MALEVICH'S SUPREMATISM AS A *CRITIQUE* OF THE BORDERS OF KANTIAN *"AESTHESIS"*[*]

KANTÇI "AESTHESIS"İN SINIRLARINA BİR ELEŞTİRİ OLARAK MALEVİÇ'İN SÜPREMATİZMİ

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Özet

Kant (1724-1804) "aesthesis" kavramını Yunanca aslına, "algılamak" anlamına geri taşır ve bu kavramı insanın evren ve bilme karşısında temel konumunu belirleyen bir kavram olarak kullanır. Kant argümanının kaynaklarını Newtoncu evren anlayışından alır ve insanın bilme yetisini "aesthesis"in koşullarıyla, yani yer-merkezli, Newtoncu, Eukleidesçi zaman ve uzam kavrayışı ile sınırlandırır. Maleviç'in süprematizmi ise onun, Eukleides-dışı geometrilere dayanan kendi evren, yani zaman ve uzam anlayışını yansıtır ve "aesthesis"in sınırlarını aşarak, yani Kantçı sınırları aşarak bilmenin bir yolu olarak düşünülebilecek olan "saf-duyum" kavramını temel alır. Şu halde onun süprematist resimleri ve manifestoları, Kant'ın insanın evrendeki bilme potansiyelini duyusal algısıyla, "aesthesis"in koşulları ile sınırlandıran bakış açısının bir eleştirisi, onu bir değilleme girişimi olarak değerlendirilebilir.

Anahtar Sözcükler: *Kantçı uzay-zaman, Eukleides-dışı geometri, süprematizm, dört boyutlu gerçeklik, projektif geometri.*

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Malevich's Suprematism as a *Critique* of the Borders of Kantian 'Aesthesis'

Kasimir Malevich's (1878-1935) manifest painting *Black Square* (dated 1913/1915) (Photo 1) is considered as one of the first avant-garde attemps of geometrical abstraction. It is also often seen among the masterpieces, which are the outcome of zeal to be loyal to natural borders of autonomous realm of existence and autonomous possibilities of the art of painting itself. These early masterpieces of geometrical abstraction[1], including Malevich's *Black Square* and other suprematist works, have a basic quality in common: they all are created from these possibilities and strictly inbetween the natural borders of art of painting at the most minimal level. The evaluations of Malevich's works, such as *Black Square* and *Suprematist Satelites,* with some exceptions[2] mostly overlook their peculiar and unique feature distinct from other masterpieces of geometrical abstraction, and consider these paintings only from a point of view which is mentioned above. The basic distinction in question is scientific and ontological characteristics of his painting, which are based on geometrical, cosmological and physical novelties for these early times, especially on non-Euclidean geometries developed by Gauss, Bolyai and Lobachevsky[3]. The basic mo-

[1] Among these early masterpieces we may include Mondrian's horizontal-vertical compositions, van der Leck's *Mine Triptych,* van Doesburg's Elementarist canvases, Compositions and Contra-compositions, Rodchenko's *Black On Black* etc.

[2] Having said that, some unconventionalist scholars including P. Railing and S. Compton had pointed out the connection between Malevich's Suprematism and non-Euclidean geometry, for details see Railing P., **On Suprematism 34 Drawings,** Artists Bookworks, 1990, and Compton, S. P., "Malevich's Suprematism – The Higher Intuition", **The Burlington Magazine,** vol. 118, no: 881, August 1976, pp. 576-585, and Compton S.P., "Malevich and the Fourth Dimension", **Studio International** 187, April, 1974, pp. 190–195.

[3] Non-Euclidean geometries can be classified in two main titles: Hyperbolic and elliptic geometries. The foundations of hyperbolic geometry was laid by Gauss (1777-1855), Bolyai (1802-1860) and Lobachevsky (1793-1856). Among the three founders of non-Euclidean geometries, Gauss never published anything on the very subject, but his notes, which were taken from 1920s and on, shows that he had matured ideas. János Bolyai, who was son of Gauss's friend, well-known mathematician Farkas Bolyai, prepared a treatise on a complete system of non-Eucleidan geometry, which was published in 1852. Their Russian contemporary Lobachevsky's work *Geometrical Investigations on the Theory of Paralles* was published in 1840, and his postulate negates Playfair's axiom, which was named after him, is dated 1855. Elliptic geometry was founded by Bernard Riemann (1826-1866), as a consequence of suggestions and encouragement by Gauss, who was Riemann's professor. The work by Riemann, which was published in 1866 under the

tive, which had induced his geometrical abstraction, especially the use of square as a leitmotiv, is the scientific and philosophical background of these paintings. It is Malevich's very conception of the universe and his critique against Newtonian and Kantian space-time conception as an outcome of his very own conception. In short it won't be a mistake to say his squares and satellites are his artistical/philosophical/semi-scientific objection against conventional conception of space and time, which had been reinforced "indesructibly" by Kantian philosophy. In my readings I haven't come across any discussion about Malevich's critiques againts Kantian space-time conception and Kantian aesthesis bound by this conception and also his *Critiques* takes their bases from it, and so his transcendantal philosophy. Nor did I see nor any analyses of Malevich's critique, thus I decided to focus my discussion on this point.[4]

I will proceed step by step in order to present my discussion explicitly. First I will explain the differences between Euclidean and non-Euclidean geometries, in a preparatory introduction. Then I will try to explain what Kant meant with the term "aesthesis", and how he limited man's ability to know with the condition of aesthesis, in other words with the geocentric/ Newtonian/Eucledian –conventional- conception of time and space. In the

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title *On The Hypotheses Which Underlie Geometry*, would be a source of inspiration for Einstein's geometric theory of gravitation, or with its most popular name, general theory of relativity (1916).

[4] Non-euclidean geometries were developed after Kant's death (1804). However their acceptability wasn't proved among scientific circles till Einstein's geometric theory of gravity (1916). Therefore it is imposible to find any responses for those in Kantian aspect. At this point, main discussion of this article as Malevich's critiques -which take their origin from non-euclidean geometries- against Kant, can not be appreciated as he criticised Kant with regard to geometrical and physical treatises developed after him. Malevich's starting point is never a defective, stillborn thought as such. As a matter of fact, Malevich had ever mentioned neither about philosophical contexts, which Kant assigned on matematics and physics nor about their ontologically functional roles in Kantian aspects. What Malevich criticised is that he limited man's perception and faculties as strictly geo-centric, relying on negotiable scientific judgements (such as Euclidean geometry and Newtonian time-space), which their negotiability was proved through those theories, developed after Kant. In other words Malevich criticised that he ignored or overlooked man's possible organic links to the infinite cosmic reality, and he made man's sensory mechanism subjected to a geocentric time and space. By the way one has to underline the concept of intuition, however different contexts assigned, this term has an exceptional place with regard man's ability to know for both Kant and Malevich. This article will discuss the differences between those two kinds of intuition in the following pages.

last part, I will try to show through his paintings and his words, how Malevich have criticised all these.

Non-Eucledian geometries particularly base on the negation of Euclid's sixth postulate, as the interior angles of a triangle add up to 180°; and of seventh postulate as there can be at most one line that can be drawn parallel to another given one through an external point. And also the negation of Euclid's *parallel postulate* and Playfair's axiom based on it, which we can summarize as two parallel lines never intersect. In such a way that, the Euclidean geometry which considered as a geo-centric/earthly geometrical system bases on a stable and two-dimensional, namely a flat, planar space perception.[5] However non-Euclidean geometries, which can be said to be cosmo-centric instead of to be geo-centric, embark on the idea of expanding universe This is why they reject and negate our linear, sequential earth-based time conception. When the expanding curved universe, i.e. a non-planar surface is in question, the interior angles of a triangle add up to higher than 180°, moreover that number won't be fixed and the higher the rate of expansion gets, the more the number will be increased[6].

