

PROCEEDINGS ARTICLE

Geometrical Transformations and Plastic Effects in the Creative Process of Konstantin Melnikov

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ABSTRACT

Attention is paid to the very moment of the master's creativity while making form and meaning. The results of the creative process reconstruction proceeding through geometrical transformations and individual stages (flattening, coding, disjunction, naming, shifting and struggle of parts, balancing) are presented. The process is treated as a sustainable reproduction, cyclical actions repetition and working with meaning blocks – a design ritual. Geometric forms change and vary, but there exist the stable form sets, favorite objects in architectural history and past masters with whom he argues and dialogues. Multiple images influxes refer to various imagery domains (fairy-tale, folklore, ancient myth, engineering and mechanics). He borrows and rethinks the principles and schemes of shaping – migration in architecture. Spatial discoveries are transferred into other architects' objects. Regular process course is interrupted by alien inclusions, occasional invasions of natural elements (light, air, water) associated with plastic images and appearance of unexpected spatial effects, disturbance and finding harmony. A tumbleweed concept is proposed explaining the seed-ideas trans-temporal transfer – specific to the avant-garde way of reproduction.

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1. INTRODUCTION

Konstantin Melnikov addresses his son Viktor Melnikov: *Keep yourself in yourself or son! Follow in my footsteps, that is, in your own way* [1]. This implies to develop and maintain the artist's unique subjectivity, his small world integrity, commitment to own way of becoming. The master's subjectivity includes own design mythology and algorithm – creative process and sensitive response to external influences – external circumstances and changes in time and contexts of activity.

Melnikov's creativity was studied in various aspects. S.F. Starr and S.O. Khan-Magomedov recalled key points of his design mythology; described the revolutionary years and marveled at buildings effects. V.E. Khazanova talked about his clubs functional organization, typology and life. A.A. Strigalev published original texts, noticed his insights and unexpected spatial solutions caused the discussions in architectural circles [2]. O. Máčel and G. Garrido

analyzed the structural and typological contexts, construction and functioning of his time garages and pavilions [3,4]. Viktor Melnikov narrated Melnikov House spatial formation, mythology, scenario and habitus of existence [5,6]. Yu.P. Volchok reconstructed Moscow urban space surrounded Melnikov's projects, his being in the House semantic context and in dialogue with recent philosophical and engineering ideas [7,8]. M. Meriggi treated his work as closely related to Moscow landscape and *Ansambli*, continuing the settlement traditions specific for Russian countryside and considered it in the light of new *Green City* ideas [9,10].

The way to interpret architect's spatial formations and images can be found referring to the very moment of his forms generation. So we strive to reconstruct the creative process, has its own logical deployment, and acting as the pivot on which all accompanying images, ideas and associations are strung.

Konstantin Melnikov argues while conceiving a project, at the *initial stages*, there is no *general law* for

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the creative process sequence – it's rather a spontaneous act [11]. But he tries to comprehend and describe creative process initial stages in his lectures for students, represented as a logical sequence, including a set of geometrical forms and their transformations. The description also comprises *Volume, Form* (contrasting forms), *Space, Technological Processes* and building *Structure*, introducing odd mythical personages and circumstances [12].

2. ARTIST'S "PRE-WORLD"

The first sketches comparison shows that *hitherto unseen images* are linked in master's mind with historical architectural forms. The artist repeatedly refers to certain objects from architectural history (Egyptian Pyramid, Parthenon, Pantheon, Flavius Colosseum, St Basil's Cathedral). He combines these forms with images of dreams, fairy tales, folklore, ancient myth, elemental forces and natural ideas, inclusions from practical areas (Fig. 1). So, we assume the existence in Melnikov's creativity some stable integrity, special realm or something akin to what V. Khlebnikov called – *Pre-World (Do-Mir)*.¹

Pre-World images invariably glimpse, accompany and correlate with actual images of Melnikov's architecture. Semantic field images drawn from *Pre-World* are actively involved in the transformation managing and directing the creative process course. Melnikov grasps the *idea* of external, often non-architectural forms to discover in them his own *law and principle of construction, degree of perception and spatial effect* (Fig. 2A). The *laws and principles* forms contain come into conflict, lively dispute. Forms themselves find their relatives or rivals in history. Melnikov gets a kind of equalizing and differentiating mechanism compressing history. Such an equalizing/differentiating mechanism for the architect becomes a transfer *Old and New* forms into one time – contemporaneity and bringing them to the kind of flat, strictly geometric forms. This allows him to recognize and extract his own prototypes, analogues or antipodes from a wide variety of material. The first triangles, squares, circles, ellipses with which he begins creating new forms differ from the same formalist architects' figures not only by their particular artist's sharpness and inner tension, but because they only seem the purely geometrical figures. They contain the previous forms' meaning, *law and principle*, being conventionally

depersonalized and *mortified*, but in such a *mortified* existence they remain intelligible to architect.

