first experience in the theatre dated back to 1912 when he abandoned law and acted and served as manager in the "Stray Dog" cabaret in Petrograd. Later the same year he founded and managed the Theatre Mobile, a travelling dramatic company. A year later he was head of the newly founded "Free Theatre" in Moscow, and a year later head of the Kamerny when the parent institution split into two organisations.

The "Kamerny Theatre" opened for its first performance on December 25th 1914, having originated in the "Svobodny" Theatre, an experimental institution which opened its first and only season in the Autumn of 1913. The split that took place in the Autumn of 1914 gave the Kamerny directed by Tairov and the Moscow Dramatic Theatre, a popular play house which lost the revolutionary spirit of its origins.

The first production at the Kamerny in December 1914 was the Hindu classic, "Sakuntala" by Kalidasa. The translation was by Balmont and stage sets designed by Pavel Kuznetsov. Later the same month "Playboy of the Western World" was put on with sets by Kuznetsov and in 1915 "The Fan" by Goldoni with sets by Goncharova. In October 1916

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1. see Oliver M. Sayler, The Russian Theatre (London 1923), Ch. IX, pp. 145-146.
"The Merry Wives of Windsor" was played with sets by Lentulov. "Thamira of the Cithern" followed in November with sets by Exter.¹

In the minds of the founders of the Kamerny Theatre, Alexander Tairov and Alice Koonen its leading actress, it had three main aims:

1. The practicing of the theories of a new form of theatrical art.

2. The breaking away from the Traditions and the routine which up until the founding of the Kamerny had held sway over the Moscow theatres and the entire Russian stage, with the exception of the experiments of Meyerhold and Evreinov in Petrograd. It amounted to a struggle against the type of realism expressed by the Moscow Art Theatre.

3. The expression of the theatrical action in its widest possibilities. The theatre should keep itself varied, flexible and plastic.

Kamerny had thrown off the enslavement of theatre to painting on the one hand and literature on the other. He had tried to create the atmosphere of each individual play and considered it necessary to construct three dimensional scenery to be in harmonic relations with the rhythmic and plastic movements demanded in the production of each play. Kamerny also studied gesture and mime in the belief that the latter art gives an opportunity to place in strong and effective relief all the nuances hidden in traditional theatrical art. The actor would acquire the emotional gesture

¹. Ibid., pp. 136-138.
which was really inseparable in drama from the word and which had gradually been lost latterly. Mimes presented at the Kamerny included "The Pentecost at Toledo" by Kuzmin and the "Box of Toys" by Debussy.¹

The composer Forterre gave a new conception of the position of music in the theatre:

Music has hitherto been represented in the dramatic art as a dynamic element, intended to strengthen more or less the dramatic situation. This function has now been replaced by a rhythmic and melodic element which, allying itself to the gesture of the actor, augments the expression by the persuasion of the rhythm and melody.²

In this respect music which had been a general atmospheric aspect of the drama was henceforth to be fitted in detail to the individual gestures and expressions of the actors.

Alexandra Exter³ (see Appendix LXVII) began working in a neo-impressionist way experimenting with division of colours into separate elements attempting the maximum luminosity and transparency of colour. This was the treatment of her first still life subjects, landscapes and later large panels inspired by Swiss and Breton landscapes. A series of flower subjects followed, strongly reminiscent of Van Gogh. She was then drawn toward the expression of form and while in Paris she studied the compositions of Poussin. This is reflected in her work around 1910. Following the example of the cubists she abandoned her polychromatic

¹. Ibid., p. 144.
². Quoted, op.cit.
pictures for a more restricted range of greys.

From 1910 to 1912 she painted a number of landscapes of Genoa, Venice, Paris and Moscow. These views of cities were expressed as compact houses bridges and angles often within an oval frame. These did not have the same severity as the cubist works of Picasso and Braque but appeared to be more related to the exhibitors at the independent group and contained more decorative elements.

Her maquette "the Town" (Kiev 1917) consisted of a combination of spirals, narrow houses and skyscrapers. For the first time A. Exter used various materials such as plaster, metal, paper, newspapers and posters.

She was however soon to return to using colour extensively, both in painting and in stage design which she carried on as a parallel activity after 1916, designing both decor and costumes for a wide variety of theatrical productions including (see Figures 702-712), M. Amnensky's "Thamira of the Cythere", Shakespeare's "Romeo and Juliet", d'Annunzio's "The Daughter of Iorio" and Oscar Wilde's "Salome" (figures 704-708)

Her aim was to create constructions on the stage and to this end she constructed maquettes architectural in quality which seemed to be the ultimate realisation of her cubist paintings. In many experiments she attempted to evolve away from the theatrical tradition of an actor in front of a naturalistic back-cloth by replacing the decor with fabrics and screens. These elements resemble those of Gordon Craig and Reinhardt while others such as A. Appia gave primordial importance to light on the set. Others restored an immobile architectural background such as Georg Fuchs.
Adolph Appia’s addage that "Man is not made for the decor but decor for the man" suggests the new experiments to realise the three dimensions of the movements of an actor in space that Exter carried out with her first stage set. The antique myth was treated with a modern irony, the landscape was reduced to primitive forms, white steps of different sizes, conical cypruses, with stones and rocks as black and gold cubes. Her designs were a contrast to the naturalistic "truth" resulting from archaeological and ethnographic research manifest in the "World of Art" designers Benois, Bakst, Dobuzhinsky, Anisfeld, Somov, Roerich etc. Even for historical plays she designed sets which were the three dimensional extension of abstract paintings.

Her evolution from easel painting to theatre design was gradual. She began with a mural painting in the foyer, then a curtain, finally in 1916 the decor for "Thamira of the Cythern" for the most advanced Muscovite theatre the "Kamerny". During the years that followed Exter and Tairov inaugurated the idea of "Synthetic Theatre",1 in which the set, costume, actor and gesture were to be integrated to form a dynamic whole.

In 1920 Yakulov designed sets for "Princess Brambilla" and Alexander Vessenin co-founder of Constructivism designed sets for the Kamerny Theatre production of Claudel's "L'Annonce faite à Marie".

J. Tugenhold described the white canvas which formed the background, being saturated with lights of every nuance:

pale blue, orange, and deep red. No forms were lost during the performance, the Bacchantes moved across the steps, the satyrs climbed on the cypreses and rocks with gestures corresponding to their forms.

For Oscar Wilde's "Salome" at the "Kamerny Theatre" the basis of the decor was again architectural: the scene was divided in two parts diagonally, and between them a round staircase rose (Figure 725). Multi-coloured fabrics cut into different shapes accompanied the moods and movements in the progress of the drama. Changes of colour indicated the changes of place from act to act and the movement of the materials indicated the psychological moments of the drama like musical accords. It was something of the "psychophysiological" force of colour of which Goethe wrote in his "Farbenlehre" and to which Delacroix referred when he said "la peinture s'approche de la musique et de la mathematique". "Salome" began with a silver and black gamut on the generally red background of the curtain and ended with five sharp angles like the edges of a guillotine suddenly dropped in the last scene.

Oliver Sayler described the curtain (Figure 704) as a "bold study in the grotesque" with black and gold as the dominant colours. Facing inward at the centre were two monsters - a goat and a leopard with a peacock and a swan's progenitor facing outwards. The rest of the background was of a post-impressionist or even cubist appearance. After this curtain opened to the strains of exotic music, another

curtain was revealed, a sharp pointed arc in white against a black background represented beneath red banners. Then this curtain parted to show the stage set as the terrace of Herod's palace overlooking the banqueting hall. Several stone columns at the right were lit with red light from within and in its glow soldiers stood around the foot of a winding staircase. The well in which Jokanaan was confined was shown on the left and just beyond it was a dark curtain with moonlight being represented with a great green disc from which beams of light projected. Sayler who saw the performance stated\(^1\) that at Jokanaan's first speech "After me shall come another mightier than I..., the curtain with the cubist moon was drawn off to the left, and in its stead a lighter stage revealed two silver streamers of unequal length suspended from above and extending nearly to the ground. The red light originally seen only at the right, then spread over the terrace as the voice of Salome was heard approaching from the banquetting hall. Sayler continued the description by saying that in quick sinuous movements and angular, passionate poses the action was carried forward. Jokanaan was brought up from the well, and Salome hurled herself at his white body, his black hair, his red mouth. Alice Koonen (Figure 708) played the part of the erotic Salome and further action was observed when the Syrian Narraboth killed himself on the stairs and flung himself between the prophet and the princess. The silver streamers of the moon rose out of sight as the prophet descended into the well to escape Salome. The

light grew redder and blended into a "portent ous yellow as Herod squat and gross", came on to the terrace. Salome remained fixed in a dramatic pose with arms outstretched against the wall. After Herod promised her whatever she asked if she would dance, the light turned red again, the blue curtain at the back moved off and a red one was left in its place. Salome then entered, her feet slowly moving at first but gradually dancing more and more wildly as she discarded red and green veils and as she removed the sixth veil only torchlight remained on the stage. Dramatic gestures also accompanied the display of the severed head a little later and as herod's soldiers smothered Salome under their shields, great black streamers dropped from above blotting out the scene from view and the curtains closed.

In this play Exter's simplified costume designs with painted folds in the drapery was appropriately accompanied by strict rhythmic control of the body by the actors. Sayler compared this economy and rhythm with a performance of "The Afternoon of a Fawn" by Diaghilev's ballet.

Reminiscent of her painting "Venice" the three dimensional set for "Romeo and Juliet" consisted of a number of arches, white angular bridges suspended between the houses of the Montagues and the Capulets.

The costumes were also constructed conceiving of the costume as a mask for the body to express the period and the character. In another play designed by Exter, "Thamira Cytharède" by Innokenty Annensky, the bacchantes and satyrs appeared to be nude but were in fact clothed and painted in multi-coloured stripes to accentuate the muscles and lines
of their bodies. The costumes also reflected the rhythms of the characters' gestures.

Sayler described "Thamira of the Cithern" as being more impersonally erotic than any of the plays in the Kamerny repertory. The scenic background remained unchanged throughout and the play had "a certain austerity and dignity combined with a passionate symbolism which at once links the cubist formula with the "Greek Spirit". A flight of steps in the centre of the stage was flanked in the foreground on the right by another tier of steps leading up to the door of the musician Thamira and on the left were a group of "cubist rocks". Other rocks and tall pillars appeared further back. Early in the play a chorus of Menads staggered in song and dance down the steps to form a circle of restless movement accompanied with red light. Yellow light was used whenever Thamira entered. Music by Forterre accompanied the performance.

An interesting experimental theatre, the Kommissarzhevskaya Memorial Theatre directed by Fyodor Kommissarzhevsky, founded in Moscow in 1914, was the direct outgrowth of a school of acting and stagecraft opened originally in 1910 entitled "The free School of Scenic Art". Fyodor's aims described in the prospectus were:

...to find with his pupils and his artistic friends the new means of artistic and scenic interpretation for new authors, Russian and foreign, and for the classic authors. At the school and the theatre of Kommissarzhevsky, the naturalistic ideas of the theatre of Stanislavsky will be completely unknown. It will be a theatre purely esthetic and theatrical.

2. Quoted, Ibid., p. 181.
This aesthetic and theatrical aim was the achievement of harmony between the interpretation of the actors, the ensemble, the forms and the colours of the scenery and costumes, the music and the light. Plays performed varied from Molière's "The Sicilian" in 1914, a dramatisation from Dickens' "A Christmas Carol" in its first year of existence to "Night Hops" by Sologub and "The Cursed Prince" by Remizov, 1915 and 1916, both written by contemporary Russian writers. The theatre was small, with an auditorium to seat a hundred and fifty people.

In the capital, Petrograd, the traditional state-owned theatre, the Alexandrinsky Theatre, was the equivalent of the Small State Theatre in Moscow. Meyerhold had introduced a new tradition to state theatres, and stood out as the foe of Stanislavsky and realism in the theatre after the revolution, while Evreinov, whom he admired, emerged to propose a new way of conceiving the theatre, monodrama.

Golovin had designed the scenery for all Meyerhold's sets during the period 1908-1918 and Meyerhold was concerned to revive a primitive spirit of the stage. He introduced this tradition by 1910 when he produced Molière's Don Juan and of his method he wrote:

The academic theatre of the Renaissance, unable to make use of the greatly extended forestage, removed the actor to a respectable distance from the public... Molière is the first of the masters of the stage of the era of Louis XIV to bring the action forward from the back and the middle of the stage to the forestage...

Similar to the arena of a circus, pressed on all sides by a ring of spectators, the forestage is brought near the public, so that not one gesture, not one movement, not one glimpse of the actor should be lost in the dust of the backstage...

Could an actor with an inflated affectation or with insufficiently flexible bodily movements be tolerated
at the proximity to the public at which the forestage of the old English, French, Spanish and Japanese theatres placed their actors?\(^1\)

Meyerhold was reticent in expressing his political convictions after the revolution but continued to work under the new regime.\(^2\)

The ideas of Nikolai Nikolaievich Evreinov (b. 1879) are set out by him in a number of publications, notably in "Teatr dla Sebya" ("Theatre for One's Self") and in Kamensky's biography of his life. Evreinov was first attracted to theatre at the age of five when he saw "Girolé Girolà" at Ekaterinburg. At the age of seven he produced his first dramatic composition "A dinner with the Minister of State". He later joined a circus and performed in a balancing act but despite ambitions to go to Africa he attended law school in Petrograd where he continued in an amateur capacity to produce plays and a musical composition. From the age of fifteen he tended toward atheism and read Nietzsche but later he became a close student of the gospels. When he graduated from University his theatrical activity increased. After much writing and producing he succeeded Meyerhold in 1908 at the Kommissarzhevskaya theatre in Petrograd where his productions included Sologub's "Vanka the Butler and Page Jean" and Oscar Wilde's "Salome" (removed by the police from the repertory after a dress rehearsal). In 1909 when he produced Sologub's "Night Hops" at the "Gay Theatre for Grown-up Children" in Petrograd, a number of well known poets


\(^1\) Quoted in Sayler, Ibid., pp. 209-210.
and artists took part. From 1909 to 1911 he directed a drama studio in Petrograd in which his task was to develop theatrical intellectuality concerned with the technique and plastic execution by artists for the Theatre of the Future.

