El-Lissitzky, Irrational Space, and the Proun Studies

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> Lissitzky's *Proun*... is utmost tension, violent jettisoning... Space is filled by all possible variant physical forms of a constant energy... Thrusting sharply into space on all sides, it contains layers and strata, held in a state of tension, and drawn into the tightly-knit complex of components, which cut across, embrace, support and resist each other ... [*Proun*] is a preparation for a new synthesis of real and illusionist methods of creating space...

> > – Ernst Kàllai, "Lissitzky", 1922

INTRODUCTION

One of the most enduring legacies of early Modernism is the remarkable array of avante-garde proposals developed in the first quarter of the twentieth century that aimed at the reconception of architectural space. One notes, for example, the work of Russian Constructivist El-Lissitzky and his *Proun* paintings in the years following the Russian Revolution, an investigation that reached its apogee in the *Proun Space* installation designed for the Grosse Berliner Kunstausstellung (1923).

The discussion presented here aims, in part, at a description and consideration of El-Lissitzky's *Prouns* as a sustained and unprecedented investigation of form and space, a body of work that offers a reconception of architectural space at least as important to early Modern Architecture as nearly contemporaneous proposals and visionary projects by Wright, Gropius, Van Doesburg. Le Corbusier, Mies van der Rohe, and Moholy-Nagy. The body of scholarly studies on the work of El Lissitzky is small and, not surprisingly, his work has been, until relatively recently, largely ignored by architectural historians, theoreticians, and critics: El Lissitzky is not mentioned in Scully's *Modern Architecture*, receives only brief mention in Banham's *Theory of Architecture and Design in the First Machine Age* and in Frampton's *Modern Architecture: A Critical History* – though Frampton does include a reproduction of Lissitzky's cover design for the art review Veshch/Gegenstand/Objet (1922). Curtis presents a more detailed discussion of Lissitzky's Proun paintings and architectural proposals in the context of a discussion of the work of the Russian Constructivists in Modern Architecture Since 1900. Modern Architecture Since 1900 includes several images of Lissitzky's work, including Proun 1E, City and the sublime Der Wolkenbügel ('Sky hook', 'Cloud hanger' or 'Cloud stirrup') proposal.

Rather than offering a re-examination of topics or questions where others have previously made significant contributions, e.g. El-Lissitizky's politics (Victor Margolin), or common themes in the work and writings of Lissitizky, Moholy-Nagy, and Van Doesburg (Steven A. Mansbach), this paper seeks a consideration of El Lissitzky's *Proun* studies in explicitly architectural terms as well as an assessment of the importance of Lissitzky's work in contemporary architectural design education. The difficult questions considered by El Lissitzky as he demarked and investigated a realm somewhere between painting and architecture reverberate in contemporary architectural discussions in an abundance of ways, especially in questions regarding the representation of architectural space, the investigation of spatial syntax, and the attributes of architectural space.

EL-LISSITZKY (1890-1941)

Lazar (El) Lissitzky was born to Orthodox Jewish parents in Polshinok, Smolensk, in 1890, and grew up in Vitebsk, a small town in Belorussia. An avid artist as a youth. after finishing high school he applied for admission to the St. Petersburg Academy of Arts, but was rejected. In 1908 Lissitzky left Russia for Germany in order to study architecture at the technical university in Darmstadt. A talented and hardworking student with an entrepreneurial streak – not only did he work part-time as a bricklayer, but there are reports that El Lissitzky sometimes earned extra money by completing studio projects for lesstalented or less energetic Darmstadt students – Lissitzky was careful with his limited funds and used his summers and school breaks to travel to Paris, Brussels, and other major European cities, and to tour Northern Italy. After completing his studies at Darmstadt (passing with distinction) he returned to Russia just as war broke out in Germany. Later Lissitzky received a diploma in engineering and architecture from the Riga technological university and began working in the office of the architect Felikovsky in Moscow in 1916.