3. STAGES OF MELNIKOV'S CREATIVE PROCESS

Fig. 2B refers to this Section 3 as a whole. The figure illustrates an approximate sequence of stages in the architect Konstantin Melnikov's creative process, that he reproduces time after time while proceeding his creative design activity. The stages presented in the columns are described sequentially in the paragraphs of this section.

Activating a Material Transformation System; Mortification; Empty Geometry

The arising of artist's special geometry is preceded by activation of specific vision system and mental volume flattening. There is a selective search for the principle of spatial structure, first leading to a form simplification. Former form is not just physically *flattened*, translated into a *flat, strictly geometric* state – its entire meanings richness is *flattened*, depersonalized and *mortified*. The historical form is taken out of its usual context, its image-principle is transferred to our time, and it loses its characteristic name. It becomes abstractly universal – a representative of a certain law. Formalized Egyptian Pyramid resembles a triangle, grasping in the scheme the pyramidal structural principle of both society and *tectonic masses (finished static form of Pyramid, granite)*. This stage of *empty geometry* is a key point of the *freezing* and simultaneously pre-existence of life in artist's world. The form is in its *geometricized* hypostasis – it seems everything that could be taken out by transfer into Euclidean language has already been thrown away, emasculated. The form seems a devastated, but not exhausted, it becomes empty, unfilled for a while. The temporal semantic *geometric void* awaits and requires filling with other, perhaps opposite, content. A *mortified* volume is able to *awake* for a new life and unfold by a row of different meanings, retaining something of its former existence.

Coding

The coding stage creates an abstract-universal basis. *Flattened* and reduced forms record their prehistory, accumulate information. The sense-law of former full form is as if rolled up, compactly fit, contained and imprinted in a flat geometric figure – a kind of geometric cryptogram.