In Euclidean geometry the origin is a "point", conversely in non-Euclidean geometries the origin is a line because of the same reason. Besides in non-Euclidean geometries it is possible to draw numerous parallels to another given one, through an external point and parallels can intersect as well. (Figure 1) In cosmic reality, parallels intersect in positive curvature like curved universe, and diverge apart in negative curvature (Figure 2).

The term of aesthesis, to which Kant had referred the original meaning in Ancient Greek as "to perceive", means in Kantian terminology all kinds of perceptional acts emerge from human mind. And in Kantian conception this term is fundamental for the operation of all the ontological system of human mind, i.e. for the operation of "Pure Reason" and "Practical Reason". *Universal Natural History and Theory of Heaven (Allgemeine Naturgeschichte*

[5] Two-dimensional Euclidean geometry is also called as plane geometry. In Euclidean geometry three-dimensional space is possible, but every point in three dimensional Euclidean space is determined by three basic coordinates, i.e height, width and depth as straigt lines with 90˚angles. In Euclidean geometry it is unthinkable to mention about the curvature.

[6] The mentioned fact is valid for elliptic geometry. In hyperbolic geometry the sum of angles in a hyperbolic triangle must be less than 180˚.

und Theorie des Himmels, 1755)[7] from Kant's early period, which had clear impacts on Kant's first *Critique*, not only contains definite references to Newtonian conception of universe, but also had the title *An Essay on the Constitution and the Mechanical Origin of the Entire Structure of the Universe Based on Newtonian Principles* as a second title. Kant feeds and reinforces his theory with Newtonian principles. He says in his first *Critique* that there is no time and space apart from human beings. According to his point of view if time is abstracted from subjective condition of sensible-intuition, then time is nothing.[8] In this context he argues that man brings all these along with him when he comes to the world, i.e. *space* and *time* are forms of the faculty of *human* sensible intuition[9], in arguing this Kant bases his theory on both basic operational system of aesthesis and Newtonian concepts of absolute time and of absolute space. According to Newton:

> I. Absolute, True, and Mathematical Time, of it self, and from its own nature flows equably without regard to any thing external, and by another name is called Duration: Relative, Apparent, and Common Time is some sensible and external (whether accurate or unequable) measure of Duration by means of motion, which is commonly used instead of True time; such as an Hour, a Day, A Month, a Year.
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> II. Absolute Space, in its own nature, without regard any thing external, remains always familiar and *immoveable*. Relative Space is some moveable dimension or measure of the absolute spaces; which our senses determine, by its position to bodies; and which is vulgarly taken for *immoveable*[10] space.[11]

As we've seen those explanations by Newton, suggest two different time phenomena, which are independent from each other. One of them is constantly *moveable* and enduring. Newton distincts precisely this kind

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[7] Kant, I, **Universal Natural History and Theory of Heaven,** (trans. by Ian Johnston), Richer Resources Pub. Arlington, Virginia, 2009

[8] Kant, I., **Critique of Pure Reason,** translated by Paul Guyer & Allen W. Wood, Cambridge University Press, New York, 2007, *A35.*

[9] Kant, I., 2007, passim.

[10] Italics added.

[11] Sir Isaac Newton, ***The Mathematical Principles of Natural Philosophy***, volume 1, 1729, p. 9-10 (resource: url: http://books.google.com.tr/books?id=Tm0FAAAAQAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false) 2. 22. 2013

of time from timeless and *immovable* space phenomena. Kant as well in his first *Critique* says that our sensibility (*sinnlickeit*) was formed before any kind of experience, in a manner in which it perceives all kind of outer events in space and all kind of internal events in time. According to this, time and space are predetermined frameworks, in which our experiences necessarily take place. So both time and space are a special kind forms of intuition, actually pure forms of intuition, which can not be sensed in their own reality. And in Kantian thought there can not be any external intuition form for time, and any internal intuition form for space[12]. It's clearly seen that Kant embraces Newton's sharp distinction about time and space. Kantian aesthesis operates according to perceptional limits of human mind, this is the reason why man's sensory mechanism is subjected to a geo-centric time-space. Kant emphasizes that time and space are subjected to our aesthesis on one hand and argues that our human intuitions are restained with our sensibility, which is to say that our entire intuituons are sensory-based.[13]

Malevich had created concepts such as 'non-objective sensation' or 'intutional (or cosmic) consciousness' under the impression of Ouspensky's writings. Through these concepts he tries to go beyond the borders of Kantian "aesthesis". Malevich embarks on a kind of vision which is 'superindividual' and 'supersensible' when he builds his own conception of intuition.[14] Malevich takes his conception of intiution as a way to access to the dimension (the fourth dimension) which had been prohibited by Kant, who had considered it in the transcendantal field, because it can't be perceived through the senses, because it has no phenomenal quality; being as such Malevich's conception of intuition -in Kantian terms- displays an *a priori* quality. In Malevich's opinion the only way to make use of this particular kind of intuition is to free human *ratio* (reason) from all kinds of regulative and constitutive principles and to break it out of categories.[15]

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[12] Kant, I., 2007, passim.

[13] For detailed discussion see Bağçe, S, "Are Non-Eucleidean Geometries Possible for Kant*?"* **Muğla Üniversitesi Uluslararası Kant Sempozyumu Bildirileri,** Vadi Yayınları, Ankara, 2006, pp. 29-38.

[14] Malevich, K., **The Non-Objective World:The Manifesto of Suprematism,** translated by Howard Dearstyne, Dover Pub., New York, 2003, pp. 67-68.

[15] From correspondances between Khlebnikov and Malevich, translated from Russian by Chris Miller, (cited in Néret, G., **Kazimir Malevich and Suprematism,** Taschen, Cologne, 2003, p. 37).

By this way, man can achive a superior form of reason (*ratio*), named by Malevich as trans*ratio*nal, which is able to make use of cosmic intuition.

However Kant uses the term intuition in two somehow different meanings, so the pure *a priori* intuition for Kant denotes an immediate relation between our mode of knowing and objects. He says,

> In whatever way and through whatever means a cognition may relate to objects, that through which it relates immediately to them and at which all thought as a means is directed as an end, is intuition.[16]

Having this quality the pure *a priori* intuition is connected to the sense and sensibility. In this context Kant considers the conditions of time and space as "pure forms of intuition" which belong to solely sensibility. So space and time are nothing other than the subjective forms of human *sensible intuition. Remember that the time and space in question are Newtonian ones. The other meaning of intuition according to Kant is,*

> *that every particular idea –as distinguished from 'general concepts' is an intuition. In other words, evereything in the human mind which represents an individual or particular is an intiution*[17]

That means Kant argues that,

> *all human intuitions are bound up with our sensibility, i.e. with our faculty of senseous perception.*[18]

Therefore our intuition is restrained to the space and time, which are subjected to our faculty of sensuous perception. And the geometrical system, which is particular to this space, is a synthetic, Euclidean geometry.

Malevich's own conception of "intuitive consciousness" takes its origin from a particular concept by Dr. R. M. Bucke's, which he originally named as cosmic consciousness or higher intuition. Malevich got acknowledged on that concept through Ouspensky's book *Tertium Organum*. According to Bucke's theory every individual has a self-consciousness, through which he can distinguishes himself from outer-world. However cosmic consciousness is

[16] Kant, 2007, (A 19 B33).
[17] Cited by Bağçe, ibid, p. 33.
[18] Cited by Bağçe, ibid, p. 34.

> as its name implies, a consciousness of the cosmos, that is, of the life and order of the universe (. . .) Along with the consciousness of the cosmos there occurs an intellectual enlightenment or illumination which alone would place the individual on a new plane of existence - would make him almost a member of a new species[19].