Over the next few years, Lissitzky worked as an illustrator and as a painter and achieved some modest success and notoriety. And, following the overthrow of the Tsars, it was El-Lissitzky who designed the first flag for the Central Committee of the Communist Party of the Soviet Union. Early in 1919, Lissitzky was invited by Marc Chagall, at that time head of the Popular Art Institute in Vitebsk, to return to his hometown to assume the posts of professor of architecture and head of the applied arts department. It was a pivotal moment for the 28-year old El-Lissitzky for a number of reasons: perhaps most importantly, the radical change in his creative work that occurred as a result of events in Vitebsk.

Lissitzky accepted Chagall's invitation and, in September, 1919, the Suprematist painter Kasimir Malevich joined the Institute faculty. Malevich sought to identify the most essentials attributes of painting; he believed that his abstract paintings postulated a pictorial language for a new world. His *Self-Portrait in Two Dimensions* (Figure 1) is emblematic of the work of the Suprematists: the aggressive rejection of icons or references to specific objects: compositions of simple geometric shapes presented in a manner that dramatically compressed and flattened the space of the painting; and a color palette comprised of the primary colors, white, and black.

Malevich's first months at the Popular Art Institute were tumultuous: by the beginning of 1920 he had organized a collective of faculty and students within the school called UNOVIS ('Affirmers of the New Art') who sought to reshape the school curriculum based on the principles of Supremacist art. This led to a split with Chagall and, rather quickly, Malevich's ascension to the directorship of the school.

Malevich's influence on El-Lissitzky was swift, powerful, and profound: within a short time, Lissitzky abandoned the representational approach characteristic of his earlier work (Figure 2) in favor of the geometric and 'non-objective' abstraction of the Suprematist movement (for example, the work shown in Figure 3, *Interpenetrating Planes*, 1919-20, or Figure 5, *Proun 12 E*, c. 1920).

El-Lissitzky executed *Interpenetrating Planes* (Figure 3) shortly after Malevich's arrival in Vitebsk. The painting is noteworthy not only as evidence of Malevich's influence on Lissitzky, but also because a number of formal themes and strategies are present in the work that establish an agenda, of sorts, for the



Fig. 1. Malevich, Self-Portrait in Two Dimensions, 1915

Proun studies of subsequent years. Here one observes the relatively small and uncomplicated palette of colors; the apparent suspension of the laws of gravity; the multiple axes of projection; the precisely ordered presentation of simple geometric objects – rectangles, squares, and circles – both obliquely and frontally; the simultaneous use of the conventions of perspectival and axonometric views: and the condition of 'phenomenal transparency' described by Gyorgy Kepes¹ and popularized by Rowe and Slutzky in the essay "Transparency: Literal and Phenomenal". Lissitzky contrasts the apparent *physical* interpenetration of objects, e.g., the yellow and dark gray planes in the upper left quadrant of the painting and the more phenomenal interpenetration of planes near the center of the painting: the white wedge just to the right of center fluctuates between foreground and middle ground.

El-Lissitzky's abstract *Proun* paintings – *Proun* is an acronym for the Russian title "Proekt utverzhdeniia novogo" ('Project for the Affirmation of the New')² – are remarkable if only for El Lissitzky's attempt to identify and investigate a realm somewhere between painting and architecture.³ There are, however, at least three other aspects of the *Proun* studies that are significant.

First, the *Prouns* are an attempt to depict formal relationships. *possible* relationships between spaces as well as objects, and are not intended to depict specific objects. One might even consider the possibility that Lissitzky's *Prouns* constitute a unique



Fig. 2. El-Lissitzky, The Theft of the Crown, 1919. (Illustration for a Ukranian fairytale)



Fig. 3. El-Lissitzky, Proun Interpenetrating Planes, 1919-20.

typological investigation of form and space. and the fact that shapes appear to alternately recede and advance within the space of the painting simply increases the number of possible formal relationships. Other examples include *Proun 12 E* (Figure 5). *Proun RVN 2* (Figure 6) and El-Lissitzky's sketch for *Proun 1E, The Town* (Figure 7).