1. According to Viktor's stories, his father was acquainted with the work of futurist poets and loved it.

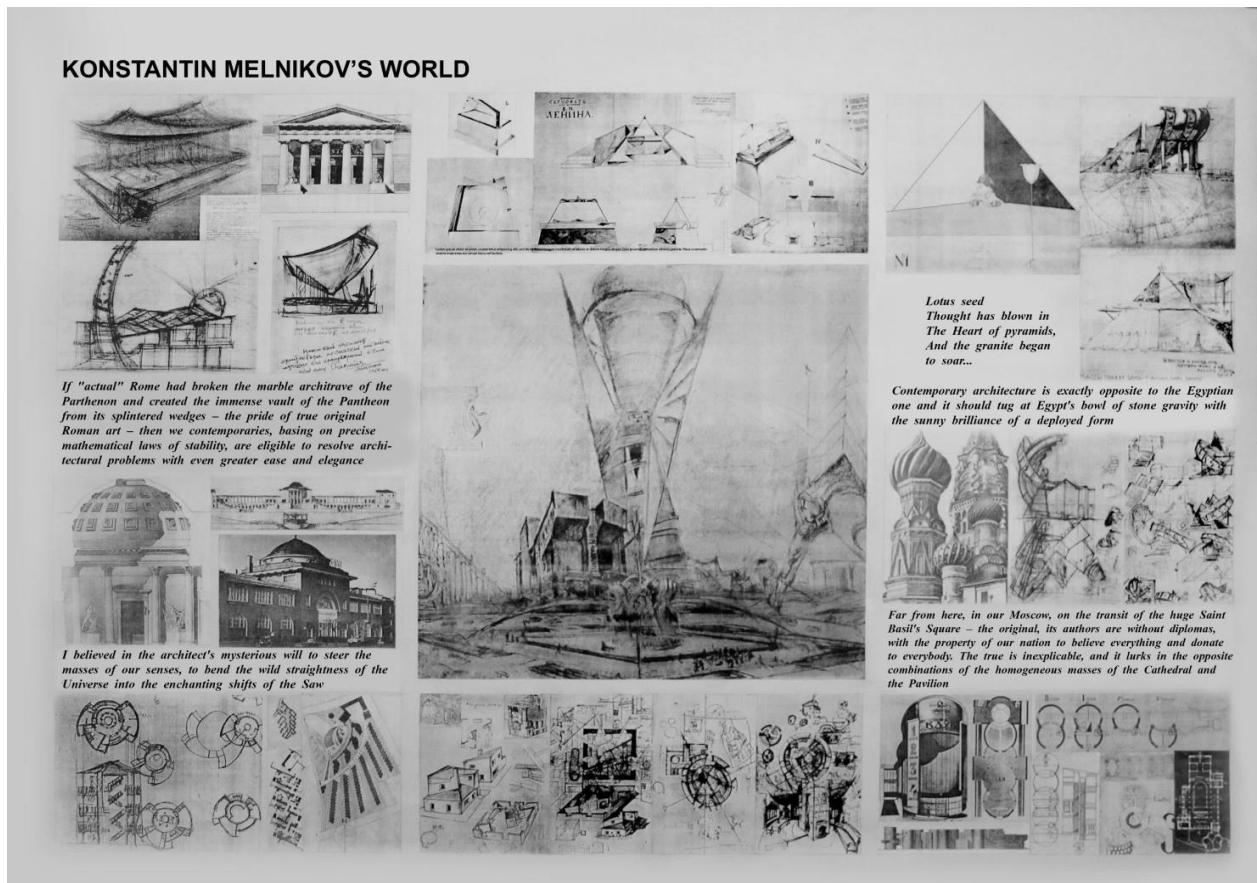


Figure 1. Konstantin Melnikov's World.

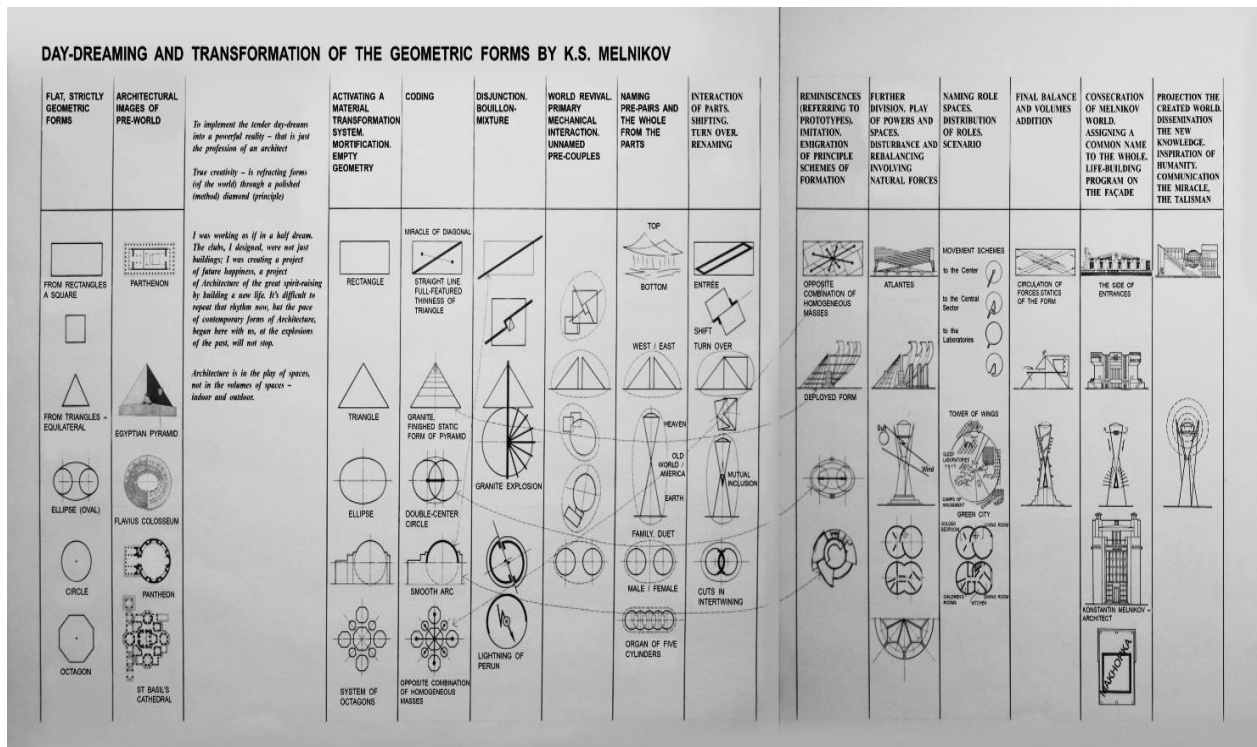


Figure 2. Pre-World (A) and Creative Process of Konstantin Melnikov (B).