Senses, perceptions, images, concepts and language are the elements which constitutes the self-consciousness. Yet the elements of a supra-conceptional mind or a supra-conceptional intellect are intiutions. These cosmic intuitions are the unity of all the former senses, concepts and experiences. A mind, which goes beyond the concepts of the phenomenal world, will achive the cosmic intuition. After he encountered with this consciousness, he will realize that the cosmos isn't composed of dead matter governed by unconscious, rigid, aimless law. Conversely it is entirely immaterial, spiritual and alive. Over there, everything is alive. The individual, who can achive this consciousness, will begin to understand four dimensional space, he will have a sense of infinity.[20]

Malevich's conception of intuition is also quite different from the conventional conception of it, which we can describe as a kind of immediate attainment of the truth without an instrument or an intellectual preparation. Malevich's concept doesn't point a kind of instinctive, immediate apprehension or attainment in a direct contact with the object which is a situaiton inherently oppositinal to reasoning (as in Kant's second description). Malevich's conception of intuition is a particular kind of comprehension, based on a particular individual who stands on all kinds of accumulation, remained in collective subconscious for thousands of years. Upon that man develops his self-conscious and his comprehension oriented to outer world. After analysing the ontology of himself and of outer-world through reasoning, he goes beyond all these. In this way he can comprehend all the existence and the cosmos as a whole in their wholeness, through the "activity" of the intellect, eventually transcends the human needs, human foibles, moreover subjectivism of self-consciousness and of the self and develops a particular kind of comprehension, for Malevich this comprehension is the very intuition itself. It is a particular, unique situation requires indi-

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[19] Ouspensky, P. D., **Tertium Organum or the Third Canon of Thought and A Key to the Enigmas of the World,** translated by Claude Bragdon, Kessinger Pub., 2004, p.311.
[20] Ouspensky, ibid, pp. 311-320.

vidual consciousness, collective subconscious and apprehension of laws of cosmic order, all together and simultaneously. So it is completely conceptual, and if we put it in Kantian terms, it is in the field of "pure reason", in a field where can be attained through analytic judgements not through syntetic ones.[21]

[21] As in Bucke's, in Malevich's opinion man can attain the concious of cosmic structure, but Kant disagrees with them on that. When Kant deals with comprehension of cosmic infinity, he makes use of the concept of sublime (das Erhabene), which he placed in the field of power of judgement, instead of pure reason. According to Kant when our imagination fails to comprehend the magnitude of infinity, and awared of presence of thoughts about the totality of the universe in our minds, the feeling we experienced is sublime. Sublime "involves, or else by its presence provokes a representation of limitlessness, yet with a super-added thought of its totality" (90). So sublime is what we comprehend in comparision with our quality being finite. Kant makes use of mathematics in explaining of imagination of sublime. Mathematical magnitude or sublime is related measure: "Since the magnitude (…) always requires something else as its measure and as the standard of its comparision" 95 *"(...)that is sublime in comparision with which all else is small"*(p:97) But here the role which assigned to mathematics is limited. Because "we can never arrive at first or fundemantal measure, and so cannot any definite concept of a given magnitude." (p:98) That's why "the estimation of magnitude by means of concepts of number is mathematical, but that in mere intuition is aesthetic" (p:98) (The concept of intuition here is the first kind, namely a priori intuiton) Because mathematical estimation of magnitude "present only the relative kind, whereas the former (aesthetic estimation) presents magnitude absolutely, so far as the mind grasp it in an intuition. (p:99) (citations: Kant, **Critique of Judgement,** Oxford University Press, New York, 1989) Here, the key expression in the last citation is "so far as the mind grasp". Namely the absolute measure of knowledge of cosmic magnitude or infinity is not attainable through matmematical measure or comparision, so it is not something that we can grasp its noumenal reality through its phenomenal or scientific data, although all the resources of mathematics, particularly because comparative quality of mathematics. So its imposible to explain magnitude or sublime (which is actually a kind of knowledge belongs to the a priori field of pure reason) through mathematics in a phenomenal framework –namely as "so far as the mind grasp" with its perception, which is conditoned with geocentic time and space. So Kant, in making use of the concept of sublime (which is one of his basic concepts actually belongs to the field of judgement –the other is beauty-), in some respect, he conveys the attemps of man to grasp infinity from the field of understanding and natural science (the field of pure reason) to the field of art (the field of power of judgement).
Malevich's conception of cosmic consciousness takes the meaning of concept of intuition, which desires full comprehension of infinity, out of Kantian quality to be an instrument provides immediate contact, and he turns it to a feature of transratio. (In Malevich terminology transratio is a particular kind of ratio which blossoms in individual ratio and also trancends it.) So, Malevich understands intuition as some faculty which is reinforced by collective mind however takes its base from individual reason. So in his opinion

I've mentioned Ouspensky's conception of alive cosmos above. This particular meaning of vitality can be explained as vitality of the energy which is the keystone of the universe and also as vitality of movement of the energy. It is the point at which, mediation of the objects which are subjected to the "aesthesis", disappears and the mind attains the sensation of non-objective infinity. In this context Malevich sees an opportunity of an immediate access to the concepts of energy and movement which are at the basis of every existing thing, through his conception of non-objective sensation and intuitive conscousness. So Malevich embarks, creating the idea of suprematism as a manifestation of four dimensional reality, on following facts:

a) the matter actually is the energy which is gathered around the gravity,

b) the physical integrity –to which Kantian aesthesis had us obliged - is essentially an illusion,

c) hence space and time are the natural, spontaneous results of the energy and of the movement of energy,

d) therefore the space i.e. the third dimension is a layer or a cross section of four dimensional reality; a particular appearance of it, which is presented to our aesthesis.[22]

Eventually he attemps, in the lights of these facts, to prove invalidation of Newtonian and Kantian distinction between time and space. In cosmic

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intuition is a kind of instrument which makes man break the bounds of limited faculties, assigned by Kant, through. In that case a comperension of universe, in Malevician context, is not mathematical but intuitional for Kant as well. The key point is here different meanings of intuition assigned by Kant and Malevich. To Kant intuition is sensuous in the final analysis, to Malevich it is a syntesis of individual and collective reasons. Malevich sees this intution (or cosmic consciousness) as a way to attain to (in Kantian terms) the knowledge of noumena, in their own reality.

So, for Kant the knowledge of infinity of the universe – although it is inherent quality being in the field of "pure reason"- is an aesthetic knowledge, with which we can only connect through a priori intuition, it must be dealt with in the field of power of judgement, namely art. In this respect, Kant nonintentionally seems agree with Malevich, who claims the true apperances and knowledge of the universe can only be displayed and grasped through art, and produces his suprematist canvases for that purpose.

[22] Malevich, ibid, 2003, passim.

reality –and also as accepted by Malevich- space is just an appearance of time, so space is subjected to the energy as well, and again space naturally and inevitably is constantly and eternally *in motion*, or *movable* –if it is said in Newton's words-. In the process of creating the non-objective art[23], Malevich gets his strongest support by Hinton's metageometry concept with which Malevich Malevich got acquaintance through *Tertium Organum* by Ouspensky.[24] Metageometry is actually Hypotetical geometric system bases on fourth dimension and the curvature of the universe. Although it is pseudo-scientific in some respects, Hinton's metageometry derives from projective geometry, which is developed against Euclidean geometry. Remind that Euclidean geometry is based on two dimension at the outset, and it develops its three dimensional conceivings on this base and establishes its all the postulates and axioms on flat space assumption. If we reiterate briefly, in the actual curved universe Euclidean postulats are invalid, simply since Euclidean geometry base on flat space assumption. Also in fourth dimensional reality time and movement aren't sequent but inherent in matter.