Second, the paintings present a multiplicity of views and are not intended to be seen from only one viewpoint. In his 1922 article "PROUN: Not World Visions, But – World Reality". El-Lissitzky declared:

We have set the Proun in motion and so we obtain a number of axes of projection; we stand between them and push them apart.⁴

Multiple viewpoints, presented simultaneously, as well as multiple axes of projection, are essential to the work. A comparison of roughly contemporaneous works by El Lissitzky and Malevich brings the issue into sharper focus. Victor Margolin notes:

Lissitzky's handling of space and multiple perspectives gives evidence of his training in architecture, a formation that Malevich lacked. At the same time, Lissitizky had learned a great deal from Malevich about the visual representation of space and time.⁵

Malevich's Supremus No. 56 of 1916 (Figure 4) is breathtaking in its formal clarity, complexity, subtlety and richness; the establishment of foreground, middleground and background within the space of the painting is straightforward and relatively unambiguous. The presentation is, for the most part, based on the conventions of the orthogonal view. El-Lissitzky's Proun 12 E. c. 1920 (Figure 5), like Supremus No. 56, is strongly ordered, formally complex, uses a similar color palette and a simple and abstract geometry. However, unlike Malevich, El Lissitzky denies the observer a fixed viewing point and adroitly choreographs the simultaneous presentation of multiple viewpoints as well as projection systems: here elements are presented perspectivally, orthogonally, and axonometrically and, even if the viewer does not literally move to view the painting, there is undoubtedly a shift in perception that must occur. As the eye moves across the work. the space of the painting continually compresses, bends, curves, warps, rotates, collapses, deepens, shifts, flattens and expands in accordance with the mode of projection and the attendant visual cues.

Third, a recurring theme is the effect of a variety of forces on spaces as well as objects or shapes: in some instances, an entity may change shape in response to an implied force, may be compressed, attenuated, or sliced. Objects, shapes, and spatial volumes thrust upwards, downwards, and sideways, sometimes rotating or spinning, but a delicate balance is always main-



Fig. 4. Malevich, Malevich, Supremus No. 56, 1916.



Fig. 5. El-Lissitzky. Proun 12 E. c. 1920.



Fig. 6. El-Lissitzky, Proun RVN 2, 1923.



Fig. 7. El-Lissitzky, sketch for Proun 1E, The Town, 1919-20.

tained. Margolin writes that, for Lissitzky. "the *Proun* was an articulation of space. energy and forces rather than aesthetics."⁶ A formal discourse, based in part on notions of force, is established between elements and, in many of the works, attributes or conditions usually associated with works of architecture are integral to the *Prouns*: spatial and formal sequences are evident, objects or shapes are placed relative to one another based on an implied grid of slots of space or on a system of regulating lines, and hierarchical relationships are primary, rather than secondary, considerations.

Finally, as Matthew Drutt has observed:

With their multiple references to real and abstract space, the *Prouns* became a system through which Lissitzky not only ruminated upon formal properties of transparency, opacity, color, shape, and line but began to dwell upon the deployment of these forms into socialized space.

Early in 1921 – and after less than two years at the Popular Art Institute – El-Lissitzky returned to Moscow to teach painting and architecture at the Higher State Artistic-Technical Workshops and, later that year, he traveled to Germany as a kind of unofficial emissary for the vanguard of Russian abstract art. In Germany, Lissitzky met many of the leaders of the European avante-garde, among others, Theo van Doesburg, Hannes Meyer, Mart Stam. Hans Schmidt. Emil Roth, Hans Arp, Mohology-Nagy, and Kurt Schwitters, many of whom would later collaborate with El-Lissitzky on a variety of architectural. graphic design, exhibition design, and writing projects. El-Lissitzky's influence on his contemporaries in Western Europe is significant: in 1922, at least two issues of van Doesburg's magazine *de Stijl* were largely devoted to a description of Lissitzky's ideas and to reproductions of the *Proun* studies.