An "Introduction to Monodrama" was first published in Petrograd by Mme. Butkovskaya in 1909 and read by Evreinov in Moscow in 1908 and 1909. His first play embodying the new theory was "The Representation of Love" produced at the "Studio of the Impressionists" in Petrograd in 1910 (Figure 696). In 1912 "The Greenroom of the Soul" or "The Theatre of the Soul" was shown on the stage of the "Crooked Looking-Glass" in 1912. In 1913 Mme. Butkovskaya published for Evreinov his "Teatr kak Takovoi" ("The Theatre as Such"), illustrated by Kulbin. In this he discussed the theatricality of life and expounded his idea that the inborn theory of theatricality lives beside that of self-preservation and sex; that the uprooting of that instinct is equal to physical castration; that the satisfaction of that instinct is one of the endynamic stages, so far as happiness is understood to be one of the needs of the soul and that man is touched only by that which he is able to theatricise. This idea was taken further by a publication "Pro Scena Sua" in 1913.

The three volumes of "The Theatre for Oneself" published in 1915, '16 and '17 are described by the author as "theoretical", "pragmatic" and "practical" respectively and elaborate his ideas of "Monodrama". His intention was to show that "Monodrama" is the "living experience of the acting character on the stage resulting in the similar 'living experience' of the spectator who becomes one with the actor through co-ordinate living experience":
The task of monodrama is to carry the spectator to the very stage so that he will feel that he is acting himself...

The "I" (the acting character), is the bridge from the auditorium to the stage...

He also wrote of this in connection with his first Monodrama, "The Representation of Love" published in Moscow in 1910:

This play is an experiment in monodrama. The latter, as an architectonic theory of the drama on a subjective impressionistic basis, came as a result of the plot of the play, not the contrary. It is not the theory which came before the artistic creation. I consider it necessary to make this observation in order to avoid the accusation of preparing a play according to formula. As it is known, many plays have been written according to my 'recipe' under the name of 'monodramas', but unfortunately many authors took up my theory superficially and in their productions only tried to be ahead of the fashion.

I do not wish such followers.

'The Representation of Love' is, indeed, the first example of an exactly constructed monodrama.

I shall recall the most important of my teachings concerning monodrama.

Our soul is limited in its capacity for receptivity. The foundation of esthetic contemplation is the concentration of the attention on some definite individual object. Moreover, the change of the objects of our concentration results in weariness of the soul-activity and consequently in the weakening of the capacity for receptivity. The real object of a dramatic representation ought to be some living experience, and with this, for the purpose of facilitating the receptivity, the living experience of one soul instead of several.

Hence, the necessity for preferring one 'really acting' protagonist to several 'equally acting', - in other words, the logic of the demand for such an 'acting character', in whom as in a focus should be concentrated the whole drama and therefore the living experience of the other acting characters.

In addition, variety not unified splits the whole into several separate less strong impressions and this prevents the appearance of the most significant

1. Evreinov: An Introduction to Monodrama, Quoted in Ibid., p. 231.
esthetic moment. Therefore, in art we must absolutely try to attain variety in unity, achieving in this way an easily conceived simplicity and thus a whole impression - an esthetic pledge - of the significant.

What I have said indicates the steps to the perfect drama, - monodrama.

I call monodrama the kind of a dramatic representation which endeavors with the greatest fulness to communicate to the spectator the soul state of the acting character, and presents on the stage the world surrounding him as he conceives it at any moment in his stage experience. Instead of the old incomplete drama, I propose the architectonics of a drama based on the principle of identifying the stage with the representation of the acting character.

The conversion of the theatrical spectacle into a drama depends on the living experience, the contagious character of which, calling forth in me a coordinate living experience, changes in the moment of the stage action a 'drama alien to me' into 'my own drama.'

The stage means of expression of the dramatic experience are reduced, as we know, first of all to words. But the unsatisfactoriness of these means is evident; he who attentively analyzes himself in the parterre of the theatre acknowledges that we hear more with the eyes than with the ears; and this in my opinion is in the nature of the theatre.

As Pshibuishevsky says, 'There is no possibility of expressing one's self in words.' There remain gestures, artistically expressive gesticulation, the tongue of movements common to all human races, mimicry in the broad sense of the word, that is, the art of reproducing with one's own body the movements expressing our agitations and feelings. Charles Aubert justly remarks that mimicry predominantly is the fundamental element of the theatre, as it represents by that means action, that is, the most evident part, the part best able to produce an impression and the most contagious on the ground that the spectator seeing in the mimicry a picture of a more or less deep agitation is moved by the law of imitation to share and feel the same agitation, the signs of which he sees. And this last circumstance is the most essential in the theatre, because in bringing about a coordinate living experience with the acting character it establishes in this very way the change of the 'drama alien to me' into 'my own drama.' But even this powerful means of communion of the stage with the spectators is limited, as we know, in its potency.

Thus we see productions in which the dramatist, unable to rely on the mimic art of the actor, adds in certain cases to the words of the most vivid expression and to the detailed directions for the mimicry of the main acting character, the object as a cause of the given
words and the given mimicry in all the clearness of its stage personification. Thus in a whole series of dramas, classic as well as modern, the feeling of terror is sometimes suggested to the spectator not only by word and mimicry but by the very object of this terror - for instance, the ghost of this or the other image of hallucination. The object of the dramatist here is clear: in order that the spectator may have at a given moment nearly the same experience as the acting character, it is necessary that he see the same thing.

In such cases there comes a moment which I would call monodramatic in spite of the lack of preparation and stage groundwork. Indeed, why is the spectator obliged suddenly to look upon that which only one acting character sees and what the other personages of the drama do not notice in their terror at perceiving the disfigured features of the one who has seen the ghost? That is one point; in the second place, if the spectator must see only that which the terror-stricken individual sees, that is, the image of the ghost, why are the other acting characters shown to him, those personages whom the terror-stricken individual is psychologically not in a condition to see in all their clearness? Not only that, but why does the room or the plain or the forest - the place of the appearance of the ghost - not change at the moment of suggestion of terror in his features; why do the coloring and the light remain unchanged, just as if nothing had happened and, though seized with unspeakable fear, he continued to see their impassive contours?

This is not yet monodrama. Monodrama must present the exterior spectacle in correspondence with the internal spectacle. This is the whole essence of it.

Monodrama forces every one of the spectators to enter the situation of the acting character, to live his life, that is to say, to feel as he does and through illusion to think as he does. Consequently, first of all, it is necessary for him to see and to hear the same as the acting character. The cornerstone of monodrama is the living experience of the acting character on the stage dependent on the identical coordinate living experience of the spectator who by this act of coordinate experience becomes a similar acting character. To convert the spectator into an illusory acting character is the important problem of monodrama. For this, there must be on the stage first of all only one subject of acting, and not only for the reasons that have been set forth in the beginning but also because monodrama has for its purpose to present such an external spectacle as will correspond to the inner spectacle of the subject of acting; for to be present at once at two spectacles is not within our weak powers.
In order that the spectator should be able to say to himself on this or the other occasion together with the one acting on the stage 'Yes' or 'No', it is not sufficient for the spectator to see the eloquent figure of the actor, to hear his expressive voice and to know that it is he who speaks in the room. It is necessary further to show, at least by a hint, the relation of the actor to the surrounding setting. We often say 'Yes' instead of 'No' when the sun shines, but it shines sometimes in our soul more brilliantly than in the sky, and this sunshine, not less than the real sunshine, may lighten up with royal comfort our miserable setting. I may utter my 'Yes' or 'No' in deep meditation, distant in my thoughts from this setting. Then it is as if this setting would disappear; it veils itself by my indifference to it. Is it possible that Hamlet uttering 'To be or not to be' sees at this moment the desperate luxury of the palace ornaments? And you, true people of the theatre, did you not become angry in such a moment at the intrusive brilliance of these requisites of luxury, at all this useless clearness of contours unintelligible to Hamlet?

To every psychologist it is elemental that the world surrounding us, thanks to the sense impressions, inevitably undergoes changes; and the idea that the object has in it inherently that which in reality it borrows from the impressionable subject is not some exceptional psychological phenomenon. All our sense activity is subject to the process of the projection of purely subjective changes upon the outside object. I do not know what is the color of cherries. I only know that in my eyes they are red. Do your eyes color them exactly in the same shade as mine? I do not know. I only know that the Daltonists color them in green. We seem to think that the world in itself is full of sounds, although the sounds as well as the colors are nothing else than our subjective transmutations of external facts. That which is inanimate objects suddenly stands out in the quality of animated force is not so strange according to the explanation of K. Groose, because this animated force is our own familiar 'I' with all its peculiarities; here, according to the just remark of Fisher, 'the borrowing of souls' goes on; we seem to loan the necessary particle of our soul to the object, inanimate by its nature, for the time of the impression.

The surrounding world seems to borrow its character from the subjective individual 'I'; and we understand what Goethe meant in saying of Hebel that the latter gave nature a great deal of the 'peasant quality.' Nature can be peasant-like, when Hebel perceives it, but it can be chivalrously beautiful when Wolfram von Eschenbach perceives it. And it changes together with us, with our soul-mood. The cheerful meadow, field
and forest which I admire, sitting free from care beside my sweetheart, will become a bright green spot, yellow furrows, and dark age, only if at that moment I be notified of a misfortune that has happened to some one near to me. And the author of the perfect drama in the sense I understand it will fix in a remark these two moments of the setting surrounding us; pedantically he will demand from the decorator an instantaneous change of the cheerful landscape to a stupid combination of tiresome green, disquieting yellow and gloomy olive colors, and he will be right in his pedantry.

The artist of the stage by no means should show on it in his 'drama' the objects such as they are in them¬selves - when they are represented as they are perceived, reflecting some 'I', his torment, his joy, his wrath, his indifference, only then will they become organic parts of that desired whole which we truly have a right to call perfect drama. In expressing one's self imaginatively, the blood of the acting character must circulate in the objects on the stage and a very stony stone must not remain silent beside the acting character. The revolver when I admire it as a brilliant toy is not the same as when as a task I clean it for my master, and it is certainly not the same as when I take it up in order to shoot myself; on what ground on all these three occasions do they show me from the stage the same terribly coarse, meaningless weapon! Why, I was promised a drama and not merely a 'show', was I not? I wish to live the same life with the acting character - the moment of the deepest identity with him has come! So do not turn me aside, do not dampen my interest by showing me your 'criminal' properties!

'But this is conventionality!' will cry out our theatrical air brakes, 'and a necessary conventionality which can not stand in the way of the spectator who has tuned his mind in unison with the soul of the acting character. Such a spectator who is meeting the design of the author sees the object in the real light, because he can easily imagine the aspect of the object just as it should be from the course of the play.' But in such a case, I answer, it is not necessary to show anything! It is much easier to imagine all this, if no obstacles are put in the way of the imagination.

I repeat - we come to the theatre first of all as spectators, and then as listeners; and everything that is most essential we wish by all means to see, to con¬template with our bodily and our spiritual eye. Give us, then, this satisfaction, if it is a stage and not a pulpit nor a concert platform!

In the end it must be clear to the dramatist that if he wishes to represent the life of the spirit, he must deal not with external realities but with the internal reflections of the real objects, because for the psychology of a given person his subjective perception of the real object is important but not the object in a relation in¬different to him.
Thus far we have spoken of the decorative change, as of the natural result of a given emotion, of a given soul-state which on stage presentation causes the spectator to have the desired fulness of coordinate living experience with the acting character. In this manner, the motive of the decorative metamorphosis must be understood. But some of our emotions, our feelings, are so tenaciously associated with this or the other characteristic of the surrounding setting that sometimes we find out the cause from the results.

The psychologist Ribot in his teaching about character takes note of the following significant fact: 'If we assume for some time a sad pose we may feel that sadness has taken possession of us; in joining a cheerful company and imitating its external ways we can bring out in ourselves a momentary cheerfulness. If you give the hand of the hypnotized man a threatening position with a tightened fist, then as a complement to that position naturally comes a corresponding mimicry of the face and movements of other parts of the body. Here the cause appears as the motion and the result the emotion. In such a way, concludes Ribot, there exists an uninterrupted association between certain movements and emotions corresponding to them. Moreover, not only the definite emotions are capable of bringing out definite movements, but, on the contrary, some of the movements of the subject are capable of stirring up in the soul emotions corresponding to them. And I think that we shall not go out of the limits of experimental psychology if we shall apply the conception of 'movement' to the decorative changes in a monodramatic sense. And under these conditions the gain in the economy of time - a circumstance extremely essential for the perfect drama - will be certain; instantly proceeding from the result to the cause, that is to say, from the given character of the setting to the soul-state of the acting-person which brings it about, the spectator sometimes will not need at all a verbal or a mimic introduction to the psychology of the acting character. Independently of the rapidity and the exactness, the original charm of such a shortened presentation of the living experience comes as an added merit of the monodramatic method.

As explained above, all our sense activity is subjected to the process of projection of our purely subjective changes on the external object. In the category of this external object, monodrama understands not only the inanimate entourage of the acting character, but also the living persons surrounding him.

As we already know, in the perfect drama, becoming 'my own drama', only one acting character is possible; in the strict meaning of the word only one subject of action is thinkable. Only with him do I identify myself, only from his point of view do I perceive the world
surrounding him, the people surrounding him. In this manner, the latter must present themselves to us through the prism of the soul of the acting character himself; in other words, the spectator of the monodrama perceives the other participants in the drama as they are reflected in the subject of acting, and consequently, their living experience having no independent meaning on the stage, they seem important only as much as in them is projected the perceiving 'I' of the subject of action. On this ground, we can not in monodrama recognize any importance in the other acting characters in the strict sense of the word, and we must in justice set them up as objects of action, understanding the word 'action' in the sense of the perception of them and the relations of the acting character to them. It is not important here what they say and how they say it, but that which the acting character hears. How they look by themselves remains concealed; we shall see them only in the aspects in which they present themselves to the acting character. It is quite possible that the latter will ascribe to them attributes which they would not have in our eyes. They will necessarily present themselves to us transformed. They will be unnoticed, they will be fused with the background or will be absorbed by it, if in this or in other moments they are indifferent to the acting character. They will efface with their appearance the whole setting if the acting character is entirely absorbed in looking at them. They are beautiful, intelligent and kind if the acting character conceives them as such at the moment, and they appear repulsively ugly if the acting character is disappointed in them and sees them from a different point of view.