The futuristic opera *Victory Over the Sun* (1913) which had been staged by Malevich, poet and playwriter Khlebnikov, poet Kruchenykh and composer Matiushin, is the first artistic production in which the conception of metageometry is examined. Poet and author Benedikt Livshits, who had attented the first performance of the Opera, had written that luminious effects, created by mobile lightening which had been designed by Malevich, decomposed the figures into their components,

> ... the figures themselves were sliced by the blades of the beams (...) since for Malevich they were only geometrical bodies, subject not only to decomposition into component parts but also to complete dissolution in pictorial space Instead of the square, instead of the circle, toward which Malevich was already trying to bring his painting, he had the possibility of using them as their volumetric correlatives, the cube and the sphere [25]

[23] Here the non-objective concept can be considered in the context to abandon object as second constituve element of "aesthesis" beside the subject.

[24] Ouspensky, ibid, pp. 75-77.

[25] Elder, R. Bruce, **Harmony and Dissent, Film and Avant-Garde Art Movements In Early Twentieth Century,** Wilfrid Laurier University Press, Waterloo, Canada, 2008, p. 245 and also in Compton, ibid, 1976, p. 580.

Decomposition of the figures, when they perform what they have to perform on the stage, through luminious effects, means here decomposition of solid matter and along with it, of three dimensional "self" into their atoms. It is to reveal the most inherent quality of the matter, through the light which displays this quality in the most obvious way. This is an act which points sense of cosmic consciousness. At the 'Country 10', a location in the future after the sun has been overcome[26] in the Opera, "indications of 'inside' and 'outside' have been conflated"[27], moreover at there time is both backwards and onwards, all the routes comes from the one and the same direction, just as envisioned in Hinton's metageometry and described in his book *The Fourth Dimension*[28]. In fact in spatial, cosmic reality the neither direction can be determined as up and down, left and right nor dimensions can be restrained as width, depth and height. Death of the sun means the end of time as we know it, which is sequential, which is subjected to our aesthesis. Then the age of a new conception of time, i.e. the age of infinite, immeasurable, 'timeless' cosmic time will begin. In fact, from four-dimensional point of view all the spatial directions and relationships are existed simultaneously and the conception of dimensionality is invalid, briefly it displays an isotropic character.

> Undoubtely the artist was trying to produce on stage, that new dimension, that 'merging of time and space' about which Matiushin had written almost a year ago.[29]

But our ordinary consciousness (which maintains its acts in Kantian borders) is restrained inbetween three-dimensional limits, and subjected to the "aesthesis", so we are not able to perceive this simultaneity.

Malevich's attemp to decompose space to its molecules and to reduce matter to its substance, i.e. to the light and to display merging time and space on the artistical platform, as in those scenes, was not the first for either Malevich or Russian avant-garde. Sources and motives of those attempts by Russian avant-garde artists can be found in traditional Russian art. In both religious and folkloric Russian art, reverse perspective and

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[26] At this part of the Opera a giant black square form painted on stage backdrop symbolizes the coffin of the sun.

[27] Douglas, Charlotte, **Malevich,** Harry Abrams Inc, New York, 1994, p. 20.

[28] Ouspensky, ibid., pp. 39, 46-49- 52, 75-77.

[29] Douglas, C, ibid, p. 20.

primitivist two-dimensionality are dominant, instead of naturalist perspective and illusion of three dimensionality unlike European art. Those characteristics formed conception of pictorial space in Russian avant-garde painting, since the artists prefered to focus to their roots, however they borrowed some innovations from European modern art. Those artists' works, included Pavel Kuznetsov, Ivan Kluin, Natalia Gonchorova, Mikhail Larionov, Burliuk brothers, Vladimir Tatlin, Marc Chagall, El lissitzky, and even Kandinsky, displays features borrowed from traditional Russian art, such as vivid colors, reduced depth in pictorial surface which approaches two dimensionality, overlapped figures and most important the reverse perspective. Like many others, those characteristics of traditional Russian art underlies the formal structure of Malevich's paintings. The above mentioned influences of contemporary European art, are the influences of art movements, which exclude illusion of three dimensionality from pictorial space and propose to construct painting with colour and light, or to decompose pictorial space for recomposing it in a new aspect. Those art movements are Impressionism, Fovism, Cubism and art of Cézanne, with which Russian avant-garde circle got familiar through Morozov's, Shchukin's, Tretyakov's collections.[30]

Signs of dissolution of naturalist space perception, even dissolution of space can be found in Malevich's very early paintings as precursors of Suprematism. Beginning with his very early works, the compositional structure, namely geometrical relations of the space and of other formal elements of painting, is the most important constituent for Malevich. Like some of above mentioned Russian avant-garde painters, Malevich produced impressionist canvases appreciating Monet's impressionism. Since in his opinion, Monet comperehended that a space -both depicted and pictorial space- is constructed through the light.[31]

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[30] For detailed information and discussions about formal experiences, innovations and syntheses in Russian avant-garde, and for concise history of the developmet process of four dimensional space in art of painting see: Gray, C., **The Russian Experiment in Art, 1863-1922,** Thames & Hudson, 1996; Bowlt, ibid.; Compton S., **World Backwards: Russian Futurist Books 1912-16,** British Museum Pub., 1978, Milner, J., **Kazimir Malevich and The Art of Geometry,** Yale University Press, 1996 Howard, Jeremy, **The Union of Youth: An Artist's Society of The Russian Avantgarde,** Manchester University Press, 1992

[31] Cited in Neret, ibid, p.13.

In the next phase of his art, under the influences of icons, his symbolist works such as *Prayer* (1907) or *Self-portrait* (1908-9)[32] have neither a naturalist perspective nor an apparent vanishing point. From the beginning he perceives pictorial surface as not a space to imitate three dimensional perception of the nature, but also as a space which construct its own reality autonomously, by means of its own geometrical relations. He thinks that Cézanne is the first painter, who manifested a primitivist character, since he called for geometrisation of form by reducing nature to the cone, cube and sphere.[33] In this way, Cézanne's pictorial language, which depicts nature as decomposing it to it's elements, and excludes or manipulates naturalist perspective occasionally, becomes one of main references to Malevich, for geometrisation and simplification of form and pictorial space.[34] Fovist painting has also great influence on Malevich's Neo-Primitivist works of 1911-12, in the context of reducing pictorial space to two-dimension, merging of figure and ground, manipulation of perspective, application of colour, like other Russian Neo-Primitivists.[35] In his works of this period (see photo 9), the inherent movement disguised in stability immobility and decisive influence of colour/light on the perception of space, sign that the seeds of suprematism were already blossoming.

The following Cubo-Futurist[36] phase of Malevich's art is nourished by cubist features as dissolving space and object and rendering the components of them visible multi-perspectivally and simultaneously. Among

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[32] *Prayer (Study for a Fresco*), 1907, tempera on cardboard, 10x14.8 cm, Russian State Museum, Saint Petersburg; *Self Portrait*, 1908-9, gouache on paper, 27x26.8 cm, Tretiakov State Gallery, Moscow

[33] Cited in Neret, ibid, pp.20-21.

[34] For detailed discussion on the synthesis of reverse perspective, Russian icons, and art of Cézanne in Malevich's art and influences of them on the way to Suprematism see: Yılmaz, Evren, "Yeni Primitivizmden Süprematizme Maleviç'in Sanatında Tersten Perspektif Dördüncü Boyut İlişkisi" , **ITU Journal: Social Sciences,** Serial B, volume 6, issue 2, December 2009

[35] Among those Neo-primitivists Larionov and Goncharova are the founders of Rayonism (1913), which has similar concerns about conveying fourth dimension to the surface.

[36] For detailed information on breaking off with naturalist perception of pictorial surface, on reinventing pictorial space as an autonomous field and on experimenting on the possibilities of fourth dimension, in Russian avant-garde circles, from Neo-primitivists to first enstalations/reliefs by El-lissitzky and Tatlin see: "Russian Futurist Books and the Development of Avant-garde Painting", in Compton, 1978, pp. 87-115; Gray, C., ibid; and for manifestoes by those artists Bowlt, ibid.