A major breakthrough for occurred in 1923, with El-Lissitzky's *Proun Space* installation (Figure 8) designed for the Grosse Berliner Kunstausstellung. All surfaces – floor and ceiling as well as walls – are conceived as continuous rather than differentiated. Furthermore,

The lines of force on each wall, expressed by rods and planar shapes, were seemingly presented with the expectation that the room's inhabitant would experience the walls sequentially, but the reliefs also pulled the walls together as the boundaries of a single volumetric space, with the cube on the left wall connecting to the sphere on the center wall and the bars on the right one.⁸

The significance of the *Proun Space* installation, as well as the *Proun* paintings that preceded it. is best understood and appreciated in the context of Lissitzky's 1925 essay entitled 'A. and Pangeometry'⁹. Lissitzky describes four types of space:

- <u>Planimetric Space</u>: space created and suggested by the partial overlap of two or more planes. Lissitzky offers an antique mural or relief as an example of planimetric space.
- <u>Perspectival Space</u>: space conceived and represented based on the conventions of one-point perspective and the principles of Euclidean geometry.
- <u>Irrational Space</u>: conceptually, irrational space is based on two claims: first, "infinite extensibility" of the depth of the space, both forward and backward and, second, since time is "constant" and "sequential", the passage of time cannot be experienced directly, but only *indirectly* as the viewer changes position.

<u>Imaginary Space</u>: form and space presented as the result of a non-material effect, *motion*. Lissitzky's examples include a moving picture or film where the "impression of continuous movement" is the result of "disconnected movements separated by periods shorter than 1/30 of a second".



Fig. 8. El-Lissitzky, drawing of Proun Space, 1923.

Is Proun Space an example of Irrational Space? Lissitzky wrote, in 'A. and Pangeometry', that "suprematism has swept away . . . the illusions of two-dimensional planimetric space, the illusions of three-dimensional perspective space, and has created the ultimate illusion of irrational space with its infinite extensibility into the background and foreground." Certainly in its representation, the modified oblique that simultaneously presents ceiling and floor as well as walls, Proun Space is consistent with the notion of infinite extensibility: parallel lines do not converge at a vanishing point and there are no depth cues. In addition, the simultaneous presentation of ceiling and floor is consistent with Lissitzky's claim that the passage of time can only be indirectly experienced as the viewer changes position: here a fixed viewpoint is denied and, furthermore, there is the implication of an infinite number of viewpoints.

Perceptually, the physical entity entitled *Proun Space* can only be seen from one viewpoint at a time, however, the highly ordered arrangement of elements and volumes promotes an awareness of an apparently boundless array of "space, energy, and forces" in *n*-dimensions. The placement and alignment of elements on each of the interior surfaces acts as a cartographic system - another example of a system with infinite extensibility - that not only establishes a continuous wrapper analogous to the canvas of a Suprematist painting but begins to demark other volumes embedded within Proun Space: for example, the alignment of the intersecting bars on the ceiling, the rectangle on the floor below, the rectangle on the wall at the far right and the vertically oriented rectangle at center describe at least one volume simultaneously embedded within the neutral wrapper and extending beyond that wrapper: for a brief moment. one perceives that even Irrational Space can have an 'axis mundi', however elusive and transitory.

The *Proun Space* installation of 1923 was followed by other installations. including the celebrated *Room for Constructivist Art* (or *Dresden Room*) of 1926 for the International Art Exhibition. Originally a temporary installation, the design was the basis for a permanent gallery (the *Abstract Cabinet*, 1927) in the Provinzialmuseum of the Hannover Museum. The three-dimensional *Proun Space* studies of El-Lissitzky can be seen as a critical component of an ongoing and aggressive investigation of the nature and attributes of architectural space that is an essential characteristic of 'Modern Architecture'.