The wizard code fixes unexpected form properties. Melnikov writes it down in special formulas: SYMMETRY beyond SYMMETRY, UNLIMITED elasticity of DIAGONAL, FULL-FEATURED thinness of TRIANGLE, DOUBLE-CENTER CIRCLE. Melnikov imagines the Colosseum as a *flattened* form (a kind of code entry): *This is the famous Flavius Colosseum – a Double-Center Circle, i.e. an ellipse, with perfect acoustics, and in general the whole its form is constructed perfectly in a rational way...* The encoded pure geometrical idea of the *Double-Center Circle emigrates* in a simplified kind, forming a basis for the Workers' Village design. Information superimposed on a geometric abstract universal basis, taken as a medium, is expressed by the artist's secret conditional language (S.M. Eisenstein) – semi-word, semi-gesture, semi-hint. It can be decoded and subsequently, translated into a common language. *Here lays the realm of dormant powers [of the future architectural volume], where all the beginnings of being* (N.V. Baschmakoff) of [Melnikov] world are hidden.

Disjunction; Bouillon-Mixture

The *Old* form is not simply anonymized, simplified, *geometrized*, stripped its name, but – and this is the core, the quintessence of Melnikov vision – shattered, cut, broken into pieces, mechanically doubled and multiplied. The disjunction, disintegration of the whole are those imaginative transformations that equalize and paradoxically link historically dissimilar forms. It's a necessary moment for the realization of imaginative transitions from one form in history to another, a type of peculiar *emigration of Architecture*.

Ancient Rome broke the architrave of the Parthenon and from the splintered wedges folds the vault of the Pantheon that shows how the *straight line becomes a smooth curved arc*. The diagonal split motif is evident in the Paris Pavilion, a shifted cut – in the boutiques sketches for the Novo-Sukharevsky Market. Revived by the principle of fragmentation – a rearranged *simple geometric form*, taken from the ruined Parthenon and fit into the Pantheon and then into the Pavilion – the *Temple to the [Goddess] Architecture resurrects as a Phoenix*, as a whole – a masterwork, the spectators *admire as a miracle*.

The *Forces of Nature (Elements)*, associated with the images of folklore, assist the architect's efforts (*Lightning of Perun* breaks the emblem of *Makhorka* Pavilion). The figuratively imagined destructive energy of the vital growth placed in the *body of the age-old canon – the Lotus Seed – explodes the granite of the Egyptian Pyramid*. The *seed germs (Semidoles)* activate destructive animation of the shell-container and the cylinders doubling in the sketches of Melnikov House. The stage of disjunction or *explosion* is accompanied by uncertainty, *suspension, flightability,*

floatability and diffuse mixing of parts-pieces of the former whole or a *floating amoeba-protoplasmic state in a liquid environment* (S.M. Eisenstein). This stage is characterized by a kind of *bouillon-mixture*, consisting of split products. This is the motif of the unfolding of the *bowl of the Egyptian Pyramid* in the Palace of Nations design (or the *Monument of Time*). The meaning of whole in the *bouillon-mixture* is lost, but parts free recombination and rearrangement in search for a new stable unity are possible.

World Revival; Primary Mechanical Interaction; Unnamed Pre-Pairs

Mortified and *dormant* form *awakens* to its new existence, to a new meaning. It stimulates development, motion and unfolding of potential energy of *life in the animated volume*.

Free fragments of *flat strictly geometric forms*, taken from the *bouillon-mixture*, join together to form new whole, still unstable units. Unnamed *pre-pairs* (unstable *pairs* or *duets*) are formed. One figure can be replaced by another, a triangle by a circle, from a wide range of regular figures. The relations between figures in the pairs are not clear; the names (triangles, squares, circles) are not vivid, not memorable, but pre-pairs can create vivid, stable and expressive groups. One can note the selection and replacement of figures in the *pre-pairs* in the first sketches of Melnikov House. Successive combinations are traced in the plan: square + square, oval + squares, oval + rectangle, circle understood as a projection of an egg and intersection of circles. Each geometric combination suggests its own scheme of inner space development. Tested topological schemes (oblique rectangular layout in the two-square variant, sector division of the oval variant) do not disappear utterly, remain in memory and are reproduced in the final layout version. Master is faced with problem of clarification the relationship between parts and whole and identity/difference, hence the competition and *struggle* in new volumes.