Finally, which is self-understood from the architectonics of monodrama, the acting character himself should appear before us as such as he sees himself in any given moment of his stage action. Now, our bodily visibility we always consider as something both 'ours' and at the same time as foreign to us; in this way we can consider ourselves differently. And this permanent or variable relation to one's own personality must certainly be clearly noted in monodrama equally with the other subjective representations of the main acting character.

Among other things, monodrama solves one of the most burning problems of contemporary art, namely, the problem of the chilling and paralyzing and distracting influence of the footlights. To abolish the footlights in reality, as some propose, does not mean yet to abolish them in our imagination: bad experience will indeed compel us to recreate mentally the abolished border. It must be done so that the visible should become invisible, that the existing should be non-existing. And once the régisseur will attain fusion of the 'I' of the main acting character with the 'I'
of the spectator by the illusory images of the main acting character, then the spectator, as if happening to find himself on the stage, that is, in the place of action, will lose sight of the footlights; they will remain behind him, in other words, they will destroy themselves.

In speaking of the architectonics of drama on the principle of stage identity with the personification of the acting character, I underline the expression 'stage identity', as antithetical to the realistic identity, because I know very well that if the method of art generally presents the inevitable and at the same time desired simplification, then this remains steadfast for the art of the stage.

In getting acquainted with 'The Representation of Love', the reader must remember that in the stage directions of this monodrama are included only the main changes of the world surrounding the acting 'I'; the other changes (for instance, the almost uninterrupted shifting and changing of the decorations) must be understood by the reader according to the course of the play.

In conclusion, this last reservation:

In offering monodrama to the theatre as the drama most perfect in form, I by no means exclude by this form other dramatic representations. He who is acquainted with my 'Apology for Theatricality' will certainly understand that side by side with 'my drama' I can not help acknowledging also the 'spectacle foreign to me'. Of course, in this 'spectacle' I see something far from the model of the contemporary stage. However, I shall speak about it in another place, because the study of a theatrical spectacle as of something satisfactory in itself, leads us into a domain somewhat different from monodrama, - to the aesthetics of free stage arrangement.1

Nyemirovich-Danchenko summed up the aims of Stanislavsky as being:

To free the stage from routine and literary stereotypes.
To give back the stage a living psychology and simple speech.
To examine life not only through rising heights and falling abysses, but through the every-day life surrounding us.
To seek "theatricality" of dramatic productions not in exceptional staging...but in the hidden order of psychological life.2

1. Quoted in Ibid., pp. 231-244.
2. Quoted in Ibid., p. 249.
In general the attitude of Stanislavsky may be compared to the realists of the nineteenth-century who did away with the cant of classicism to represent ordinary subject as everyday life.

The same pattern of attack against the realist values of the nineteenth-century and the attainment of a simple abstraction took place in theatre as in painting. The clearest attack was made by Fyodor Kommissarzhevsky in his book "The Art of the Actor and the Theory of Stanislavsky". The tendency to interiorise acting which reached its peak with Monotheatre is observable in the following passage from this book:

Neither the methods of external naturalistic acting nor those of psychological naturalistic acting create stage values. The first theory, external naturalism leads the actor towards more or less artful imitation of the external expression of human emotions and passions, toward imitation of the results of soul experience, felt by other men but not by the actor.

The psychological naturalistic theory is based on half understanding of naturalistic scientific psychology; it denies the subconscious activity of our psychic nature....

Meyerhold led the revolt against the position of realism and naturalism in the theatre. Tairov first took an active interest in the theatre in 1912, and by that time Meyerhold had perfected and applied his theory of the "theatre theatrical". The "Kamerny" was founded as a direct protest against both Stanislavsky and Meyerhold. The theatre of realism, in Tairov's opinion, neglected the symbolic gesture and rhythm of the complete theatre, while the theatre theatrical by its neglect of emotion shut itself off.

1. Quoted in Ibid., pp. 250-251.
Tairov expressed emotion by means of careful coordination of simplified movement, colour and sound, while Evreinov went to the utmost extreme of simplification:

When I utter the word theatre, the first idea that comes to my mind is a child or a savage and all that is peculiarly creative in their transforming will: they are not grasping this world...but they are replacing it with a freely invented world...the attraction toward a mask as the covering of the real "is".  

His statement reveals the common ground from which the painters, poets and playwrights were evolving primitivism with a special interest in its simplifying forms and revelation of inner spiritual life. This spirit had been revealed to many of them by the native primitive traditions of Russia:

When I say theatre, I see an endless complicated ceremonial of national life, worked out by centuries.

1. Quoted in Ibid., p. 259.
Figure 696. A scene design by the artist, N.I. Kulbin, for Act II of the Monodrama, "The representation of Love" by Nikolai Nikolaievitch Evreinov.

The "I" - "Is it you I am embracing?...Yes?...Is your hair perfumed?...Do I hear your breath?...Yours?...Yes?...Yes, it is you, you!...You?...No, do not resist!...Listen, listen...(I still say something, but what, - I do not understand, I do not know, I do not hear. In the dark fog, still there is distinct green gold...Either it curls or freezes on the spot...Envelopes, shrivels...Dies in a minute of darkness, comes to life again, grows pink, purple, makes odd designs, tinkles with opalescent murkiness, wafts as unearthly charm, rains, becomes an ocean, warms with colors)."
Figure 697. Maturnin: Scenic design.

Figure 698. Pelenkin: Scenic Design for "Le Carnaval"
Figure 699. A Rabinovitch: "Aelita"
Constructivist setting for Cinema,
Bakrushin Museum, Moscow.

Figure 700. A. Rabinovitch: Constructivist setting for "Carmen".
Bakrushin Museum, Moscow.
Figure 701. Racine's "Phedre" on the stage of the Kamerny Theatre, Moscow, with Alice Giorgievna Koonen as Phedre and with settings and costumes designed by Vesnin.
Figure 702. A. Exter: Constructivist setting for Calderon's "La Dama Duenda".

Figure 703. A. Exter: Constructivist setting for the film "The Daughter of the Sun".
Figure 704. The curtain of the Kamerny Theatre, Moscow, designed by Artist Alexandra Exter.
Figures 705-707.

Costume designs by Alexandra Exter for the production of Oscar Wilde's "Salome" at the Kamerny Theatre, Moscow. Jokanan (left), Salome (centre), Herod (right).

Figure 708. Alice Giorgievna Koonen as Salome in the production of Oscar Wilde's Tragedy at the Kamerny Theatre, Moscow.
Figure 709. "Romeo and Juliet" at the Kamerny Theatre, Moscow, with setting and costumes designed by Alexandra Exter in style similar to her "Salome".
Figure 710.  A. Exter - Costume Sketch.

Figure 711.  A. Feodorov - Figure Study of a Dancer.

Figure 712.  A. Exter: Constructivist setting for a Tragedy.
Figure 713. A. Vesnin: Cardboard model for "Phedre".

Figure 714. A. Vesnin: Costume for "Phedre".
Figure 715. O. Amosov:

Stage model for "Julius Caesar"
Figures 716 and 717.

Yakulov: Design for stage setting by G. Yakulov.
Figure 718. S. Yakulov: Stage set and costumes for the ballet "Giroflé-Giroflà".
CHAPTER XXIX

POLITICAL IMPLICATIONS OF THE THEATRE IN RUSSIA

BETWEEN 1905 AND 1922.

The historical series of peasant revolts culminated in the All-Russia rising in 1905. The incidents of this made a contribution to the class-struggle content of the new forms of theatre. Ideas of dramatic mass struggle for political liberty came from the French Revolution and the Marxian idea of the mass struggle for social freedom. The dramatic technique of class struggle came from Germany and from Britain the idea of Darwin's material evolution of man contributed to the transitional period of secularism. Marx's "Capital" and Darwin's "Origin of Species" strongly influenced the development of revolutionary thought in the nineteenth century. One stressed the pressure of natural selection and the other the pressure of economic forces.

Nihilist and Populist activities were inspired by this and the intelligentsia in search of political liberty transferred their allegiance to the emancipated peasants, penetrated to the villages, organised theatrical entertainments and stirred up political and economic unrest.¹ Mass faith in communism as an instrument of social liberation was held by the Menshevists and the Bolshevists.

During the insurrections and strikes of 1905-6 over 5,000 clubs and theatrical organisations of a revolutionary character were established. After the defeat of the

revolution theatrical organisations were partly suppressed and partly driven underground to carry out secret agitation performances. The October Revolution, together with the attempt to make a new order of society inaugurated the new period of Russian Theatre. The influence of Bolshevism as expressed by Lenin was a strong influence on the theatre after this time. The function of the theatre reflected class war and explained the attempt to eliminate capitalist and bourgeois elements of society. It also reflected the aims of the civil war and real soldiers came from the trenches to add realism to the stage. During the N.E.P. period Satires were staged to expose imposters and the new N.E.P. exploiters.

Throughout 1918 and 1919 the theatre reflected the effects of fighting and staged the revolution in a romantic heroic way. The mass theatre conceived by the Bolshevist enthusiasts was not pageantry in the western European sense but was intended to theatricalise human life. Theatres and works were nationalised and intended to remain under proletarian dictatorship. A committee of experts, forming a board of censorship was formed to exclude plays which might contain reactionary tendencies. Many little theatrical organisations, playhouses and clubs sprang up outside this control. The theatre was impeded in 1920 and 1921 by war and famine.

Meyerhold was appointed to take charge of the "Left Division" of the Theatric Department of the Ministry for Art and Education, while Lunacharsky was concerned mainly with
the Centre, or Moderate section.¹

In opposition to Lunacharsky and mainly pre-occupied with machine and industrial structures as against "decorations of the past", Meyerhold attempted a synthesis of life of the present.

In 1898 Meyerhold joined the Moscow Art Theatre Company on its formation, acted the part of Treplev in Chekhov's "The Seagull" in December 1898 and in February 1901 played Baron Tuzenbach in "The Three Sisters". After three years at the M.A.T. he toured the provinces to search for new forms and after a brief return to M.A.T. left, being dissatisfied with Stanislavsky's method of confining expression to the stage and drawing no response from the spectator.

After his first journey abroad, to Italy, he returned to Russia in the autumn of 1902 and with a former member of the Art Theatre formed a company of unemployed actors and students from Moscow. Gradually he began to rid himself of Stanislavsky's influence. "The Comrades of the New Drama" performed Chekhov, Tolstoy, Ostrovsky and in the later seasons especially symbolist dramas by Hauptmann, Schnitzler, Maeterlinck, Przybyszewski and again Ibsen. He put on a performance of "The Three Sisters" in Sebastopol in 1902 and in 1904 he produced "The Death of Ivan the Terrible" and the "Acrobats" by Chenton.

The aim of "actualism" to express "real" life as it is actually lived concealed the inner spirit in Meyerhold's view.

¹ See Ibid., pp. 45-46.
He wished to exhibit the activity of this spirit and for this purpose he believed production should be simple, highly concentrated and abstract with few details and words as if it were a spiritual communication. This method was known as "Conditionalism" and was called "Conventionalism" outside Russia.¹

In 1905 he decided to go to Moscow to develop "Conditional Theatre" but the revolution distracted interest from theatre there and he returned to Petrograd. The influence of the revolution led to his interest in Greek theatre and its collective expression. He went beyond this to primitiveness, which he decided to apply to Maeterlinck.

Huntley Carter stated that in Tiflis in 1906 he produced "Tintageles' in a new manner.² He covered the stage with green cloth, used coloured costumes, followed the decorative ideas of Belkin, and posed the figures. It was a success and he concluded that he had realised the Mystic Theatre. Later he added music to his productions and sought to make the actors' movements resemble those of a dance. He concentrated on fatal and tragic moods.

His next introduction consisted of the removal of the proscenium and the act-drop in his production of Ibsen's "Ghosts" produced in a small town. Max Reinhardt had also been concerned with uniting the stage and auditorium at that time.

². J.M. Symons states that "Death of Tintagiles" designed by Sudeikin was produced at the MXAT Studio, Moscow, during the summer of 1905. The Studio was never opened to the public. See J.M. Symons Appendix of Meyerhold's productions in *Ibid.*
In November 1906 he became associated with Vera Kommissarzhevsky (Petersburg) the actor-manageress. In his production of Maeterlinck's "Sister Beatrice" he attempted to de-materialise the stage to express mystery and give the mood of a religious service in which the soul of the congregation is merged mystically and unconsciously. The set was designed by S. Sudeikin.

In 1907 he went to Berlin and saw the work of Max Reinhardt which deepened his conditionalist convictions. He returned to Moscow and his productions included Wedekind's "Spring Awakening" in which the stage was broken up into several parts and while interests led him to marionette theatre he was struck by the primitive method of different stage levels. V. Denisov designed the set. Meyerhold produced Fedor Sologub's "The Victory of Death" thus associating himself with "the theatre of Will".¹ In 1908 he broke with Komissarzhevskaya and published an article entitled "The History of the Technique of the Theatre" in "Shchipovnik", his views being based on those of Viacheslav Ivanov. During a visit to Minsk later he became influenced by Japanese methods which involved music of the moods of the play being translated by brightly coloured spots. Full light was turned on the spectators because Meyerhold believed it heightened their mood and allowed the actors to see the effect they were making.

Perhaps Meyerhold's emphasis around 1908 on "Practicables", lines and contours of the body and limbs,

¹. This was based upon the idea that the single will of the theatre united everybody.
was the starting point for bio-mechanics and athletic drill on the stage (see Figures 721 and 722) but it partly originated with his interest in Greek art. This and Japanese influence also increased his use of masks in 1910.