Russian avant-gardists, beside Malevich and other Cubo-Futurists, Rayonists related this feature of Cubism with new spatial possibilities of measure. Contribution of Futurism to those paintings is to provide instruments for creation the image of velocity and for expression of time in pictorial space. Through depicting serial images of movement, Futurism displays flow of time. Furtermore, due to both existence and expression of time and movement through spatial possibilities, and decomposition of space and objects, and exposition of components simultaneously, Cubo-Futurist paintings appear to be a kind of foresight of four dimensional reality, i.e. of identicalness of time and space. As a matter of fact, they represents duration, through serial depictions of movement -as first kind of time in Newtonian context- and also true time, through multiperspectivity and simultaneity, in pictorial surface. Or rather Cubo-Futurist painting turns pictorial surface into togetherness of those two kinds of time. So those paintings appear to be a kind of negation of Newtonian distinction between time and space, and also between duration and true time.

The light, which Malevich discovered it's inherent nature through his impressionist studies, makes those two different(!) kinds of time appear together, through the effect of transparency, which we may call dissolution of light as well. This transparency effect which we see in *Woman with Water Pails: Dynamic Decomposition* (1912) (Photo 2) and in *Simultaneous Death of a Man in an Aeroplane and on the Railway* (1913) (Photo 3), creats, in cooperation with fragmentation of space through geometric divisions, a similar effect with what Livshits described: decomposition into components, particules, and even into molecules and to lose sense of direction. In these paintings, particularly in *Dynamic Decomposition* the concepts such as up and down seems invalid.

At this point it will be proper to mention an avant-garde art movement, accepts all those references in a similar way with Malevich. This movement is Rayonism, which leaves both depicted space and pictorial space to domination of light, rather of beams of light; in other words, reduces material and pictorial reality to the light. First manifesto and works of this movement were made in 1913 by Gonchorava and Larionov, with whom Malevich participated in same Neo-Primitivist, Cubo-futurist exhibitions such as *Donkey's Tail* (1912) and *Jack of Diamonds* (1910, 1912, 1913). Rayonism, according to it's creators, synthesizes Futurism, concept of

fourth dimension[37] and transparency effect of x-rays which makes to see objects thorughly. The couple, who studied relations between the light and transparency in Orphic-Cubist paintings by Sonia and Robert Delaunay, describe Rayonism as a syntesis of Cubism, Futurism and Orphism.[38] In their manifesto they noted that "the slippery appeareance of the picture" serves the aim to express "a sensation of fourth dimension".[39] According to their 1914 manifesto, "the intristic life and continuum of the colored masses in rayonist painting are in the aim to form a synthesis-image in the mind of spectator, one that goes beyond time and space[40]." And they claimed that the sensations created by rayonist images were belonging to the fourth dimension[41]. As they argued,

> Rayonism is the painting of space revealed not by the contours of objects, not even by their formal coloring, but by the ceaseless and intense drama of the rays that constitute the unity of all things.[42]

Malevich, as a consequence of the accumulation of his artictical researches from his first impressionist canvases to *Victory over Sun,* and in the spirit of Russian avant-garde art circles, makes a breakthrough, which provides him totally broke all ties off with the traces of naturalist and Newtonian reality in his suprematist paintings. The paintings, which he called as two or four-dimensional, not only express non-whole, *moveable* structure of the matter and sense of non-directionality, but also goes beyond or "transcends" the subjective forms, "objective" appearences created by this illusion of wholeness and attemps to depict forms of four dimensional reality.

Lets see through some paintings by Malevich, how he applied all these qualities on pictorial surface. *Praying Woman* (Photo 4) dated 1912 is an example of Malevich's Neo-Primitivist period. Head of the woman it depicts, has been naturally painted according to codes of naturalist painting

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[37] For detailed information on occult reactions to the concept of fourth dimension in European and Russian avant-garde, see: Gibbons, T., "Cubism and the Fourth Dimension in the Context of the Late Nieneteenth Century and Early Twentieth Century Revival of Occult Idealism", **Journal of Warburg and Courtald Institutes**, vol 44, 1981, pp.130-147.

[38] in Bowlt, ibid., pp.95-96.

[39] Larionov, M, Goncharova N, "Rayonists and Futurists: A Manifesto", in Bowlt, ibid, p. 91.

[40] Certainly the time and space about which they talk, are Newtonian ones.

[41] Larionov, M., "Pictorial Rayonism", in Bowlt, ibid, p.102.

[42] Larionov, M., "Pictorial Rayonism", in Bowlt, ibid, p.101.

and to conditions of aesthesis. *Head of a Peasant Woman* (Photo 5) is an example from later period of the same year, depicted in a different manner, in above mentioned Cubo-Futuristic principles. However *Red Square: Painterly Realism of a Peasant Woman in Two Dimensions* (1915) (Photo 6), which depicts the same (?) subject, takes the line, which is the keystone of the non-Euclidean geometries instead of the point, as its starting point. By the way it needs to be clear that Malevich called the paintings consist of monocromatic colour masses as two-dimensional, and of multi-colored colour masses as four dimensional, since the existence of various kinds of energy through various colours.[43] Going back to discussion on the painting in question; square, as a form, actually is a non-existent form in our phenomenal world. Yet in projective geometry it is the natural and unavoidable consequence of the all linear correlations in the space (Figure 3a). On the other hand the square, which is the result of contingent intersection of the lines, doesn't necessarily have to be a perfect square[44] (Figure 3b). Besides this, the other main purpose of Malevich here, when he deformed the square and elongated it on one angle to upper right, is to reflect energy and movement which are inherent forces of every kind of matter and to evoke sensation of weightlessness in space. Malevich says that, square has within it the seeds of circle, cube, and all the other forms.[45] From four dimensional perception, i.e. spatial geometry, the movement of square will be different from our three-dimensional perception. In this respect, something, perceived as a long and narrow rectangular from three dimensional perception, can be an elongated square (Photo 7) from four dimensional perception. Or something, perceived as a circle (Photo 8) in the same way, can be an impression of another movement of square. (Figure 4)

Man with a Sack (1911-12) (Photo 9) is also dated on Malevich's Neo-Primitivist period and it shows a relatively naturalist depiction of a man who carries a sack on his back. *Painterly Realism of a Boy with a Knapsack - Color Masses in the Fourth Dimension* (1915) (Photo 10) which

[43] Remember and keep in mind some simple physical facts for other analyses on Malevich's works. In Physics colour means light beam, and light beams truly are linear movements in space, sensation of colour is a result of refraction of light on our retina; in addition to that white is a combination of *all colors* that make up the spectrum and black is the result of absence of the light.

[44] For detailed discussion see. Railing, ibid, passim.

[45] Malevich, ibid, 2003, 70.

has been painted approximately four years later, displays a depiction of a similar subject in fourth dimension. The rectancular shaped canvas is composed of a white ground, which symbolizes space, a black square is laid in parallel with the edges of the canvas and a smaller red square is positioned obliquely. As such, this painting is a represantation of four dimensional perception. Remember that form of square in projective geometry is the natural and unavoidable consequence of the all linear correlations in the spatial reality. Within the white space, an *ordinary* situation confronts us, yet perceived and treated in four dimensional reality: a boy with a knapsack. However the painting itself hasn't been abstracted from a boy with a knapsack, as the name of it may suggest. Malevich had clearly warned about the titles, he had given

> certain paintings are not intented to suggest that one must look in them for those forms, but that real forms have been considered by myself primarilyas heaps of pictorial volumes devoid of form, on the basis of which a pictorial painting has been created that is nothing to do with nature.[46]

Whatever its form is in three dimensional reality, whether a peasant woman or boy with a knapsack or a football player (photo 11) it doesn't matter. As a matter of fact, main purpose of these paintings, builded under the domination of square form, to point all the entities are actually geometrical constructions based on linear correlations and also are geometrical parts of four dimensional space, which is also composed of these constructions. They also point that the fact of movement which is inherent in spatial reality. As Ouspensky had denoted, our way to perceive movement through our three dimensional perception is because of sensation of time, sensation of changing moments. But the true time containing all the qualities of spatial expansion, is identical with space in this respect. Therefore it is a mistake to perceive time both as related to our restrained conception of movement, and linear and sequential.[47] So here in this painting the Malevich positioned black and red squares obliquely to express an expansion –having a place in infinity- a floating in space, i.e. the *spatial movement* itself.