Naming Pre-Pairs and the Whole from the Parts

The naming act helps to differentiate difficult-to-distinguish parts, to solve the identity problem. The initial distinctive impulse leads to giving meaning to the whole, introducing the artist's mythology into the project and embodying *strictly geometric* constructions. He creates antithetical pairs of names in order to sharpen the conditions of comparison and determine the nature of the connection and interaction of entities in the *pre-pairs*. He uses names to give the whole and its manifestations recognizability, memorability and concreteness. The contrasting *pairs* of names are assigned to homogeneous geometric figures: *Masculine/Feminine;*

Heaven/Earth or Supportive/Supported (theme of high flight, soaring, airiness); Top/Bottom; East/West; Old World/America. Relations of names in pairs and parts in the structure are contradiction and confrontation. They contain entire intrigue of future spatial game and development of whole. Name oppositions start working; they are required to convert the structure from its geometric state, expressed by a gesture, a hint, to a new qualitative level – a specific volume-planning solution. The architect's *World-Building* and transformation of *tender daydreams into a powerful reality*, idea into structure is getting fulfilled. Melnikov continues naming parts and gives a common name-metaphor for the whole: *Duet* (Melnikov House) or *Organ of Five Cylinders* (Zuev Club). Parts and the whole are specified, acquiring their own face and state of symbolic unit in his system, fixed in memory and repeated (automatically) in subsequent projects. Symbolization in the system is the starting point and basis for created objects functionalization. The names prescribe the building function, in general predetermine the future functional volume zoning and suggest further topology – the rooms, places, things and people location.

Interaction of Parts; Shifting; Turn Over; Renaming

Further form development consists in interaction, intersection and interpenetration of parts (*mutual inclusions, cuts in, intertwining*) or in their *shifts* or *turns over* in relation to the original or customary position (volume shifts in *Makhorka* Pavilion and Novo-Sukharevsky Market; inverted Pyramid in the Palace of Peoples). Specific spaces (general, boundary, intermediate) without a specific owner or function are formed at the joints, in the boundary zone of parts intersection and interacting. Buffer spaces, formed in the case of a shift or turn over, can be additionally named (*ENTRÉE* – the inscription in the Paris Pavilion drawing). Different poles of the essence are distinguished associated with a pair of names in context of *cut* volume corresponding to its *shifted, inverse* or opposite beginnings. They are supported by solutions contrast tectonically or topologically and creating a maximally sharpened relationship between the unity extremes. The interaction of parts and the polar differentiation of the beginnings in a single essence launches, *winds up* their inner struggle in the volume, *awakening the vital power* of each.

Melnikov writes: *In the midst of the two Worlds is the Columbus Monument, which, by connecting them, has awakened the vital power of America.* The awakened beginnings give a new quality to the whole incorporating them. The result is a double-edged, internally-stressed *super-form*. A new name is expected, capable to embrace the newly emerged

properties, vividly expressing the acuteness and ambivalence of the essence. The search involves images day-dreams and suggests the external names and working metaphors (*Saw* – Workers' Village). Further design operations are aimed at expressing the extremes *struggle* between individual spaces, taking place at different levels of building structure.

Reminiscences (Referring to Prototypes); Imitation; Emigration of Principle Schemes of Formation

The figure turns into volume. He faces the problems of form organizing that becomes a thing, a building. This makes him turn to architectural prototypes, analogues and antipodes, abandoned earlier and quasi-forgotten for a while. Parts-beginnings in a new form remember their past and relatives or eternal enemies in *Pre-World*. Kinship, similarity and opposition are not established by visual similarity, but through reproduction (or negation) of dynamic relationship of places, forces, masses and parts, already resolved earlier in a historical precedent. Information on the prototype (analogue, antipode) is *decoded* from a record in the architect's *secret* language into the generally accepted iconicity of the architectural drawing. The level of *eternal laws* of construction of forms and their interaction is involved. It's getting clear what was *encoded* earlier. In his mind, St Basil's is presented as an *opposite combination of homogeneous masses* and its schematic form is compared and becomes the *original* to which the Paris Pavilion *echoes*. Artist looks the forms through the *law and principle* of their structure. He derives a vast set of examples and trans-temporal series of *emigration* of the basic form-making schemes in architectural history and strives to continue these series by his buildings, as if carrying out a further *emigration of spatial inventions and miracles*. Trans-temporal lines in architectural history become visible: the Egyptian Pyramid-Colosseum-Workers' Village (straight-curved-bent line); the Parthenon-Pantheon-Paris Pavilion (disjunction, disintegration of former whole and composition of new one).