During the winter of 1912-13 after a visit to Paris he organised a studio to teach the principles of movement and scenic technique of Italian improvised comedy and in 1914 he began the "Journal of Dr. Depertutto". The same year he produced Blok's "The Unknown Woman". Y.Bondi's set introduced "construction" for the first time instead of "decoration" in Meyerhold's production.

In 1915 he produced Oscar Wilde's "Dorian Gray" and other plays for the cinema. The designer was V. Egorov. After a period of imprisonment by the White Army in 1919 he began mass theatre. These Revolutionary performances resembled Greek initiation, Roman spectacles, mediaeval moralities and pageants but with a modern spirit. The "October Theatre" was organised and administered by Meyerhold in conformity with the government request for strong oppression of counter-revolutionary tendencies. It was initiated a year after the revolution with an open air performance of Mayakovsky's "Mystery Bouffe" and consisted of a revolutionary group organised by Meyerhold. The group split up and formed theatres in various towns.

The first production of "Mystery Bouffe" in honour of the first anniversary of the Bolshevik revolution was described by Nikolai A. Gorchakov as
a noisy demonstration of the brilliant director's transition to Bolshevism."

The set was designed by Malevich.

Due to disease and shortages in Petrograd Meyerhold with his family left for Southern Russia in 1919, where later he was arrested by the White Army and held until the area was liberated by the Red Army. He was then called to Moscow in the summer of 1920 and appointed as head of TEO Narkompros. The first play he put on was "The Dawn" (lesAubes) written in 1898 by Emile Verhaeren. The design of the production was quite non-illusionistic: On the stage of metallic grey, cubes, flats and ramps, actors dressed in metallic grey uniforms and acted in a manner similar to both ballet and military drill. The decor was by Vladimir Dmitrév. Counter-reliefs, metallic triangles, shimmering strips of tin and a pair of red and gold discs filled the space above the stage floor. This was strongly criticised.

It was Mayakovsky who was the most prominent theatrical writer to introduce the mechanical element as a symbol especially in his Revolt of Objects his first theatrical presentation in which he compared rigid characters to machines. Henceforth all Mayakovsky's theatre seemed to announce a new era of "materialistic" happiness and an emergence of the inorganic.

Before ending its brief existence the First Theatre of the R.S.F.S.R. offered a second production of the

ambitious pageant drama "Mystery Bouffe;" by Mayakovsky in the form of a new edition produced under the direction of Meyerhold and Vladimir Bebutov in the Zon Theatre in Moscow as part of the May Day festivities in 1921. It began with Noah and the Flood, surveyed civilizations up to the arrival of communism and ending with a plea for self-effacing work and electrification of the state. It was expensive to produce and ran for a hundred performances. The same year Isadora Duncan arrived in Moscow, returning to the stage after a long absence to celebrate the revolution.

Vladimir Kiselyev, A. Lavinsky and V. Khrakovsky designed the set and costumes. Almost the whole of the downstage area was filled with a huge half cylinder representing the North Pole. Upstage of this there were several ramps, platforms, ropes and poles and a backdrop representing the deck of a steamship. No curtain was used and the large half-cylinder, with some adjacent platforms, was thrust out through the proscenium opening into the apron and nearly into the audience. The costumes gave the appropriately two-dimensional posterlike effect. On opening night an aspiring young actor, Alexander Fevralsky, was seated in the audience. Forty-five years later he looked back on the event and described it this way:

Although the construction of the stage was cumbersome and excessively conditional, although the musical accompaniment seemed to be in discord with the play,

1. Fevralsky uses the word uslovnov which can be translated as "conditional" or "conventional". Meyerhold used the same word in the title of an article (c. 1907) in which he sought to explain his efforts at the Moscow Art Theatre Studio in 1905: "Perviya popytki sozdaniya uslovnago teatra" [First attempts at creating a conditional (conventional?) theatre] (O teatr, p. 35). In Meyerhold on Theatre, Edward Braun translates the term as "stylized" (p. 49).
although not all of the performers gave consistent characterizations or were able to capture the rhythm of Mayakovsky's verses, and although the movement was seldom unified — all the same, the show produced a great impression. The abstract and static nature of The Dawns was overcome. The shortcomings of the production receded into the background and artists, inspired by the passionate words of the play and seized by the excitement of a First of May holiday, played with great enthusiasm.

Mayakovsky's play "Mystery-Bouffe" (second variant 1921) was sub-titled "An Heroic, Epic and Satiric Representation of Our Epoch" and was introduced by a short preface:

The Mystery Bouffe is a highway, the highway of the Revolution. No man can foretell with certainty what mountains we who are proceeding along that highway, must still lay low. To-day the name Lloyd George still rings harshly in our ears, but tomorrow it will be forgotten even by Englishmen.

The play is made up of six scenes: 1. All the Universe; 2. The Ark; 3. Hell; 4. Paradise; 5. The Land of Fragments and 6. The Promised Land. The characters, who converse in short expressive rhyming sentences, include "members of the intelligentsia", "devils", "saints", "the Lord of Hosts" and actors of the promised land who include "Hammer", "Sickle", "Machines", "Railway Trains", "Automobiles" as well as "Man of the Future" who does not figure in the play but whose presence is suggested at the end by the final words of "The Unclean":

"With The International Behold mankind's new birth!"


The prologue describes, in rhyme how the stage is only a third part because the action takes place in the whole auditorium. In the first act the earth leaks, all men flee the Revolution's flood, seven pairs of "Unclean" and seven of the "Clean", that is fourteen ragged proletarians and fourteen sleek bourgeoisie and a Menshevik begin to build an ark. Within the ark is seen, first, an autocracy, then a republic of true democratic slaves and finally the "Clean" thrown into the ocean. The third act shows workers caught by demons in hell; the fourth act "The bowers of Paradise" and the fifth act Confusion, referring to the disorganisation of transport and industry following the Great War. Finally the confusion is overcome and the sixth act represents the Commune.

In the second act a "man of the most ordinary sort steps upon the frozen deck" and speaks:

Who am I?
I am of no class,
No nation
No race
I have seen thirty,
Forty centuries pass
I am simply
The Man of the Future.
I have come to blow
The furnaces of souls,
For I know how hard human life is.
Hearken!
A new
Sermon
On the Mount!
You await Ararats?
There are no Ararats.

My Paradise has halls equipped most rarely,
Where electricity will serve you fairly.

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1. See Ibid., p. 805.
2. Ibid., p. 839.
The utterances of the Man of the Future were probably inspired by the style of Nietzsche's "Zarathustra" but the direction of his thoughts is always toward a state, organised on new agricultural and industrial lines and resembling the ideal of the New Jerusalem from the Book of Revelation as much as those of utopians in other art forms from the late nineteenth century to the 1920s.

The use of allegorical personalities, of choruses of voices and a super-natural frame of heaven and hell also display similarities to passion plays and mediaeval Russian manuscript drawings.

The sixth and final act takes the form of a typical futurist utopia and is described as:

The Promised Land. A huge gate. From behind certain projecting corners are dimly visible the streets and squares of earthly settlements. Over the gate are seen rainbows and the flower like roofs of huge structures. At the gate is a LOOKOUT, who calls by name to the UNCLEAN as they clamber upward.

Early in the script that follows the "UNCLEAN" ascend and gaze at the gate with great astonishment:

MINER: Marvels appear!
CARPENTER: But this seems like Ivanovo-Vosnesensk? Can there be marvels there!

A number of other workers make guesses as to their whereabouts:

CHAUFFEUR: It's Manchester
LOCOMOTIVE ENGINEER: Aren't you ashamed to talk such nonsense?
No Manchester is this!
It is just Moscow.

A little later in this act a lamplighter describes what he sees:

1. Ibid., p. 869.
2. A factory town in Russia.
3. Ibid., p. 869.
Buildings a hundred stories high
Cover the earth!
Between these houses
Hang graceful bridges!

Over the bridges
Long rows of swift trains ply!

Then a chorus of lamplighters join in to say:

Whole rows of trains?
Yes rows of trains!
The lamps
Glow with electric eyes!
Into those eyes
Motors a millionfold
More powerful than ours
Pour forth their powers... .

Next electrification is urged for agriculture and industry
and a little later the doors of the city fly open:

The wide-open frames of transparent factories and
lodging houses tower up to the sky. Trains of
railway cars and tram cars, and automobiles stand
wrapped in rainbows. In the midst of the city is
a garden of stars and moons, surmounted by the
shining crown of the sun. From the show windows
the best goods emerge, and, headed by the Sickle
and the Hammer, advance to the gate to offer Bread
and Salt.  

The concept of a functional theatre dedicated to
social service employed construction and bio-mechanics.
Construction had been used for Blok's "The Unknown". It
consisted of three dimensional devices, usually geometrical
forms and was associated with stage tendencies known as
"practicables" and "levels", the latter aiming at breaking
up the Stage and liberating it from its traditional form.
This brought the ideas of the builder, architect, engineer
and mechanic into theatre analysing urban surroundings with
maximum utility and economy. These forms expressed the idea

1. Ibid., p. 837.
of the new social order of simplified houses and urban environment using utilitarian shapes of industrialisation and the machine. The idea that Russia was backward and should at last come into line with the west entering a machine age for the first time was put forward through propaganda. The view was expressed that Russia's hope lay in the mastery and use of machines that would enable her to become a mechanical civilization.

The expressionist producer, Jessner added plastic elements or some portions of painted settings to his organisation of different levels in some plays. His production of "Othello" showed two platforms with steps superimposed one above the other. He used only indications of settings but always solid fragments to give the atmosphere.1

As with other art forms the influence of mechanisation may be observed in the theatre in a dual form, being largely sociological: Whether artists have considered the evolution of mechanism as a new slavery for man and have described a revolt of the working class against this tyranny; or whether they have seen in it, on the contrary, the liberation of man through the conquest of the forces of Nature. Such plays as Kaiser's "Gas", Chapek's "R.U.R" and Toller's "Maschinenstürmer" have inspired new scenic solutions2 (Figures 732-734). In Chapek's play the word "robot" was used for the first time being derived from the Czech word for "worker". Robots and science fiction stories have nearly always been employed to parody social conditions or to

2. Ibid., pp.60-61.
express either pessimism or optimism with regard to mechanised civilisation.

A number of Italian Futurist ballets expressed largely mechanical forms especially in "L'Anikam de l'An 2000" by Casavola; "The Psychology of Machines" by Silvio Mix and Depero's "Balleto della Locomotiva" in which the dancers represent parts of a locomotive, while the setting shows a dissected railway system.

In 1920 Meyerhold introduced his system of "bio-mechanics" to the theatre.

With the assistance of "bio-mechanics" the actor learned to be conscious of himself and of his movements as if he were a machine. Meyerhold and Eisenstein visualised the greatest economy of effort, of the application of "Taylorism" on the stage (see Figures 721 and 722).

"Taylorism", the study of workers' physical movements was invented in America to increase production and was popularised after the Revolution in Russia, with Lenin's approval. Constructivism in the theatre aimed at giving the maximum of intensity to the stage movements by establishing different planes for the action. These planes were created by platforms of such a height and depth that the movements of the human body could be fully developed. Unity between the actor and the scene was important and the constructivist stage was not interested in atmosphere and dismissed every setting which aimed at reflecting the atmosphere of the play as "illusionist".

Courses at Mayerhold's school seemed like acrobatic training. In order to manage to climb among the inclined planes, steep stairs, vertical ladders and high platforms of the Constructivist stage, courses entitled "The Technology of the Human Body" were included as well as "Bio-mechanics". They learned to run, climb, and even jump from a train.¹

Psychological drama was also condemned but the theatre aimed mainly at Communist propaganda.

Meyerhold's introduction of mechanical economy of movement and his antagonism to psychological drama corresponded to Behaviourism, which attempted to cut out mind and introduce muscular perception and speech in accordance with Pavlov's theory of reflex action.

The reflection of excessive speed, variety and ever-changing movement in human life could be expressed more easily by the cinema, but a solution to this problem was found by the theatre in its use of vertical constructions divided by floors and compartments joined by platforms, ladders, staircases, gangways, etc., which enabled a large number of scenes to be played without pause or interruptions caused by moving or changing a construction. Cinema screens were introduced into the new theatre intended for flashing messages and meanings to the audience. Meyerhold came in time to do away with stationery vertical sets and returned to a flat floor with movable walls, a revolving stage divided into concentric rings which moved separately and a spotlight.²

On this stage little settings came and went at different points with film-like rapidity.

In 1921 to advance his work Meyerhold established "G.R.V.M."); the "Higher State Controlled Workshops" for the study of the new scientific principles and in particular those of bio-mechanics in acting. These principles were first applied in the production of F. Crommelynck's "The Magnificent Cuckold" in 1921 and the same year he revised Emile Verhaeren's play "The Dawn", adding scenes, cutting out others and recasting characters in order to adapt it to the contemporary period.

The production of "Mystery Bouffe" found a solution to three problems: communicating the meaning of the revolution and the social victory of 1917; the conversion of the roofed-in theatre into a mass-theatre and the mixing of the audience with the action. "The Magnanimous Cuckold" solved problems of constructing free standing scaffolding into sculptural forms that were practicable for bio-mechanical movement. Crommelynck wrote the play in the form of a French bedroom comedy, but risqué plays were forbidden, therefore Meyerhold ignored the script and adapted it as a Bolshevist comedy that enabled him to exhibit Bolshevist types of young people expressing a theme in terms of physical culture. With the aid of G.R.M.V students including Eisenstein, Meyerhold took the windmill in which the cuckold lived in the French version of the play, and broke it up into a skeleton structure consisting of gangways, ladders, bars, swinging doors, gates, revolving wheels and other practical and symbolic parts, resembling the set for Diaghilev's production of "Le Pas
d'Acier" to a certain extent.\(^1\)

In 1922 Meyerhold adapted the play "The Death of Taretkin" by A. Sukhovo-Kobylin, dealing with the Russian official class in the 19th century. He and his pupils invented a simplified, mechanical and adaptable setting. It took the form of plain wooden structures that could be taken to pieces and rejoined to serve any purpose. Furniture of a schematised kind was also used.