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[46] Quoted in Neret, ibid, 52.
[47] Ouspensky, ibid, 39-51.

In Malevich's grammar of colour black and white are defined as energy which reveals form[48] and red mowing against the white is defined as expression of power sensation.[49] In that case, this painting is a collision of energies characterised by energies themselves and tension and expansion of the power which generates energy. It is a visual manifestation of pure energy and cosmic reality. In Malevich's grammar of colour, black is finite. Hence it can not be the colour of space, as conventionally accepted. For him white means the pure energy, i.e. infinite space, i.e. identicalness of time and space. *Suprematist Composition: White on White* (Photo 12), goes beyond the borders of our perception through not only elements of form but also element of colour, which is the most obvious manifestation of light, namely the pure energy, since its inherent nature. In this painting one shade of white, formed as a square -which is the natural form of projective geometry- floats, expanses on another shade of white, which forms infinite space in the guise of the ground of painting. Here Malevich brings all the forms of energy, the line, the square, the light together in their purest states, therefore exposes non-Euclidean and non-Kantian identicalness of space and time: Identicalness of space and time which are alive. Because,

A painted surface is a real living form[50]

[48] Malevich, "Suprematism", translated from Russian by Larissa Zhadova, in Railing, ibid, p. 2

[49] Malevich, "The Question of Imitative Art", in **Art in Theory: an Anthology of Changing Ideas**, C. Harrison - P. Wood, (eds.) Blackwell, Oxford, 1998, p. 295.

[50] Malevich, "The Art of Savage and Its Principles", in Bowlt, J**., Russian Art of the Avant-Garde: Theory and Criticism 1902-1934**, translations from Russian by Bowlt, The Viking Press, New York, 1976, p. 130.

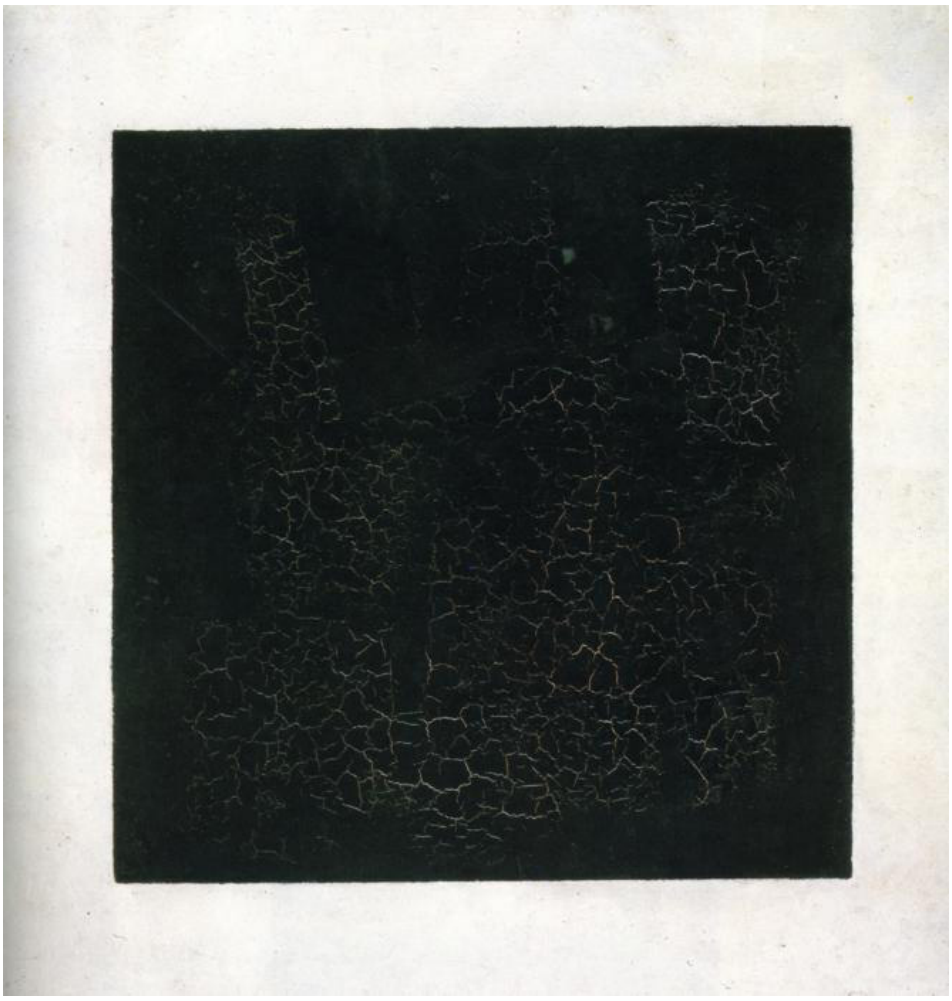

Photo 1: Malevich, Black Square, 1915, oil on canvas,
Tretiakov State Gallery

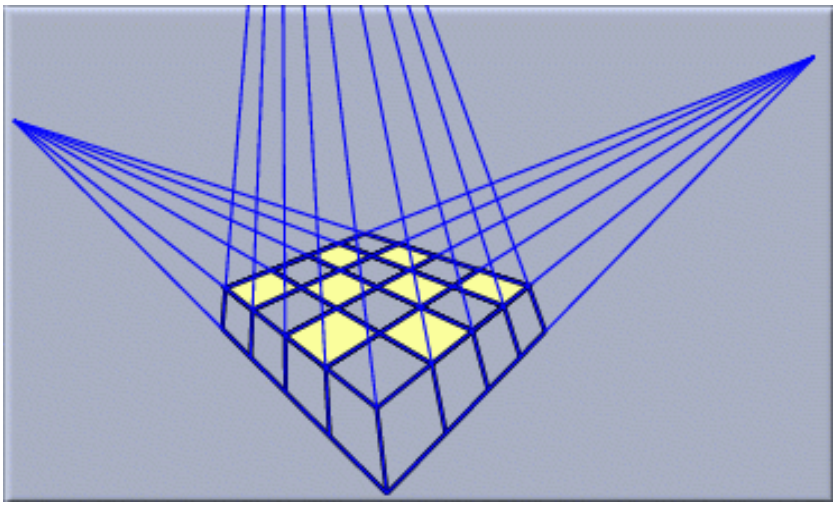

Figure 1: Diagram shows intersecting parallels on projective plane, instead of Eucleides' nonintersecting parallels (resource: **https://secure.msri.org/about/computing/docs/cinderella/Texts/Mathematics.html** 10.10.2012)

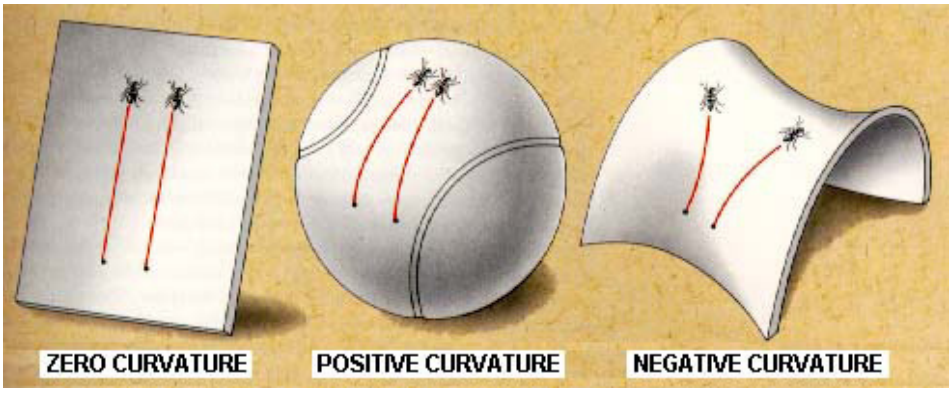

Figure 2: Illustration shows parallels can intersect in positive curvature and diverge apart in negative curvature (resource: **http://www.uic.edu/classes/phil/phil105nh/105lectures/105lecture09.html** 10.10.2012)