PROUN STUDIES: INTRODUCTION

The notion that that *Prouns* are "an articulation of space, energy and forces" has prompted a series of studio investigations over a period of six years that aim at tapping the productive potential of El-Lissitzky's two-dimensional and three-dimensional *Proun* studies. The investigations have pursued various lines of inquiry based on three premises:

First, if the three-dimensional studies of El-Lissitizky are understood as representations of dynamic relationships between forces and spatial volumes rather than as ends in themselves, then there is a strong possibility of identifying additional (latent) spatial volumes in three-dimensional *Prouns* through a series of simple mapping exercises.

Second, while it is evident that a *Proun* study is correctly understood as the representation of an idea about form and space rather than as a representation of a specific building, every *Proun* can be analyzed using a broad array of techniques and procedures, including those employed when analyzing an architectural precedent. Furthermore, the aim of such an analysis is to reveal new information about the spatial relationships and conditions present in a particular *Proun* and not the simple (and simple-minded) documentation of an abstract model. The members of the class are asked to consider the question, "If architectural space is a 'made-thing', can it also be considered a 'built-thing' that responds to a variety of forces?" and, furthermore, are asked to use the analytical studies to offer an articulate and informed response.

Third, if the *Proun* and *Proun* Space investigations are understood as dynamic, rich in potential, highly malleable as well as abstract - in the simplest terms. a kind of loose threedimensional *parti* – then the analytical material generated can either be (1) used to initiate new *Proun* studies or (2) when informed by considerations of context, site, program, structure, and construction, serve as a conceptual framework for a more comprehensive architectural investigation. Fig. 9. Simple Prounds. 1998.

PROUN STUDIES: EMBEDDED VOLUMES

The studio *Proun* studies begin with a modest construction project: each member of the class builds a three dimensional chipboard model comprised of four volumes. designated 'A', 'B', 'C', and 'D'. [Figure 10] The largest volume, 'A'. measures approximately 2" x 2" x 4". Each volume must be orthogonal to the other three, the three smaller volumes must be separated by a minimum distance of 1/8", and each of the three smaller volumes must interpenetrate Volume 'A'. Finally. the members of the class are encouraged to consider the potential of each three-dimensional study to "establish formal hierarchy, order, or proportional relationships."¹⁰

After construction of the models is completed – typically, each student builds at least three models – Volume 'A' is painted with acrylic paint as follows: identify a series of zones, at least one for *each* of the three smaller volumes and corresponding to the width or height of the associated volume, and paint the projected volumes onto the faces of Volume 'A'. The painted strips are continuous around the faces of Volume 'A', and, furthermore, at least one of the painted strips must be perpendicular to the others. There is a color change where the strips overlap on the surface of Volume 'A': in some instances, students have added additional emphasis to the overlapped area by darkening or lightening the area of overlap. [Figure 10]

It is proposed that the "overlapped" square or rectangle appearing on two or more faces of the largest volume ('Volume A') can be construed as a set of projected elevations and, therefore, offer evidence of the presence of a fifth volume (Volume 'X') embedded in Volume A. Alternately, it can be stated that the position and configuration of Volume 'X' is the result of the projection through space of the faces of Volumes B, C, and D. Volume "X", as shown in the series in Figure 12, is the intersection of the projected faces in space. In some instances, more than a single Volume 'X' is identified in the mapping exercise and, occasionally. Volume 'X' may overlap Volumes B. C, or D.

PROUN STUDIES: ANALYSIS AND SYNTHESIS

The second phase of the investigation places a premium on a series of drawings, executed in pencil on sheets of white



Fig. 10, A-D. Painted Prounds, 1998-2001.