Further Division; Play of Powers and Spaces; Disturbance and Rebalancing Involving Natural Forces

The poles and buffer spaces in the form are defined; further division continues at the volume junctions. He differentiates spaces and distributes inter-polar tension between them. From different positions of viewer, the building space is perceived as uneven and heterogeneous. He distinguishes kinds of form depending on various *perception degrees* and visual *effects* they produce. Space acquires visual gravity. In

some places, there is a *condensation* or, conversely, a *rarefaction* of space (*condensed* space in the *Makhorka* Pavilion core). Elsewhere, there is a torsional bend in *an arc* (Paris Pavilion sketches). Another option is *vibration*, *expansion* and *constriction* of space (in Melnikov House). In the conceived *stereometric volume*, an active *game of powers and spaces* unfolds. As a result of the *play*, building *balance* and tectonics (visual and physical) are often disturbed, and collapse and disintegration of parts are possible. To maintain a stable *balance*, a system (even formal) of *counterbalances* is to be introduced. Often requires the involvement of external *Natural Forces* (*Sun*, *Water* and *Wind* in Columbus Monument) or using the energy of *Greek Athletes petrified* during their highest effort (keeping the Palace of Peoples *Bowl* from falling to pieces)² (Fig. 3). But the opposite can also happen, when external *Natural Forces* disturb the building *balance* and threaten to overturn it. Adjustments are made to balance external pressures and building *internal reinforcement* is tightened or additional supports are installed in Garage over the Seine.

Naming *Role Spaces*; Distribution of Roles; *Scenario*

He feels the spatial unevenness revealing in the volume. *Condensations* and *rarefactions* of space receive their boundaries by the rooms (*compartments*) location, are formalized into geometric outlines and a set of special material objects (stairs, ramps, stoves). Defined spaces are no longer associated with abstract and purely authorial names (*Male/Female*), but with the names of *role spaces* (rooms), concrete and close to understanding of future building users. Clear only to the master, written in his *secret conventional language* of semi-gesture, semi-hint and geometric figures combination – this conventional record is now transferred to the generally accepted concepts of bedrooms, hallways, staircases. All this only seems familiar but is not, rather something *marvelous* (*Golden Bedroom* in Melnikov House). Impossible, incomplete recoding, the combination of the familiar and the out-of-this-world, the external creates the overwhelming Melnikovian effect of *communication the miracle, the talisman* and a sensitive fairy tale expectation.

Dynamic interrelation, initially abstract play of *places, forces, masses* and *parts* supplemented by the room names, turns into a dynamic game of qualities valuable for user – accessibility, coherence and control over the situation. Qualities are assigned to individual rooms and objects and determine the visitors' behavior (stove, stairs, monument are centered; bedrooms, sectors come from the center). As a result of the *struggle* for space and the volume *adjustment*, the distribution of *role spaces* is formed; they are ranked according to their gradation, weight or importance. Finally, they are closely linked by form, location and mutual combination and work together in every *game episode* that occurs when the viewer passes inside the building, in every *mise-en-scène* of this performance, at every stage of the action. One gets the feeling that the building structure conceals a *scenario* of future action, skillfully written and *staged* by the artist. Volumetric *scenario* inevitably draws visitors into action (concealment-performance game).

The word enters into a strong, comprehensible, easy to read and remind interaction with the building topology and geometry. Semantic association of word and visual image acquires a state of a symbolic unit not only for the author, but at social convention level.

Final Balance and Volumes Addition

He begins to settle the building tectonic structure. The building was kept from disintegration by external (*natural*) *forces* and mental interference – now this temporary unbalanced state has to be corrected. Improvised supports, tension cables and ropes are removed. So, the building is in an unbalanced state and requires the addition of counterweights to keep the structure in balance, creating a steady tectonic image. The finished whole building is capable to maintain its own balance both physically and visually. An overweight in one part or floor is compensated by a reciprocal overload in another part or floor. The *Cone of America* enters the cone of the *Old World*. *Cone stalactite* meets *Pyramid stalagmite* – a sarcophagus with ashes of Columbus. A spiral ramp running along the outside of the *Old World Cone* in turn enters the *New World Cone*, forming a space inside. Monument focal point is shifted down (due to the sarcophagus location), but it's balanced by the possibility of continuing the ascent to the *Pan American Union* dome. *Stereometric forces struggle* in the building finally freezes in a *tense dynamic balance*.