Photo 2: Malevich, Woman with Water Pails: Dynamic Decomposition: 1912, oil on canvas | 803 x 803 mm, The Museum of Modern Art, New York

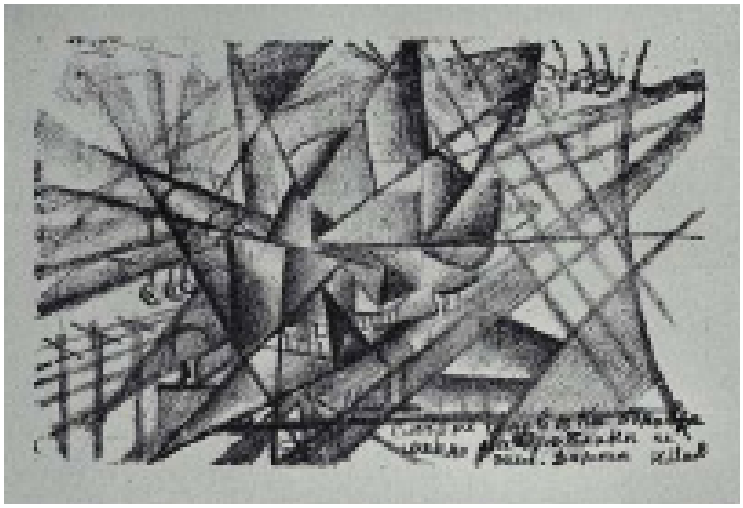

Photo 3: Malevich, Simultaneous Death of a Man in an Aeroplane and on the Railway, 1913, lithograph, 17.5x11 cm.

Photo 4: Malevich**,** Praying Woman, 1912, charcoal,
Russian Museum St. Petersburg

Photo 5: Malevich, Head of a Peasant Woman, 1912-13, oil on canvas,
Stedelijk Museum, Amsterdam

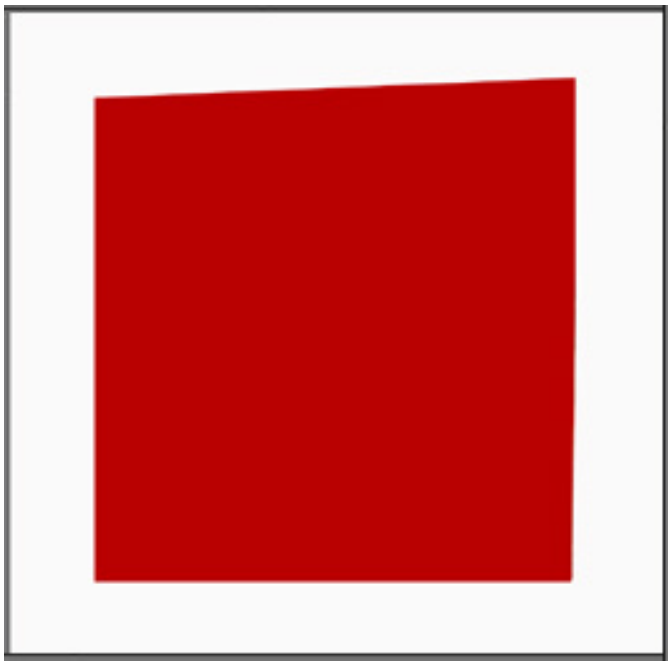

Photo 6: Malevich, Red Square: *Painterly Realism of a Peasant Woman in Two Dimensions,* 1915, oil on canvas, Russian State Museum, St. Petersburg

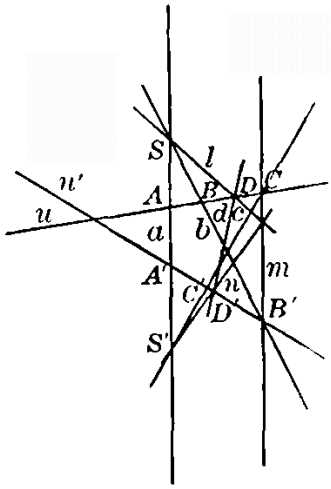

Figure 3: (a)Drawing shows all linear correlations result in the form of 'square' (resource www.gutenberg.org/files/17001/17001-h/17001-h.html 10.12.2012)

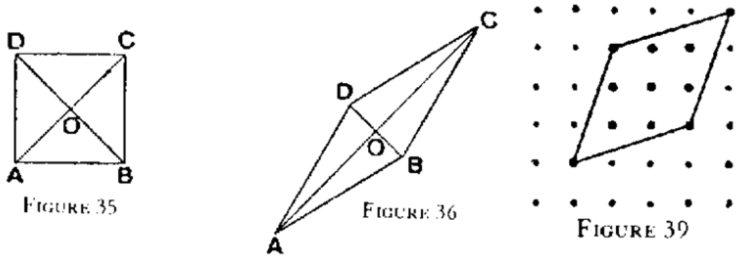

Figure 3: (b)Various *square* drawings from Hinton's book on projective plane[51]

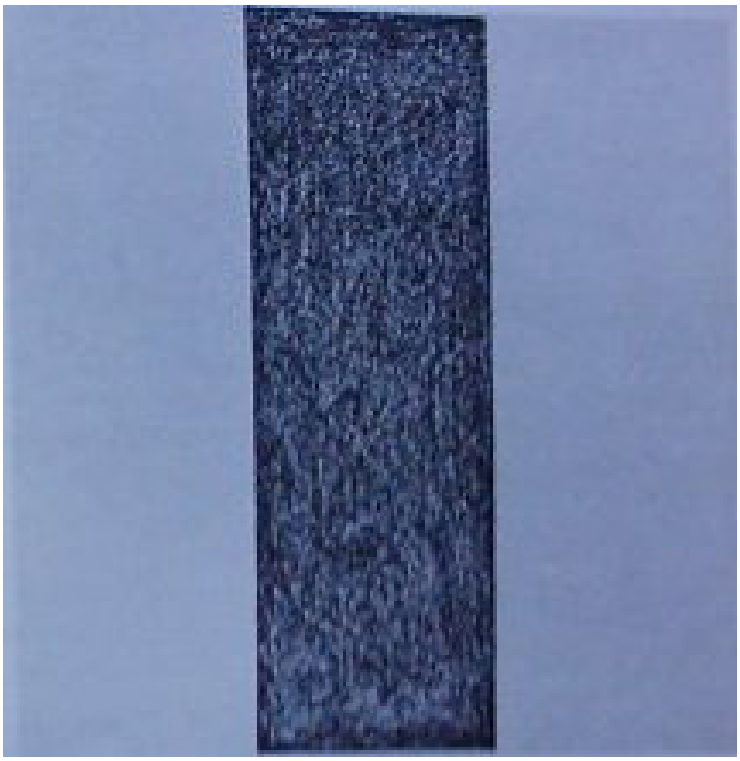

Photo 7: Malevich, *Elongated Black Square*, 1913, charcoal on paper, Kunst Museum, Basel, One of the drawings for ***Non-Objective World***

[51] Hinton, C. Howard, **The Fourth Dimension**, , Health Research Books, Pomeroy, Washington,1993 (url:http://books.google.com.tr/books?id=_ZG3MA1wvjIC&printsec=frontcover&hl=tr&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)