The following year his production "Earth Prancing" was about the problem of peasants changing from individualists to collectivists in sympathy with Bolshevik principles of class-war. The play was based on Martine's "Night" dealing with a revolution in the army. It was changed into a revolutionist struggle with counter-revolutionaries, in which the peasants were attracted to be converted to Bolshevism. Mechanical auxiliaries included modern war machines, machine guns, wireless and tools and symbols of old and new agriculture. For this play the auditorium was joined to the stage by a wide gangway with motors racing up and down it two at a time, and an adaptable construction stood in the middle of the stage resembling a cantilever bridge flanked by two towers. It had three platforms and incorporated agricultural machine structures. In accordance with the spirit of the agitation posters of that time acting and speech took on a staccato manner. Facts were made known by brief phrases as on hoardings.\(^2\)

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Peter Wollen in *Signs and Meaning in the Cinema*, London 1969, credits Sergei Eisenstein with being the first and probably still the most important, major theorist of the cinema. Eisenstein gave up engineering, for the theatre and became a student of aesthetics in order to work in the cinema. He became a scenery-painter and set-designer at the Proletkult theatre in Moscow. Theatre like other arts was to be a branch of production in the service of the Revolution. His first production in 1923 was of a nineteenth-century play by Ostrovsky. The stage was set like a gymnasium. There were satirical sketches, clowns, fireworks under seat and projection of a film diary. Meyerhold and his experimental studio greatly influenced Eisenstein. The great variety of activities that impressed Eisenstein included "Taylorism"; Dalcroze's eurythmics, influential on Massine's choreography; the commedia dell'arte; the German Romantic cult of the marionette (Kleist and Hoffmann); the Oriental theatre (Meyerhold invited Japanese jugglers to his studio); and the application of William James' psychology and the acting of Douglas Fairbanks.

Eisenstein's debt to Meyerhold even extended to paying particular attention to the movements of cats and tigers, which in Meyerhold's view exemplified the secret of bodily plasticity! Defining his phrase 'montage of attractions' Eisenstein said: "Let units of impression combined into one whole be expressed through a dual term, half industrial and half music-hall."

This film technique has much in common with dada montages and those of Rodchenko and El Lissitzky "photo-montage". During the civil war of 1921 he had worked on an agit-train and as
a poster artist, drawing political cartoons and caricatures, decorating banners like many "leftist" artists. In his early films he developed "typages", faces which would immediately give the impression of the rôle. "October" was the last film to have strong theatrical qualities echoing the street theatre enactment of the October Revolution. Through the magazine "Lef" he was in contact with "Formalist" linguists. He became increasingly interested in the idea that verbal speech is a kind of secondary process and that the primary, underlying level of thought is sensuous and imagistic and he was impressed by the notion that the origins of language were in metaphor and in conjunction with magic and mystic rituals. His films benefitted from many ideas which have since been discredited. He also studied anthropologists such as Frazer and became interested by James Joyce. In the late twenties he was influenced by Japanese Kabuki theatre and ideas of synchronisation of senses and symbolist colour theories but the general tendency of his theoretical work run counter to the main lines of Stalinist aesthetics. In the 1934 Congress of Soviet Writers, one section of Radek's report was entitled "James Joyce or Socialist Realism?".

Peter Wollen considers that "philistinism of the Stalinist regime in the 1930's finds its belated double in the United States of the Cold War two decades later" and that "'realism' has always been the refuge of the conservative in the arts, together with a preference for propaganda of a comforting rather than disturbing kind... thus Alexander Nevsky, Eisenstein's worst film, made during the 1930s under the impact of Stalinist criticism, was the most successful propaganda film!"
Figures 719 and 720.

N. Altman: Design for the stage setting of V. Mayakovsky's play "Mystery Bouffe" (Moscow, Gostsirk, 1921).
Figure 721. Taylorized Gesture in the Russian Theatre.

According to Huntly Carter a spirit which he calls Taylorism - American Taylorism - animates the modern Russian theatre and manifests itself in a new style. The aim of this system is to produce the greatest efficiency in the worker even though reducing him to the status of an energy-saving automaton.

Figure 722. Diagram of movements for a Course in Physical Education.

The Russians are attempting to train for citizenship through compulsory physical education. This is manifested in the workers' theatre in a course in "Biomechanics". The Director of the Physical Training School is Eisenstein, inventor of the circus stage.
Figures 723 and 724.

Stage sets by Norman Bel Geddes
(United States).

Figures 725 and 726.

Stage sets by Georges Pitoev,
(Russian, worked in France at the
Comedie des Champs Elysees; Theatre
des Arts, Paris)
Figures 727-730.

Stage sets by Emil Pirchan
(Oper und Schauspielhaus, Berlin).

Figure 731. Stage set by Torsten Hecht
(Stadtheater Meinz).
Figures 732-734.

Friedrich Kiesler, Austria (worked in Austria, Germany and U.S.A.)
Theater am Kurfürstendamm, Berlin.
Stage set for the play "R.U.R" by K. Chapek.
Figure 735. Georg Grosz: Designs for costumes for the play *Das Trunken Schiffe*.
Left: Cleopatra (Gliere)
Right: Methusalem (Goll).

Figure 736. Ivo Panaggi (Independenti, Rome)
Designs for "Ballo Meccanico" 1922.
L'Angoscia delle Mascini (Vasari)
Figure 737.

Figure 738.
Setting by L. Moholy Nagy for Piscator's production of "Der Kaufmann vor Berlin" by Walter Mehring, Berlin.

Figure 739.
L. Moholy Nagy. Scene from "Hin Und Zuruck" A musical play by Hindemith.

Figure 740.
Setting by L. Moholy Nagy for Piscator's production of "Der Kaufmann von Berlin" by Walter Mehring, Berlin.

Figure 741.
Oscar Schlemmer, setting for an abstract-mechanical production. Frankfort, 1925.

Figure 742.
Figure 743. Dziga Vertov: a frame from the film: "Enthusiasm". Ukraine, 1930.

Figure 744. Dziga Vertov: a frame from the film "The Man with the Cinecamera", Moscow, 1928.
ARCHITECTURE IN RUSSIA AFTER 1917

It had been the aim of Malevich to carry out a form of laboratory research into architectonic forms but it was probably the artistic production of Tatlin that influenced architects in the 1920s, particularly as some architects had begun as artists and the borderline between the two fields was not always distinct.

Some of the most important research of European artists and architects had its origins in the pages of Soviet architectural journals and manifestoes of the 'twenties. The new architecture of that period was preceded by nineteenth-century industrial innovations and social requirements. The "Esprit Nouveau" in France, the "de Stijl" group in Holland, and the "Bauhaus" in Germany, each in its own way represented new ideas which in architecture as in fine arts questioned the entire heritage of the past. In all European countries the innovators were violently opposed by the ruling circles, established architects and academics, and most of their projects were never carried out. Until the last war even Le Corbusier, Gropius, Van der Rohe and Hannes Meyer remained "in opposition".

However in the Soviet Union measures were taken to abolish private ownership of land and property while Soviet architects fought against conservative and routinist designers. "Modern" architecture came to be a radical architecture of socialism. Naturally, many ideas and achievements retained

characteristics of the past. Similarly despite the return to classicism in the 1930s practise lagged behind theory and "modern" architecture such as the Pravda building was completed during this later, conservative period.

In Russia, a huge primitive agricultural country, plans were made to set up the newest cities for which there was no previous example but radical transformation of the way of life depended on the industrialisation of the country.

Kopp observed that "henceforth the architects were to work for the people, but the people lived too deeply within the shadow of the past to see convenience or beauty in architectural forms other than those that had decorated the lives of their oppressors and for avant-garde Soviet architects of the 'twenties, architecture was a tool for "transforming mankind".

During the latter half of the nineteenth-century the new technical and material advancements of Europe and the U.S.A. created industrial progress and enabled architects to break with academism through the use of cast iron, steel, reinforced concrete and glass. Capitalism developed more slowly than in the West but in Russia likewise it led to factories, stations and warehouses being built. Migration to the town developed Moscow as an industrial and commercial centre; peasants though no longer serfs, stagnated on ancestral estates through poverty and famine and labourers moved to towns to live in squalour.

Around 1910 re-inforced concrete was an engineer's rarity or merely theoretical in Russia. The task of architects was to give a structure or "style" of Byzantine,
Roman, Chinese, or even Spanish inspiration. Imperial Russian architects were mostly divided between classical Western models and those of Russia. The debate continued until the decade 1925–35 during the time when modern architecture was triumphant. After 1917 some established academic architects went into exile, others continued to work in Russia reviving academic forms, (Shchusev, Shchuko, Zholtovsky, Fo min, Tamanyan and others).

In 1895 the magazine "Nashe Zhilishche" ("Our Home") appealed ineffectually to architects to "tear themselves away from romanticism and fight for a rationalised and industrialised architecture". But architects concerned themselves with formal aspects. Painters: Apollinarius Vasnetsov, Mikail Vrubel, Sergei Malyutin, Alexander Golovin took up architecture to try and transform it on a decorative level, including graphism and optical illusion. This was paralleled by the application of artists such as the Nabis and Art Nouveau groups. Renoir's ideas of architecture had opposed engineering in the same way. Architects in Russia were influenced by the decorativeness and appeals to industrialise were ignored. Representative buildings in Moscow are the Hotel Metropole (1899–1903)(Figures 99–103) the work of the English architect Walcott with decorative ceramics by Mikhail Vrubel; the Sansunov Bank 1895 by the architect Foidenberg and the Ryabushinski residence (1902–1906) by F.O. Shekhtel. Dull copies of Munich and Vienna often resulted. It is noteworthy that whereas in revolutionary literature, drama and plastic arts developed from pre-revolutionary arts, architecture had no precedent in Russia.
By 1921 Russia had to make radical efforts to recover from Revolution, war, famine and housing crises (see Appendix LXVIII). From 1925-30 young architects believed the new Soviet cities springing from mediaeval towns should be quite different from the western European buildings and but for the nearness of the white armies in 1919 a competition for a model district with communal facilities might have been realised outside Moscow. At this time little was being built but for that reason the search for something new was even more impassioned and the new wave began to look for an architecture relevant to the times. It was intimately bound up with movements in revolutionising poetry, painting, sculpture and drama. Painters decorated the cities with banners, placards and propaganda trains and ships carried propaganda. Hoardings, unfinished buildings and gables were transformed into frescoes in abstract, realist, primitive or "Russian" styles (see Figures 598-622). Though past art was to be abandoned by the Futurists who declared: "Why spare Pushkin", little past art was destroyed. It was an expression of ridicule against those in the midst of a revolution who wanted to safeguard ancient values.

On December 13th 1922 Professor I Golosov at a meeting of the Association of Moscow architects (M.A.C.) said "It is time for us to emerge from our musty pre-occupation with the past... Of the art of antiquity nothing vital is left... create a solid scientific foundation for the revival of rational and expressive architecture in harmony with the times. A. Kopp drew extensively from Khigen's "Pathways of Architectural Thought 1917-33" (Moscow, 1935): Khigen
described this as a period of "paper architecture" for students at the "Vkhutemas", painter-architects who could give their imagination free rein. Almost every project was based on a spiral, was asymmetrical and contained undulating planes and volumes. Functional justification of forms was the least concern, lintels of doors and windows tilted. This symbolism and romanticism in architecture was influenced by the "leftist" trends in the plastic arts (Cubism, Futurism and Cubo-futurism, Tatlin, Yakulov and Malevich) and principles of dynamic deformation long current in painting and sculpture were introduced into architecture. "Leftists" of "Vkhutemas", 1920-22, formed the vanguard. Popular theories "play of volumes", "architecture as an organism", "movement" and "rhythm" were discussed.

As one means of training the architects, they proposed that the elements and the laws of architectural composition (scale, modulation, proportion, rhythm, play of volumes, movement, etc.) should be subjected to comprehensive laboratory research. The object of these experiments was to find means of expressing ideas in the language of architecture.

The first project of early Soviet architecture to attract general attention was Vladimir Tatlin's Tower 1920 (Figure 664). It was the first step leading to genuine architectural revolution 1926-32. The Palace of Labour by the Vesnin Brothers in 1923 was the next and the Pavilions at the Moscow Agricultural exhibition and Melnikov's Soviet Pavilion, Paris exhibition of Decorative Arts 1925 were among the most important.
Typical of the gigantic competition projects never to be built was one for the Palace of Labour for the middle of Moscow with a vast auditorium, an astro-physics laboratory, a radio station and other modern services that would out-do the capitalist world. The entry by Iofan, Gelfreich and Roudnev for the competition in designing a Palace of the Soviets in 1932 (Figure 753) recalls Tatlin's project in that it was to have been "taller than the Eiffel Tower". It was the Vesnin brothers however who opened the way to modern architecture in the Soviet Union, breaking with classical composition and symbolic and romantic trends in their design entered for this competition. The prize nevertheless went to the eclectic architect N. Trotsky whose design was a combination of Ledoux and Palladio. Other neo-classical designs were entered and the jury included many academic traditionalists (Shchusev, Zholtovsky and others). Kopp explains that "Throughout the history of Soviet architecture and even after World War II the unconfessed partisans of a return to classicism held on to their official positions, and without even participating in the often confused theoretical discussions that continued through the 'twenties, they persistently used their influence on behalf of an architecture that for them was 'inimitable and unsurpassable' and they were to live long enough to witness the triumph albeit temporary of their ideas". The Vesnin brothers had received the same academic classical training but deterred by the revolution they devoted themselves to problems of workers' housing, temporary settings for great popular demonstrations and theatrical productions

1 A. Kopp, ibid., p. 56.
such as those produced by A. Tairov. Attempts to make a language capable of expressing new ideas is characteristic of the 'twenties. In June 1922 the All Union Agricultural Exhibition was formed to display the first economic success of the Soviet Union. Though it was a very conservative committee that judged the competition some young architects were among the first prize winners (later OSA members: N. Kolly, P. Golosov, A.K. Burov, A.A.O.C.) but they were only allowed to "assist" except K. Melnikov who was allowed to have his design for a minor pavilion carried out - the Makhorka popular tobacco pavilion (Figure 747, top right '3). They were intended to be temporary, though some still stand.