2. Socrates: I should like ... to tell you how I feel about the State which we have described. I might compare myself to a person who, on beholding beautiful animals either created by the painter's art, or better still alive but at rest, is seized with a desire of seeing them in motion or engaged in a struggle or conflict to which their forms appear suited [and to imagine how they reveal the forces that constitute their bodies]; this is my feeling about the State which we have been describing. (Plato, *Timaeus*, 19b)

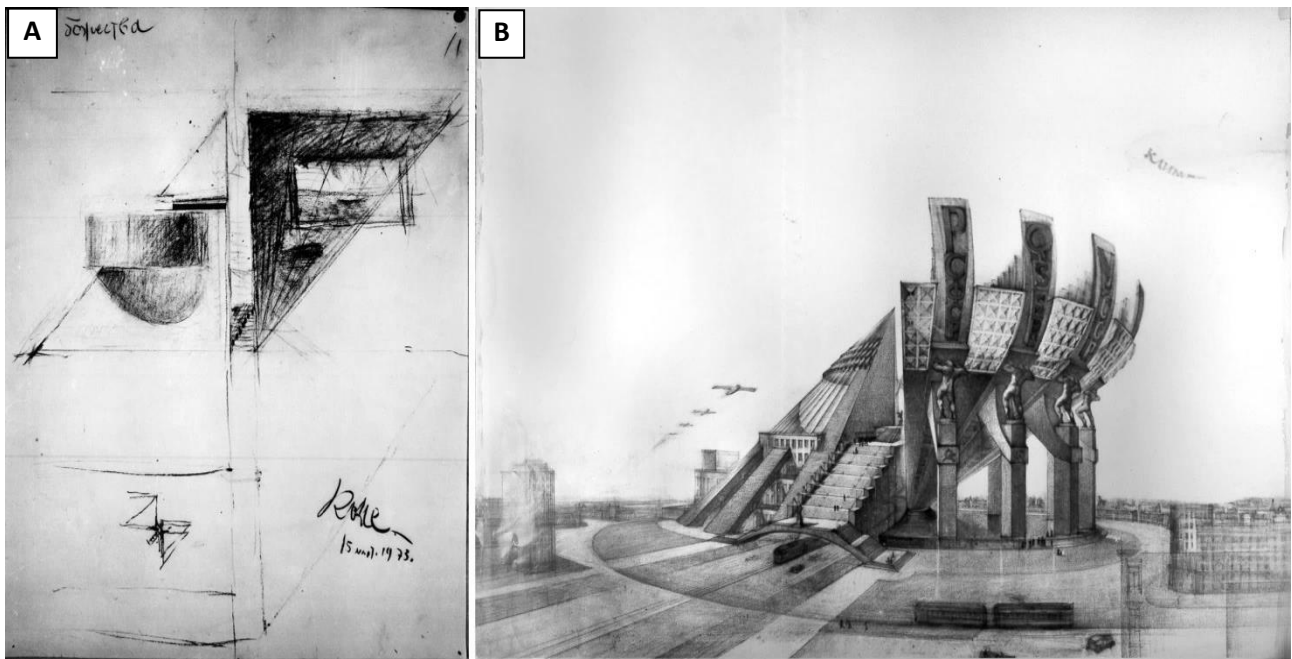


Figure 3. Konstantin Melnikov project for the Palace of Peoples in Moscow (1931–1933). Sketch A: *Two Divinities* ; and B: prospect in Moscow context ([1], pp. 93).

Consecration of Melnikov World; Assigning a Common Name to the Whole; Life-Building Program on the Façade

The whole building is balanced; *roles* are assigned to individual spaces; functions are recorded by giving commonly understood names. Building should receive a name equally clear to everyone. Name should concentrate entire future life-arrangement program, defining the purpose and nature of future building use. A way of program comprehending and a *key to its code* must be given.

Object's name, emblem-sign is often placed on the building façade. The motto-name is actively proclaimed, becomes a kind of building visiting card. It gathers entire necessary information about the building at one point. This is an inscription on the House – *KONSTANTIN MELNIKOV – ARCHITECT*. House is identified by its name, merges with its owner-creator and expresses his character and vision of architecture. The motto-inscription defines a family life, *agreed to the sacrifice*, when life in a new volume serves as an example of the *Idea* embodiment for endless visitors. A slightly tensioned ribbon with a slogan – *Leningradskaya Pravda* – is attached to the façade *turned a full circle* and demonstrates the basic principle – ascent torsion. As the *Lightning of Perun* symbolically breaks the tobacco industry circle emblem, so the word *MAKHORKA* visually cuts across the square diagonally expressing the primary *Idea* of the Pavilion spatial structure. The poster – *Plant a*

Makhorka – calls for action and a direct instruction on the program implementation. Bakhmetievsky Garage, besides its name, receives a clock and a slogan on the pediment – *THE SIDE OF ENTRANCES* – emphasizing originality and convenience of entrances stepped in plan and allowing buses to save time for parking. Knowledge of code symbolism and peculiar geometry allows comprehending artist's space in its relation to design mythology and to get closer to semantics of miraculous dream and *Pre-World* images. Melnikov himself acts as medium, guide and translator to his own wonderful spatial *World*, when he tries to express inexpressible verbally or with gestures.