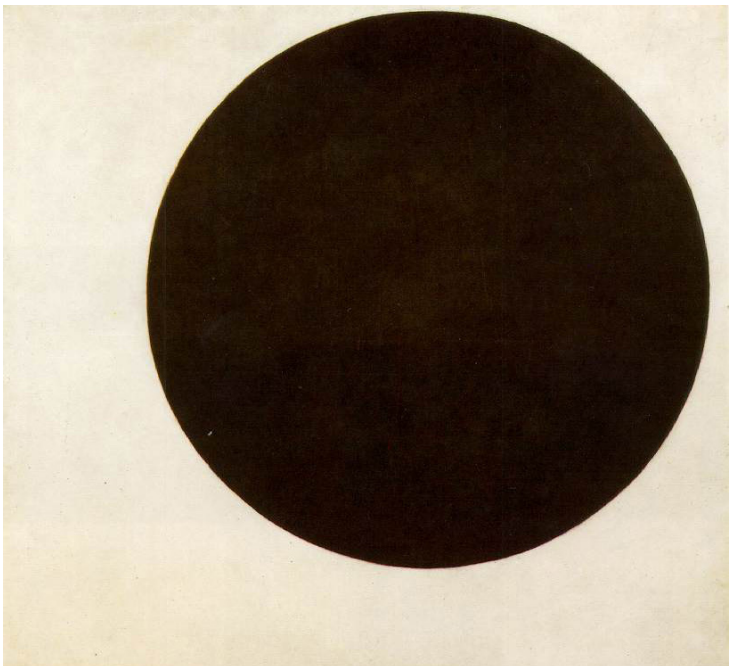

Photo 8: Malevich, Black Circle, 1920's, oil on canvas,
Russian State Museum, St. Petersburg

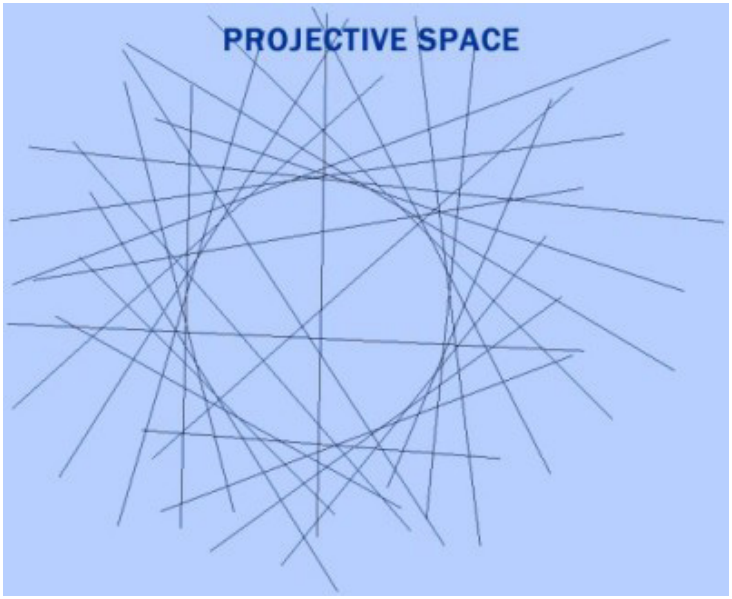

Figure 4: A Schema shows Projective Space
(resource: http://www.scienceofcorrespondences.com/projective-geometry.htm
10.12.2012)

Photo 9: Malevich, Man with a Sack, 1911-12, gouache on paper,
Stedelijk Museum, Amsterdam

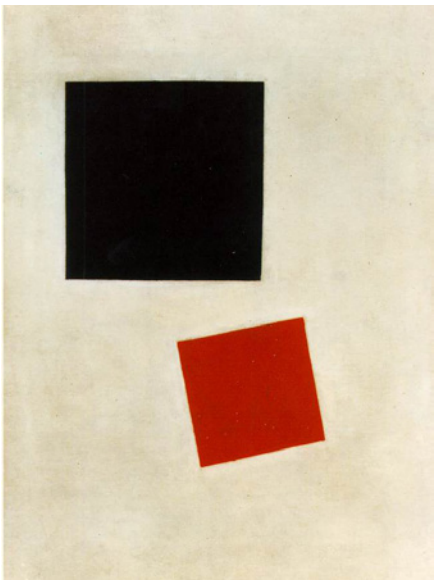

Photo 10: Malevich, *Painterly Realism of a Boy with a Knapsack* - Color Masses in the Fourth Dimension, 1915, oil on canvas, Museum of Modern Art, New York

Photo 11: Malevich, Painterly Realism of a Football Player-Color Masses in the Fourth Dimension. 1915, oil on canvas, Art Institute Chicago

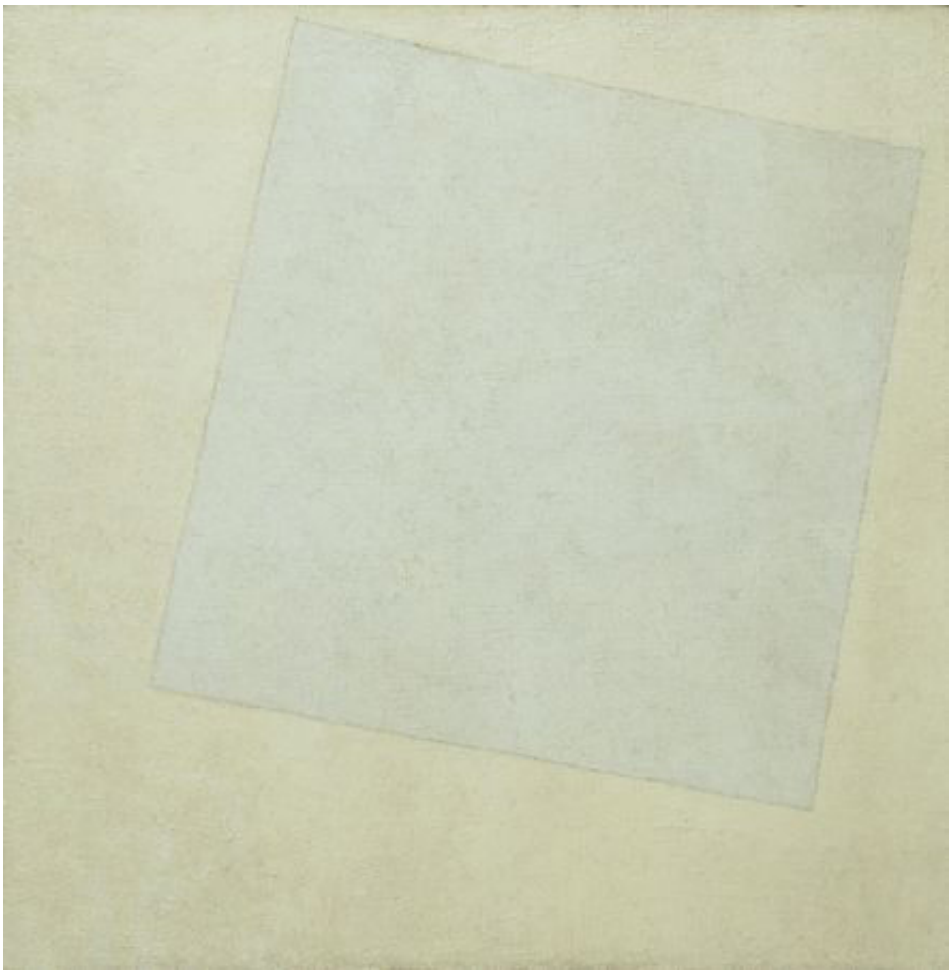

Photo 12: Malevich, Suprematist Composition:White on White, 1918, oil on canvas, MOMA, New York