At that time wooden construction was unconventional other than in traditional houses. Melnikov's inventiveness had extracted the most from limited means. Lunacharsky and Mayakovsky prepared the Exhibition of Decorative Arts for Paris. Competition was by invitation only. The pavilion was to express the idea of the U.S.S.R. and intended to be:

different from ordinary European architecture...an idea of our own new Soviet way of life, to draw a contrast between the luxury and wealth of other countries... it's our revolution that has stressed the idea that art should build reality and that true beauty consists in the adaption of the object to its intended purpose. 2

Melnikov's pavilion was intended not so much as a showcase for wares as to communicate the feeling of the revolution itself. His use of thin sections of lumber and

1. Those invited were the Vesnin brothers, Professor Ladovsky, Dokuchaev who established the Vkhutemas, some of his students, Golosov, Melnikov and Moses Ginsburg.

2. P. Kogan in "L'Art Industriel et Decoratif en U.R.S.S". Moscow, published by the Committee for the Soviet section of the Exhibition of Decorative Arts 1925. Quoted in Iz Istorii p.190. P. Kogan was a member of the pavilion committee, a group sympathetic to modern ideas.
plywood were unusual at the time and he emphasised the material without camouflaging it under plaster. Internal and external space was expressed and the large areas of glass give an industrial impression. Inside were graphics and photo-montages by A. Rodchenko with explanatory notes by Mayakovsky.

In 1926 the Association of Contemporary Architects was founded as a group committed to social rationalistic architecture. By 1925 the N.E.P. was achieving results, but industrialisation was in advance of housing (see Appendix LXIX) and modern architecture was still a minority movement. Its characteristics were "pilotis" with an independent structural frame and its natural consequence was the open plan with a facade treated as a skin permitting an illusion of the interpretation of interior and exterior space created by the use of large expanses of glass. A flat roof which might, on occasion, become a roof garden was often a feature of this type of building.

Le Corbusier's demand to "Let big industry take over building" was being realised and in western Europe and the U.S.A. industrial techniques had been applied even earlier. William LeBaron Jenney's Chicago "Fair" buildings (1893) used steel frames and large areas of glazing; Louis Sullivan's Carson Pirie Scott store 1899-1904 and the "Chicago school" department houses, hotels, office blocks etc. From them the New York skyscraper was proof of the possibilities of modern technology. The new city was not the city of tomorrow based on the renewal of the social structure but a rational city based on the requirements of the day.
When Moses Ginsburg wrote "Stil i Epokha" ("Style and Epoch"), Moscow 1924, the first manifestation of the U.S.S.R. of a "theory of architecture", efficient technical means did not exist there and it was essentially on the basis of foreign examples and technical periodicals that Soviet architects expressed their ideas. From 1925 to 1932 on the one hand buildings by the Vesnin brothers, Leonidov and other architects concerned with expressing the new society were planned, while on the other hand neo-classical and academic ones influenced and continued to receive important commissions.

In 1925 architecture students were radically different from those who had studied at the old academies. The N.E.P. brought renewed activity in industry, trade, transport and food and the "period of reconstruction" was over. Previously depopulated cities began to attract peasants, the housing crisis became acute and buildings of a new type were necessary. These were the years of transition from the search for expressive form to the search for new content in architecture and town planning. The O.S.A. ("Association of Contemporary Architects") was set up. Some of its members broke away from "Asnova" ("Association of New Architects", established 1923) and in 1928 another "Asnova" splinter group O.A.U. ("Association of City planning architects") was started. In 1929 "Vopra" ("All-Russian Association of Proletarian Architects") and other more conservative groups were formed but complete centralisation of the profession did not come until 1932, a date which marked the end of research for many years. Though foreign periodicals such as "Architecture Aujourd'hui";
"Architecture Vivante"; "The Bauhaus Journal" and some recent publications give the impression of a golden age of modern architecture, traditional architecture never disappeared and its construction exceeded the innovating trends which were fought and feared. Khiger (in "Puti Arkhitekturnoi Mysli") classified architecture at this time into three types: "Formalism" ("Asnava"); Constructivism + functionalism; (OSA) "Neoclassicism and ecclecticism". Asnava and O.S.A. were strongly internationalist.

"Asnava" was handicapped by publishing only a periodical once in 1926, "Izvestiya Asnava". Khiger in "SA" no. 1 (1929) attacked "Asnava"—formalism—associating it with the decadent aesthetic ideas of Kant. He denounced its teaching methods and use of "psycho-technics".

El Lissitsky, Professors A. Ladovsky, A. Dokhuchayev, and K. Melnikov were listed by Kopp as members of "Asnava". Lissitsky was internationally known for organising art and architecture exhibitions and publicising his colleagues' experiments especially in his book: Russland: Die Rekonstruktion der Architektur in der Sowjetunion (Vienna 1930). New Edition: Russland: Architektur für eine Weltrevolution (Berlin 1965). He began as an illustrator and a painter but his book explains the new social needs, always emphasising the political and social contents of architecture. Ladovsky and Dokhuchayev worked for reform in architectural education. The Architectural department of "Vkhutemas" of 1920, reorganised in

1. S.P. Starr stated in an article on Melinkov in Architectural Design p. 369/7/69 denied that Melnikov never belonged to either "Asnava" or "O.S.A." and took no part in debates.
1925 as the "Vkutein" (Higher Technological Institute), and later as the V.A.S.I., resembled the Bauhaus (1920) in method: the introduction of a basic course for all students to lead to personal research and discovery, total rejection of academism and its formulas, a tendency towards a synthesis in the arts, abandonment of easel painting in favour of a means of expression capable of being integrated with architecture etc. Moreover it was as late as 1927 before instruction in architecture was first introduced by Hannes Meyer to the Bauhaus. "Psychotechnical" methods denounced by "Asnova" critics as "idealistic" were an important part of the Vkhutemas programme. Melnikov played the greatest practical role during the 'twenties and his work was a logical conclusion of the new architectural romanticism which, through new and hopefully industrial forms, he attempted to express the dynamism of the revolution. His projects inclined towards constructivist sculpture in their form but they could be more easily realised than those of Tatlin, and six of his seven projects for workers' clubs were built between 1927 and 1929 (Figures 748 and 749). Melnikov's research was concerned with functional aspects of design and with plastic transcriptions of function such as expandable volumes of rooms. In 1927 he built his own home in two interpenetrating cylinders and studied the properties of circular spaces (Figure 746). It was later offered as the worst example of "formalist" and "bourgeois" architecture. But this and the clubs were unique buildings in contrast to the real needs of new construction, namely mass production, standardisation, industrialisation and pre-fabrication. These
were the over-riding pre-occupations with O.S.A. architects being social and political dreamers. In 1928 Asnova divided. Those who considered the most urgent problems of the day to be social, economic and political broke away to form the O.A.U. or the association of city planning architects. Those who believed architectural problems were "specific" problems that should be solved "in themselves" stayed with Asnova.

Lenin's N.E.P. causing a socialist sector and a private sector to co-exist, ended in 1929. In 1925 on the initiative of a group of architects particularly Moses Ginsburg and the brothers Alexander, Victor and Leonid Vesnin, the O.S.A. group was formed (see Appendix LXX and Figure 752).

Non-architects also belonged to the group. Architects had become technicians developing new methods of construction and solved engineering problems:

And the engineers? Certainly they have built and they are building. They build solidly in a contemporary style, using the latest technology. As long as they stick to their own job (bridges, cranes, docks), everything goes well. Yet strangely enough, the moment they try their hand at something more general the engineer's mask slips off to reveal the old familiar features of the aesthete. Reared in the traditions of bourgeois art, the engineer, like the architect, is almost always a fetishist.

Early enquiry into flat roof possibilities preceded those of "Architecture Vivante" in France, prefabrication, industrialisation, standardisation and questionnaires for

1. From LEF. Quoted in A. Kopp: Ibid., p. 89.
consumers was developed by O.S.A. Despite the O.S.A. campaign the Central telegraph office was built in Moscow. Ginsburg summed up in 1928 in his opening report to the first O.S.A. conference in Moscow, a constructivist view of society:

Whereas the goal of old architects was private commission they obtained and that of the formalists a narrowly prescribed commission which restricted them to the refinements of form. The constructivists however approach the same problem with maximum consideration for the shifts and changes in our way of life.1

Formal aspects link them with the "Constructivist" artists, but in this case the ideology, broader and more realistic:

...intelligent proletarian utilitarianism and rationalism, and in giving artistic expression to the social and collective purposes of the (working) class.2

But far from being the taste of the masses, Constructivism was to remain foreign to them. New types of communal housing, new types of clubs, palaces of labour, new factories were to have been the "conductors and condensers of socialist culture". The ignorance of builders; decorators and abstract researchers regardless of social purpose was denounced:

Down with the speculative art of the Rightists and Leftists. Down with Dilletantism and Amateurs in Society and Art Long live the Materialist school of Artistic creation - Constructivism!3

Architecture was considered to be a mould or tool for society.

They were more concerned with functional, technical, social and political problems than Pevsner, Gabo and Tatlin, but critics associated them also with fantasy, utopianism and impracticality.

A. Kopp summarised Constructivist doctrine as a search for plastic form based partly on the idea of expressing in the structure "structural truth": rationalistic and functionalistic attitudes to a proposed building programme and pressure for the introduction of scientific method where previously subjectivity had reigned supreme.

Ideas expressed by Engels were the basis of the transformation but after 1932 the Constructivists were also reproached for having deliberately invented the "new way of life" solely as a justification or pretext for their architecture.

By 1925 living conditions had improved a little but the population was increasing more rapidly than living space. A. Kopp praised the solutions of the politician and militant Yuri Larin, who understood that transformation of human nature could only follow increased production and planned "Housing for production" (see Appendix LXXI). New and experimental styles of living were not acceptable to the variety of races and special groups but housing and workers' clubs were to be most important: "The mass of members must be directly involved in the activity of the club—maximum of self-expression...all should be made to feel members of a collectivity". These were run by trade union or political organisations. A craving for culture was beginning to seize the broad masses of the population and in 1923 the Vesnin brothers planned the Palace of Labour. Propaganda was to be achieved also through its size. Not until 1925 did the club find its true function.

and style, built for the neighbourhood or place of work.

These were forerunners of the "maison de la culture" in France. Leisure and culture was at first conceived in surroundings of the privileged circles of the past, in theatres for a passive audience. However flexibility and adaptability was necessary, therefore the Tuyev club was built in Moscow by Golosov which provided intercommunicating spaces, overhanging galleries observation points from stairs and Melnikov designed the Kauchuk factory club which contained moving partitions (see Figure 749 - '18' and '24'). During the 1928 Five year plan period, Ivan Leonidov's club replaced the theatre type of club with a project in 1929 involving people in laboratory work, lectures, sports, games, exhibitions, new films, action campaigns with instruction by television and radio, while political and economic news was broadcast outside. The skin of the building was to be chiefly of glass and the supporting structure of reinforced concrete, but in 1928 the U.S.S.R. was not technically, socially or culturally ready for such innovations.

The communal house was set up and designs made by O.S.A. to include communal dining rooms, kitchens and corridor (see Appendix LXXII). But super-collectivisation was against the instincts of peasant family life and it encountered fierce opposition. It may have been possible to do so gradually by improving services first, but some communal houses were built and later used as cheap hostel accommodation, the new social condensers being rarely completed. Peasants became construction workers, then industrial workers in the factory they had built.
Factories were created for the first time and unlike their western European counterparts, Russian architects had the honour of participating in their creation and conceiving them as complete entities. Zoning ceased with dear electricity but "Dneprostroj," the Dneiper dam, the biggest hydroelectric power station in Europe 1927-1932 was planned by Professor I. Alexandrov who set up the study project in 1921. Many similar projects were completed later during the period of the "return to classicism" when under the pretext of accentuating the "nautical" character, rostral columns were allowed to proliferate over the face of the dam or locks were even decorated with groups of stone horsemen in the act of plunging off the edge. "Dneprostroj" was to be one of the symbols of the Five Year Plan. It was destroyed by the Soviets themselves during the advance of the invading German army in 1941 but Kolly and Orlov restored it after the war.

Though creative city planning is better understood today, the U.S.S.R. in the 'twenties and 'thirties was handicapped by technical difficulties. New cities on virgin land such as Brazilia and new English towns came later than Magnitogorsk, Dzerzhinsk and others which were built after 1927 and 1928.

During the years 1929-30 there was keen debate of "land use" between "urbanists" and "deurbanists" (see Appendix LXXIII).

N. Miliutin, in transforming the way of life, was most concerned emancipating women to allow them to participate in production. In building, he favoured light, cheap, natural
materials. Debate was cut short by the decision of the
Central Committee of the Bolshevik Communist Party published
in Pravda, May 29th 1930. It criticised Utopian plans when
industrialisation was urgently needed to transform the way of
life and the committee fought "leftists" as well as "rightists".

Ivan Leonidov (1902-1960) achieved a synthesis between
the opposing trends though his projects were never realised.
From a peasant family he became a labourer in St. Petersburg
shipyards, studied painting in Moscow, then architecture in
the studio of the Vesnin brothers. His Lenin institute
differed from all other entries in the competition of 1927.
He also made designs for a new Socialist city, Magnitogorsk
in 1930; the Government Centre at Alma-Ata (1927-1928); a film
studio (1927); a Tsentrosoyuz office building Moscow, 1928
which was finally re-designed and constructed by Le Corbusier
in 1930. He also designed a club of a new social type. His
project for the Palace of Culture on the site of the old
Simonov monastery was a new concept in urban centres with
"cultural and sporting complexes instead of a capitalist
business centre". His linear design for Magnitogorsk shows
"deurbanist" tendencies and it inspired the layout of
Volgograd. Semi-communal houses were envisaged centering
on winter gardens. In 1931 he also worked for Meyerhold's
theatre.