Strathmore, which are speculative as well as analytical (Figures 13A, 13B, and 13C). The aim of the studies is to prompt the realization that a *Proun* is not a model of a specific building: a *Proun* is a model of an idea or ideas about architecture, about formal and spatial relationships.

The drawings include a series of axonometrics of the *Proun* (including at least one wireframe view) and conventional analytical diagrams that examine proportional relationships, axial relationships, and the like. More speculative studies

consider the unfolding of the faces of the constituent volumes of the *Proun*, the testing of various structural and spatial grids, the splitting and shearing of the *Proun*, an "X-ray" of the *Proun*, figure-ground relationships – is Volume 'X' a solid or a void? – literal and phenomenal transparency, and tectonic studies in which the *Proun* in its entirety (or some volumes) are stretched, compressed, or rotated in response to internal or external forces. The prospect of an understanding of architectural space based on the tectonic attributes of spatial volumes becomes apparent.

Fig. 11. A-D. Volume X', the dark green volume, is the result of the intersection of the projections of Volumes B, C, and D.

Fig. 124. Prounds, Analytical drawings, 2001.

Fig. 12B. Prounds, Analytical drawings. 2001.

Fig. 12C. Prounds, Analytical drawings, 1999.

This last point is the basis for a series of studies that focus on the properties of Volume 'X'. If, for example, some other volume is substituted for Volume 'X' – a volume that, unlike Volume 'X', is not trilaterally symmetrical – then how must Volumes B, C, and D change to support the new condition? If Volume A is stretched or rotated, does Volume 'X' change? And, if Volume 'X' is stretched or compressed along the x, y, or z axes, what is the effect on Volumes A, B, C, or D?

More recently, the drawing portion of the analytical studies has been augmented by reproducing other versions of selected *Prouns* in basswood (Figure 14, A-C). The specific aim is a parallel investigation of spatial relationships, phenomenal transparency, and the mutable characteristics of Volume 'X', here based on the manipulation of structural and cladding systems.

PROUN STUDIES: DESIGN PROJECTS

In the final phase of the investigation, students are asked to consider on what terms a significant architecture, an architecture based on some or all of the aspects of El-Lissitzky's concept of Irrational Space, might result from the *Proun* investigation and, furthermore, are asked to develop a proposal for a specific building on a specific site and in response to a specific program.

In retrospect, the most successful investigations have demonstrated at least some, if not all, of the following characteristics:

Fig. 13, A-C. Prouns, Basswood models, 2000-2001.

Fig. 14. Design proposals based on the Proun studies, 1998-2001.

- In the switch from analytical studies to schematic design proposal, no assumptions were made regarding sectional diagrams versus plan diagrams and, in fact, the designers often went through a stage where the array of analytical diagrams were tested as either plan or section.
- Eventually, two or three of the analytical studies are identified as primary: they establish the ground for further study and development.
- Volume 'X' is primary in terms of programmatic, as well as spatial, hierarchy.
- During the design process, the designer realized that the volumes that sponsor Volume 'X', that is, B, C, and D, can exist outside Volume 'A' and, therefore, B, C, or D may be a spatial volume, an object or a space such as a courtyard or garden, adjacent to the site.
- During the design process, the designer differentiated between volumes that are perceptually dense and those that are conceptually dense.

- The formal and spatial attributes of the original *Proun* model reappear in the final proposal, as a skylight, a garden, a spatial sequence, or a primary space.
- At almost every phase of the investigation, there has been a preoccupation – if not obsession – with Kepes' notion of a fluctuating spatial volume and rigorous and exhaustive study and testing of the means for establishing, maintaining, and exploiting such conditions.

A small sample of project proposals from past years are presented in Figure 14. To reiterate the point offered a moment ago, in each of the most successful projects, there has been a preoccupation with Kepes' notion of a condition of a fluctuating spatial volume and rigorous and exhaustive study and testing of the means for articulating that fascinating spatial condition in section and in elevation, as well as in plan.