Facilities were to include a scientific winter garden,
hall for lectures and films, a library and gymnasium. Though
considerable progress had been made, differences lay between
idea and reality. It soon became apparent that different
wage scale based on skill was one of the pre-requisites of
efficient production. Work and city life was shared by men of the cities, veterans of the workers' struggle, men whose lives had changed little since the middle ages and people from tribes which were semi-nomadic. They could not be easily regimented into a new way of life.

When the N.E.P. authorised a certain amount of private enterprise to hasten industrial recovery the personality of the "Nepman" became the subject of caricature, satires and novels depicted him eager to make a quick profit and pleasure-loving. Mayakovsky described the spivs and parasites in the new wave of egoism and indifference to the ideals of the revolution. Labour and resources were not available to build the new city, the former splendours of the ruling classes were still accepted as standards of taste and ambition. Time and means were lacking to undertake research - illusion filled dreams of the 1920s had given way to the planned necessities of the 1930s. When architects were required to build for the immediate present they were sometimes unprepared for specific tasks and inadequate in numbers and experience.

The proletarian group "Vopra" ("All Russian Association of Proletariat Architects") lasted from 1929 until 1932. Proletkult active in poetry, the fine arts and cinema in the early years of the revolution, had, by 1928-30, become a rigid narrow and unproductive movement. "Vopra" also helped bring the downfall of "modern" architecture. It was composed mostly of young architects leaving school when modern architecture was declining. In its manifesto it declared its intention to reject "formalism", eclecticism and
Constructivism. But these statements never produced positive results. Although at first they were inspired by the functionalist architecture of the O.S.A., they retained only its formal elements and lapsed into attempts to build high rhetorical monuments. The Palace of the Soviets and the Central Theatre of the Red Army resulted. The theatre itself and the Corinthian columns were five pointed stars in both plan and elevation. The communist party denounced it. "Vopra" referred to "Asnova" in 1932 in "Sovyetskaya Arkhitektura" in the following statement:

The Trotskyist essence of rationalist "formalism" must be exposed...specific examples must be given to illustrate its direct relationship with Cubo-futurism, its petty bourgeois ideology, its so-called "political non-allegiance..."

There must be pitiless unveiling of the mechanistic content of functionalist constructivism (reference to O.S.A.)...an instrument of capitalist exploitation...which denies everything that is not strictly utilitarian...a reflection in "leftist" guise of social-fascist theories...

But it was mostly declarations that were being attacked. The classicists had seldom expressed views and never exposed themselves to criticism. Unlike the Constructivists who tried to find solutions to the practical problems of life, they had contented themselves with a few important public buildings actually erected. Moreover the attacks came when O.S.A. was divided between urbanists and de-urbanists. Regrouping under new initials such as S.A.S.S. in 1931 had no effect. A few months later it disappeared.

In 1931 the June plenary session of the Central Committee of the Communist Party passed an important resolution relating to urban planning and development to assimilate all
the progressive elements to create highly artistic forms that will fully satisfy the aesthetic needs of the members of a socialist society. On February the 28th 1932 the committee in charge of the construction of the Palace of the Soviets under its chairman V. Molotov announced the outcome of the competition in a statement that stressed the absolute necessity of monumentalism, simplicity, unity and elegance of architectural expression and need to employ "Both new techniques and the best methods of classical architecture" (Figure 753). On April 23rd 1932 the Central Committee passed the historic resolution on the "reorganisation of literary and artistic associations", which put an end to "cliques" and opened the way for the consolidation of all artists on the basis of the creative method of socialist realism. In 1934 the All-Union Academy of Architecture was formed and the resolution of the Central Committee "Concerning the general plan for the reconstruction of the city of Moscow" (1935) ...called the Stalin plan was set up.

In 1937 the first congress of Soviet architects decided "Socialist Realism" to be the correct method of Soviet architecture:

In the area of architecture socialist realism means combining ideological content and truthfulness of artistic expression with a determination to make every building meet all the demands, technical, cultural and social that may be made on it...

The same year P. Golosov finished the much delayed Prav da building in Moscow and Moses Ginsburg completed the Ordhonikidze vacation and rest home in Kislovodsk. These were the last buildings of the period of "formalist" architecture to be built in Russia before Greek, Roman, Florentine or "pseudo-Russian" edificies were put up during...
the "period of the cult of personality".

The architect Tsapenko mentioned that "realist architects" had worked and had achieved a certain reputation before the revolution. They had tailored private residences to suit the rich merchants of the period from the great catalogue of "styles". Pale imitation of the constructivists continued, for example Shchuko's first Lenin Central Library project, but they never became involved in constructivist research. When "Socialist Realism" received official recognition, its architects joined forces with "Vopra" and monopolised Soviet architecture. The classical style had been a luxury of the wealthier middle classes, but the 'moderns' were easier to criticise as they were in advance of both masses and professionals. Unlike them traditionalists had never engaged in any struggle and it was easier to make copies of the past and less risky than original research.

André Lurçat claims that the construction of the building on Mokhovaya Street was a deliberate attempt to demonstrate the superiority of the classical over modern architecture. It was built in 1934 by I. Zholtovsky whose notions of art had been acquired before the revolution. Khiger summarised the period of "the cult of the personality of Stalin as being accompanied by an ever-increasing trend towards representationalism, over-monumentalism and decorative excess in contempt for the real needs of the Soviet people. The awarding of Stalin prizes contributed to a formalist aesthetic forms that reflected the age...theoretical concepts applicable only to fine art". Le Corbusier, André Lurçat, Ernst May and Hannes Meyer worked for the U.S.S.R. either from
their studios abroad or during visits to Russia. Apart from political or professional considerations, what brought these architects to the Soviet Union was above all the idea that there was a country in which modern architecture was officially sanctioned and in which the conditions were ripe for its rapid development.

Soviet architecture changed little from the nineteenth-ties until the mid nineteenfifties (see Appendix LXXIV). At the very moment that modern Soviet architecture was beginning to decline or lose its influence, the west was on the rise in this field.
Figure 745. G. Klutsis: Project for a Newspaper kiosk, 1919.
Figures 746-751. Architectural designs by Konstantin Melnikov.

Figure 746. K. Melnikov: The house built by Melnikov for himself in Moscow in 1927. "...a solo personality proudly sounding forth amidst the roar and thunder of the capital's disorderly vastness..."

Figure 747. K. Melnikov:

Top left, '2', Design for the Moscow office of the newspaper *Leningradskaia Pravda*. Each elliptical floor could be rotated on the common axis.

Top right, '3', K. Melnikov's pavilion for the shag tobacco combine "Makhorka"

Centre left, '4' K. Melnikov's Exhibits within the pavilion reminiscent of early constructions by Rodchenko.

Centre right '5' and bottom '6'.

The replanned 'Sukharevka' market in Moscow.
Figure 748. K. Melinkov: The Rusakov workers' club, Moscow, 1927.
Figure 749. Projects and finished buildings of workers' clubs by K. Melnikov.
Top '14'-'16'. The Rusakov workers' club. The 1400 seat auditorium could be quickly partitioned to provide a hall two thirds that size or three smaller rooms.
'17' - The Burevestnik club (1929)
The tower rooms contained movable walls.
'19' and '20' - The Gorky Clubs (1928)
'18' and '24' - The Kauchuk club (1927).
Figure 750. The title page of a record of the work of K. Melnikov compiled by himself from 1955.

"Creative work is when you can say, this is mine.

Melnikov."
Одаренной силой и дерзкой смелостью являлись Перлы архитектурного искусства.

Москва 1955 год
Figure 751. A. Rodchenko: Sign for a Workers' Club, U.S.S.R. 1926.
Рабочий Клуб СССР
Figure 752. Jacob Chernikov: Design for the emblem of O.S.A. ("The Association of Soviet Architects"), 1925.
Figure 753. Projects for the Iofan, Gelreich and Roudnev: Project finally selected for the competition for a design for the "Palace of the Soviets", 1932.

Figure 754. Ginzburg's entry for the competition for a design for the "Palace of the Soviets", 1932.

Figure 755. G. Yakulov with his "Monument to the Twenty-five Commissars of Baku", 1923.
The figurative paintings of Malevich represent the least known aspect of his work. In 1930 as well as an exhibition of political posters of the early years of the Revolution, the Tretyakov held an exhibition of his work and though representative of all periods, it contained his more recent figurative pictures.

It is not known when his figurative work began. The thickly impastoed impressionistic landscape painted at the beginning of the century developed by about 1903 into symbolist works of brilliant colours. It is possible that he never ceased to produce figurative work. The Tretyakov gallery in Moscow possesses a painting representing a woman with a rake dated 1915 (Figure 757). It is affirmed\(^1\) that Malevich always did figurative paintings but that he never exhibited them and never showed them to anybody. In a similar style paintings date from between 1915 and 1920, the period of his own attack on figurative art. Both Suprematism and figurative art grew out of his interpretation of Cubo-Futurism which had many affinities with the work of Léger between 1911 and 1914 in its colour, form and treatment. The common characteristics include the method of interspersing small forms drawn with thick black outlines among large abstract squares, rectangles and curved shapes in bright colours. This is very evident in Léger's "Woman in Blue" (1912) and in Malevich's "Musical Instruments/Lamp" of 1913 (Figure 401). The large square shapes may be seen to indicate the beginning of his design's for Matyushin's

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\(^1\) Miroslav Lamac 'Malevich' Cimaise No. 85-86 Feb, March, April, May 1968, p. 38.
opera which developed into Suprematism. In Léger's paintings the shapes became more bold and abstract on the one hand and on the other developed into his characteristic form of simplified monumental realism. In paintings such as "An Englishman in Moscow" 1913-14, (Figure 405) both abstract and figurative elements are used. The abstract forms are extremely simplified and the figurative parts, a little church, ladder, sword and especially the face are very stylised and conventionalised in a similar way in order to effect extreme simplicity of form and symbol. As a result there is no conflict of style in this picture. It is this simplicity of figurative form coming close to a new symbolist manner that developed into his figurative paintings, the majority of which were painted after 1928.

Also in common with the development of Léger's work at about this time was Malevich's retention of a certain cubist element of simplification and subject matter of the peasant which he had used before 1913. Even an apparently abstract painting of a cross inside a circle forms the basic element of a head in the picture painted after 1918 entitled "Head" (Figure 756) while "Three Heads" drawn after 1930 (Figure 756) show faces divided in a way similar to that used by Léger in pictures such as "Coming down Stairs" 1913 (Figure 21); "Staircase", 1913 (Figure 22) and "The Staircase, 2nd version" 1914 (Figure 396).

Troels Andersen suggests that the figurative paintings may be the expression of a new religious attitude.¹ The

¹ T. Andersen, Malevich, p. 36.
problems of developing the most elementary abstract shapes and the most elementary figurative shapes were in many ways similar and apart from the titles of the figurative pictures and their symbols of the cross there is no reason why the mysticism of the square as an essential form could not be transformed to the mystical essence of the human figure in a similar way. Malevich had realised in his essay "The Non-objective World" that it was meaningless to repeat an old art form which was no longer relevant to the time. Many of these late drawings are as deliberate and intense as the Suprematist pictures and architectons. The quality of his figurative work is not consistent with some suppositions that he was intimidated by official Soviet policy into producing figurative art against his wish. It is more likely that he was trying to achieve a certain synthesis in a more classical-realist language which was relevant to his time.

Malevich aimed at a supreme quality in both non-objective and in figurative work which is in many ways consistent with the Byzantine tradition of simplification and of frontal representation in Russian icons. Icons were not only a part of native artistic tradition but had been consciously used as models by the avant-garde before 1913. In icons such as "St Basil the Wonder Worker" (Figure 765) and others (see Figures 761-764) all the qualities for which Malevich seemed to be striving existed in both geometrical and figurative forms stylised into the symbol or formula of a particular saint. In St. Basil the irregularity of the book, the crosses, the haloes and head are arranged flatly, the drapery, hand and face are simplified into the most expressive geometrical forms
but a certain humanity and primitiveness is retained in the drawing in contrast to the three perfect circles in the top half of the icon. Great contrast is used in the tones in such a way as to make a strong impact on the viewer, but also to give the impression that this figure is not only a human figure but also abstract and transcendental.

The most simplified of these human figures by Malevich painted after 1930 was probably not later than 1932. It is entitled "Girl with a Comb in her Hair" (Figure 760) is signed and dated 1932 and appears to be from a transitional phase between his style of simplified figures and the more naturalistic and detailed figures slightly imitative of Renaissance portraits representing members of his family and friends painted in 1933 and 1934.

The "Girl with a Comb in her Hair" is probably a portrait of his daughter resembling one done in 1934. It has a tendency toward the naturalism of the last phase of his figure painting in having carefully defined features with a suggestion of modelling. The composition is arranged in geometrical or simplified lines and curves. The face is oval, almost like an egg shape with the tip of the chin nearly at the exact centre of the canvas. The comb and other arrangements at the back of the head rest on a horizontal exactly a quarter of the way from the top of the picture. The yellow hair is shown as an oval shape falling behind the oval of the head. The frontality of the figure and the flat simplification of the forms of the body placed slightly to the left are reminiscent in some way of an icon.

Even in his most naturalistic paintings of 1933 and '34
each of the figures seems to appear as an emblem giving an essential and real representation just as in his Suprematist period the square stood for the most simplified and basic element of spiritual reality.

Realism in Russia had already begun to revive in 1919 among a group of artists who in 1921 called themselves "The New Association of Painters" and who after their annual exhibition of 1922 called for a struggle against "the speculative art of the productivists". They declared themselves to be in favour of "realist and representational" painting which should instruct socialism and build the new proletarian consciousness. This led to the closure in 1926 of INKhUK from where the new theories and art forms were being elaborated. As early as 1922 Abraham Efros had spoken of the spirit of classicism; in 1923 a declaration of neoclassicism had been made by seven members of the former Petrograd and Moscow intelligentsia, and in 1924 Efros published his polemic essay "The Spectator's Revolt" confirming a tendency toward "Socialist Realism".

The strength of the "leftist" groups lasted from about 1917 until 1925-26. The "left" organisation Lef was defeated by A.Kh.R.R. (Association of Artists of Revolutionary Russia") and when the decree of the Council of People's commissars of USSR 23rd April 1932 was published the struggle ended. Leaders of LEF, Punin, Stefnberg, Mayakovsky and others, wanted to build a new life, whereas A.Kh.R.R. declared: "We will show the present day - the daily life of the Red Army, the workers, the peasants, we will give portraits of leading revolutionaries and of types of heroes of labour. We
will give a true picture of events. In the opinion of "LEF" (in 1925) "the picture is a form of Bourgeois aesthetics which is not required by our way of life and the present state of affairs". A.Kh.R.R. looked with respect on the works of the "Wanderers" while "LEF" was impressed by the technical perfection of the motor car, aeroplane and sky-scraper. "LEF" in charge of artistic departments of the commissariats was replaced by A.Kh.R.R. "LEF" could not be imagined without an industrial culture. Its decline coincided with the rise of Stalin who favoured national communism, unlike Trotsky whose aim was world revolution and industrialisation. A number of accounts of the history of Russian Art were written from the point of view of Soviet critics between 1932 and the second world war. Representative publications included M. Bush and A. Zamoshkin's illustrated almanac "Soviet Pictorial Art" published in Moscow in 1934 and G.K. Loukomski's "History of Modern Russian Painting" published in London in 1945.

Loukomski summarised the ideology of the "World of Art" as "the ideas of pure aestheticism was then the artistic expression of that condition of Russian society which is nowadays described as 'Liberal idealism'" (see Appendix LXXV). He argued that in the years around 1890 to 1900, the democratic positions which had been taken up by the "Wanderers" were replaced by an aristocratic contempt for the crowd. "The World of Art" was mainly too engrossed in the past, while the "formalists" (1915-1925) were too deeply committed to the future - Futurism. Shchekatov considered that "Russian Futurism was born in a society which was passing through its
preparatory class and was preparing for the democratic February*. Another point to the discredit of the Russian Futurists was that the Italian Marinetti was considered to have been their forerunner. Futurism became closely associated with Fascism and Marinetti was appointed a "Senator" in Mussolini's government.

Bush and Zamoshkin\(^1\) divided artists after the revolution into three categories. Firstly elements from proletariat layers who formed groups (see Appendix LXXVI), secondly intellectuals, engineers and technicians revolting against the feudal bourgeois regime of old Russia and thirdly theoretical and apolitical working in teaching and historical monuments (see Appendix LXXVII). The most prominent leftist artists between 1917-21 perplexed the workers with their geometric shapes - shapes empty of all social content, despite their philosophical social basis (see Appendix LXXVIII). Alexei Gan in his book "Constructivism" published in Moscow in 1922 had stated that the exhibition of a black square proclaimed, in his view, the negation of art. The Soviet critics also criticised the purely "formalist" approach of artists like Malevich whose work appeared to be devoid of "subject" or "content". All the same the clear and laconic style of "agitation-propaganda" art (Figures 606, 608-12) was acceptable in contrast to the "World of Art" movement which held firm declaring they existed for an élite. The "Knave

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1. Bush, M. & A. Zamoshkin "Soviet Pictorial Art" Voks illustrated almanac, Moscow, 1934, Nos. 9-10, gives the official view conforming to the Central Committee of the Communist Party of the U.S.S.R. at a time when it's resolution to found socialist Realism as the best "method" was only two years old.
of Diamonds" - pre-revolutionary Russian Cézannists - did in some cases contribute to the formation of Soviet art by their subjects.

Just after the October Revolution, art in Lenin's opinion suffered from an "infantile sickness of the left". Madame Puni describes the days after the October Revolution:

A communal arts committee was constituted in the commissariat, directed by nine artists, and numerous commissions were given us. Thus it was that in 1917 Puni drew the model of the state seal, the hammer and sickle, and with our comrades we decorated the streets with immense (10x6 meter) canvasses which we had to suspend ourselves by cords stretched from one building to another at the level of upper floors or from chimney to chimney at the roof-tops. Since we did not have a big enough hall at our disposal, we used the throne room in the Winter Palace as a studio. Every possible facility was afforded us.

Lenin did not think of artistic questions at all and ignored completely what was going on. But Trotsky was against us and warned us "My friends the fantasy is finished, you're going to work on propaganda for the people". Fortunately we had the backing of Lunarcharsky who had lived in Paris and knew modern art well. However from 1924 onwards Trotsky's point of view carried and the innovators were gradually forced to cede to the proletarian painters.

Soviet critics recognise however, that the leftists, during the first years of the revolution, played a positive part in mass agitation, in the posters of the civil war, in street propaganda, revolutionary festivals etc. (See Figures 594-606 and 608-614). The art poster, formed at that time, played a great role. Clear sharp colours, originality of composition advertised the struggle against counter-revolution, famine and civil war. Lavinsky, Lebedev, Mayakovsky and Moor were the most prominent designers of posters with slogans for windows of the telegraph office (ROSTA) (see Figures 610-613).

During the period that followed - the first year of the reconstruction of the country, Soviet artists came to consider the plastic art of agitation of the first years of the revolution to be inadequate. A backward agrarian country was being transformed into an advanced industrial country and collectivised agriculture was beginning. Therefore while constructivists developed new concepts, the avant-garde was a minority and landscape painters represented modifications to the traditional landscape of their country, industrial towns on the steppes, mountain centres and a general mechanisation.

The maintenance of an ideological theme in realist pictures was upheld by the "Association of the Artists of Revolutionary Russia" (A.Kh.R.R.) against what they considered to be survivors of bourgeois aestheticism, against tendencies to turn away from reality and against the individualism of the left in art. Growing socialist industries, Kolkhoz fields and their workers were to be the subjects. Just as the avant-garde had been officially recognised after the 1917 Revolution so in 1932 they were defined as "formalist" and on the 23rd of April the Central Committee of the Communist Party of the USSR passed a resolution that Socialist Realism as a concrete historical interpretation of reality in its revolutionary development was the sole method in art to educate the workers in the spirit of socialism. Marxist-Leninist philosophy had underlined that art's ideological structure is an instrument of the interpretation of reality and the Marxist conception comprehended the world not with passive description, but as an arm for its active transformation and in the education and organisation of the huge masses. This implies an art frankly tied to the
proletariat.

In the USSR art was also to play an important part in socialist education and organisation of the masses and it was hoped that the artist of the Soviet Union could not conceive of his activity without a clear understanding of his social function. Several years before the October Revolution Lenin wrote:

The liberty of the writer, of the actor, of the bourgeois artist, is only a masked (or hypocritical) dependence on the golden calf, of corruption, of venality. Socialists we denounce this hypocrisy, we tear out the false ensigns, not to create a literature or an art deprived of class character (that would only be possible in a socialist society without classes) but to oppose to pseudo-free literature, tied in reality to the bourgeoisie, with a truly free literature, frankly tied to the proletariat.

The realist styles that developed in Russia from the 1920s were based on the "national" art of 1860-1890, which appeared after the academic and romantic epoch of a European type. The Soviet critic Shchekatov wrote in 1926 describing the new realism as "painting which while corresponding to the New Russia, would particularly bear the legacies and traditions of the past in mind". Loukomski, too, emphasised that "realism...will represent us as the preservers of the characteristics of 'hellenism', which have permanently vanished in the West..." and this he associated with "A free Russian painting, unfettered by academism...born after the revolt of 1863". In the eighteenth and early nineteenth-centuries art was considered to have been the slave of the west. The Peredvizhniki became the Propagandists of the new life (see Chapter IV and Appendix LXIX). To many Soviet critics and historians of art, the phase of experimental art
that lasted from the establishment of the "World of Art" until the early years of the nineteen-twenties was temporary. Most of the "World of Art" painters and others emigrated to Western Europe and America.

Lenin declared in 1923: "Art belongs to the people. It must have its deepest roots in the very depths of the wide working masses. It must be understood and liked by them. It must unite the feeling and will of those masses and raise their spirits".

One year before the death of Lenin the turn from the subjectless futuristic trend towards the art which reflected the revolutionary state of affairs was taking place.

A new epoch of the future renaissance of the arts - already called the Socialist renaissance was thought to be only possible in Russia and not the rest of Europe (See Appendix LXXX).

Soviet critics give Petrov-Vodkin first place in the development of Soviet Art. For the artists who matured or became noticed only after the revolution and the years 1920-25 the Soviet epoch had already arrived. The intermediate link with the mass of Soviet masters was the group of neo-academicians Vasilii Takovlev, P. Korin, Rianshina, Nikonova and others. These painters were thought to be consciously restoring all that had been destroyed and that which the formalists tried to destroy: natural perspective. ...light and shade etc. They also ignored Impressionism. P. Korin became famous with a portrait of Gorki and the picture "In the (surgical) operations theatre" was painted by V.I. Yakovlev. The group of "Neo-wanderers" ("neo-perevizrzhniki") Shukmin, Radimov, Strunnikov, Savitski, Iakovlev and others belong to the years 1925-30.
Also painters such as Shchekatov, who had been formalists adopted the ideas of the "Wanderers" and the partisans of the pro-popular trend. A group of painters who still showed traits of formalism and were considered to be somewhat pro-western included Deineka, Vialov, S. Gerasimov and others. They showed an interest in industrial themes.

When the second world war came demands changed and Schekatov praised the fresco painter A. Deineka who

loves physical culture and health and is attracted by muscular forms... women of the future, the builders of the new world. Odintsov is the best of the new battle painters. Savitsky, Kotov and Pokarzhevski continue to paint big pictures of subjects from the history of the revolution, portraits of leaders, especially military ones and scenes from the military events of the present time.

Loukomski writing in 1945 completed the cycle which began in 1845 with the words

The ideals must be Courbet ("The Stone masons") Millet ("The gatherers of sheaves") Mentzel (The factory") ... Surikov, Repin and others. 1

A common factor to both the Socialist Realists and the Productivists was their aim to abandon aesthetic standards in favour of an activity committed to a social end. They opposed the traditional creation of fine art objects which would become valuable collector's pieces or end in museums. Socialist Realism was imposed as a method and not a style. Their sacrifice of aesthetics in favour of a moralist function is the main cause of their lack of attraction for Western critics and artists. But this is no basis for criticism of course. Fashions of taste are created and revived. For example Victorian painting, which seemed to have much in common with Russian realist art, though not officially imposed in the same way, was despised in the twentieth-century until

the 1950s after which it has enjoyed nearly twenty-five years of popularity.

Though it was the Soviet government that passed the resolution in 1932 promulgating Socialist Realism it was, of course, not the members of that committee who had recreated realism in the arts. The avant-garde was on the decline by the early 'twenties in Russia and it was also less vital elsewhere. Various forms of realism and classicism were revived in Western Europe and the United States. Even artists such as Picasso, Braque, Chirico and others who, before and during the first world war had been some of the most experimental, began to introduce classical imagery into their work. In the West too it was a period of reconstruction following the first world war that coincided with art forms that were understandable to a larger number of people and often represented the virtues of their republic or state. A certain spirit of nationalist solidarity accompanied the period of reconstruction in western nations at about the same time that Stalin was developing a national communism for the USSR and forming the separate socialist republics with various national identities. Russian artists were not unique in reviving realism through the direction of their governments. State sponsorship in various forms encouraged realist public art on a monumental scale in America, Britain, Germany, Mexico and elsewhere at various times between the two world wars. Russia had been the first country to officially recognise and to sponsor abstract art. Fifteen years later in officially denouncing "formalism" as elitist the Soviet government was equally consistent in
insisting that the arts, architecture and other public forms should conform to an ideology. Perhaps posters and images of Lenin and Marx prominent since 1917 have in some ways replaced icons. However certain post-revolutionary monumental sculpture has retained traits of cubism (see Figures 608–9), of Vrubel and even of precocious Abramtsevo ceramics (see Figure 607).

The succession of groups and societies, though related to Western movements often possessed Russia's Mosaic tradition. They took ideas to their limits and applied them to all aspects of society.
Figure 756. K. Malevich:  **Three Heads** (after 1930)
Drawing, 22 x 35.2 cms., pencil on paper.
Private collection, Leningrad.

Figure 757. K. Malevich:  **Woman with a Rake**, c. 1915.

Figure 758. K. Malevich:  **Head**, after 1918.

Figure 759. K. Malevich:  **Crucified Woman**, c. 1928.
Figure 760. K. Malevich: Girl with a Comb in her Hair 1932. Tretyakov Gallery, Moscow.
Figure 761. A Biographical icon of St. George
Novgorodian work of the 14th century.
Russian Museum, Leningrad.
Figure 762. A biographical icon of St. Basil.
Late 15th century work.
Hann Collection, U.S.A.

Figure 763. St. Basil and St. Nicholas.
Novgorodian work of the turn of the 15th century.
Hann collection, U.S.A.
Figure 764. Andrei Rublev: *The Annunciation*, 1408

Lime board overlaid with canvas, 55⅔ × 44 3/4 inches.

Tretyakov Gallery, Moscow.
Figure 765. St. Nicholas the Wonder Worker.
Muscovite work of the fifteenth century.
Hann collection, U.S.A.
Figure 766. Kuzma Petrov-Vodkin:
The Playing Bows, 1911, oil on canvas,
Russian Museum, Leningrad.

Figure 767. K. Petrov-Vodkin: 1918 in Petrograd
1920, oil on canvas, 28⅔ x 36⅔,
Tretyakov Gallery, Moscow.
Figures 770 and 771

Vera Mukhina (1889-1953)

Worker and Collective Farmer.
Stainless steel sculpture erected at the main entrance to the USSR Economic Achievement Exhibition in Moscow.
Figure 772. Osip Zadkine: The Maenads, (bronze) 1934.
Figure 773. The Sputnik Monument, Moscow.
with ideas that it was not possible for them to become long-lasting movements. The result of this ferment was to emphasise ideas in art while art objects themselves diminished in individual importance. It was not so much the creation of a number of great works of art but of new conceptions of art.

Outstanding artists did emerge but many more unfulfilled ideas waited to be realised. The uncompromising character of this art and theory is important also for the understanding of art in the West during the past fifty years. For many of the successive movements in Europe and the United States more recently, art and theory in Russia between 1905 and 1924 have been seminal.