In closing, I offer a heartfelt thanks to the friends and colleagues who, over a period of almost ten years, have offered

Fig. 15. A and B. Proposal for An architect's Club. based on a Proun study, 1999.

support, encouragement, and constructive criticism for this endeavor and to my former students at Kansas State University and the University of Tennessee who almost always managed to surprise and impress me with their thoughtful, enthusiastic, and inventive responses to the *Proun* investigation.

EPILOGUE

From the magazine ABC – Beträge zum Bauen, 1925, edited by Lissitzky, Emil Roth, Mart Stam, and Emil Schmidt:

... I cannot define absolutely what a 'Proun' is, for this work is not yet finished; but I can try to define a few things which are already clear. At my early exhibitions in Russia, I noticed that the visitors always asked: what does it represent? – for they were used to looking at pictures which had been produced on the basis that they were to represent something. My aim – and this is not only my aim, this is the meaning of the new art – is not to represent, but to form something independent of any conditioning factor. To this thing I give the independent name Proun. When its life is fulfilled and it lies down gently in the grave of the history of art, only then will this idea be defined. It is surely and old truth, dear friend, that had I defined absolutely this idea which I have created, my entire artistic work would have been unnecessary.

But a few facts:

The painter of pictures uses his optical, psychological, historical, etc. abilities, and writes all that into the novel, the short story, the grotesque, etc. of his picture. The Proun creator concentrates in himself all the elements of modern knowledge and all the systems and methods and with these he forms *plastic elements*, which exist like the elements of nature . . . he amalgamates these elements and obtains acids which bite into everything they touch . . . they have an effect on all spheres of life. Perhaps all this is a piece of laboratory work: but it produces no scientific preparations which are only interesting and intelligible to a circle of specialists. It produces living bodies, objects of a specific kind, whose effects cannot be measured with an anmeter or a manometer . . .

Fig. 16. El-Lissitzky, Self-Portrait (Constructor), 1924.

NOTES

¹ Gyorgy Kepes: "If one sees two or more figures overlapping one another, and each of them claims for itself the common overlapped part, then one is confronted with a contradiction of spatial dimensions. To resolve this contradiction one must assume the presence of a new optical quality. The figures are endowed with transparency: that is, they are able to interpenetrate without an optical destruction of each other. Transparency however implies more than an optical characteristic, it implies a broader spatial order. Transparency means a simultaneous perception of different spatial locations. Space not only recedes but fluctuates in a continuous activity. The position of the transparent figures has equivocal meaning as one sees each figure now as the closer, now as the further one."

- ² Note that, according to Kenneth Frampton, Prom is from "Pro-Unovis", 'for the school of the new art' (Modern Architecture: A Critical History), and Reyner Banham asserts that "Proun is merely a Russian word for 'object'," (Theory and Design in the First Machine Age).
- ³ Victor Margolin cites El Lissitzky and Hans Arp, *Die Kunstismen* (The Isms of Art), 1925, where they defined the *Proun* as "the transfer point from painting to architecture" [Margolin translation].
- ⁴ Lissitzky, "PROUN: Not World Visions, But World Reality", in *De Stijl* 5, no. 6 (June 1922)

⁵ Margolin, p. 31-32.

- ⁶ Victor Margolin, *The Struggle for Utopia*, (Chicago and London: The University of Chicago Press, 1997), p. 68.
- ⁷ Matthew Drutt, "El Lissitzky in Germany, 1922-1925", El Lissitzky, Beyond the Abstract Cabinet: Photography; Design, Collaboration, by Margarita Tupitsyn, with contributions by Matthew Drutt and Ulrich Pohlmann (New Haven and London: Yale University Press, 1999), p. 9.
- ⁸ Margolin, p. 71
- 9 The abbreviation 'A'. = art
- ¹⁰ C. A. Debelius, "Handout No. 1", Proun Studies, 1999.