This stage in the creative process is accompanied by an act of *consecration* and *resurrection* of the created *World* with intervention of the *natural element* – *Water*. Columbus spirit reincarnates within rainwater, washing of the sarcophagus with his ashes. A *cleansing rain* accompanies the architect's last look at his finished creation – Paris Pavilion.

Projection the Created World; Dissemination the New Knowledge; Inspiration of Humanity; Communication the Miracle, the Talisman

The final and resulting point in Melnikov's creative act is the dissemination of information about the realized object and the author's *World*. He tries to express and develop his small world in his objects, to project its laws and achievements onto a wider context and other architectural objects, onto entire humanity. The

images, schemes and principles found by him must emigrate and be reborn in the other architects' objects, in different countries. The building creation is a kind of *mystery*, always a *miracle*, the discovery of non-Euclidean geometry and the building itself is a *talisman*, a sacred symbol meant to influence and change the surrounding. Columbus Monument should periodically *send out its waves and inspire humanity* to innovate, create, search, stimulate the inventors and change the world. Melnikov House *magnetically attracts pilgrims* looking for the quintessence of daydreams in it. Paris Pavilion draws a crowd, excites, stirs up and sets the mood and rhythm of people's life.

What is revealed to the architect in a creative act-half-dream, in a state of half-reality-half-dream, when ordinary things suddenly appear with unexpected facets and reflections of unusual *Pre-Worldly* spatiality – the spectators recognize and solve as a riddle. The artist rejoices in their ingenuity and penetration into his space.

4. TUMBLEWEED CONCEPT

Tumbleweed concept (complementary to Deleuze's *rhizome*) is introduced to explain how a break from traditional foundations and trans-temporal transfer of *seed-ideas* can occur, fragments of different contexts and spatial formation schemes, without inheritance, but with subsequent rooting in another cultural soil; specific to the avant-garde way of reproduction. *Tumbleweed* ball of heterogeneous dry plants is rolled by winds over many kilometers of steppe, tearing off other plant parts along the way, disseminating seeds and germinating as if the circumstances are suitable. Such is the *tumbleweed* concept in avant-garde culture, crossing the *steppe of time*, dying and being reborn through the centuries, and affirming a continuous dialogue of creators-inventors and ideas dispute and transference, trans-temporal resonances and development with ongoing change (basing on ideas of V. Khlebnikov, V.S. Bibler, M.K. Petrov, Yu.M. Lotman). Flying *tumbleweed* ball, detached from earthly circumstances, allows each avant-garde creator to maintain his recognizable subjectivity in their heterogeneous community – such VKHUTEMAS was for them.

5. PLASTIC EFFECTS

Colleagues (I.V. Zholtovsky, V.E. Bykov) noted his special talent for original plastic effects, the *primacy of plastic image over function and structure*. Plastic images refer to various imagery domains – fairy-tale, folklore, ancient myth, engineering and mechanics. Melnikov drawn geometric forms, ancient sculptures

and sitters in a vertiginous perspective with a special *degree of perception* creating spatial effects and *felt Beauty from the unexpected juxtaposition of simple forms*. Mechanical action generates plasticity, a dynamic image of action – he built a watermill kinematic model and then realized the *Idea of Water* drive formed Columbus Monument.

Melnikov did not sculpt plastic forms but worked as an analyst and designer. *He saws off or prunes forms with large geometric planes, straight, oblique, polygonal, treats them as bodies of rotation*, using the *Ray of Light* or vital energy (*Lotus Grain*), cutting, transfiguring and reviving forms. He translates subtle diverse impressions of images into geometric forms language and identifies the *laws immanent to geometric forms and their combinations* and *qualities* useful for architectural image creation. He follows the *Principle of Dynamism and Transformation: everything in composition is in ongoing motion and struggle*, leaving traces and creating aesthetic effects. *In search for proportionality in composition, he relies on an irreproachable natural proportion sense, defining the dynamic forms ratio without a compass* [13] (Fig. 4).

6. CONCLUSION

There is presented a processual approach developed applicable to the study and interpretation of architectural phenomena, used for reconstruction the architect's creative process and revealing imagery, semantics and spatial formations arising while creative activity [14,15]. Melnikov's creative process has its own deployment logic, in which stable and cyclically repeated stages are distinguished – a design ritual, akin to a traditional one (V.N. Toporov). Its course is often disturbed by occasional events and external inclusions of bright, memorable images taken from various semantic fields. These inclusions bring a plastic character, change and enrich the desired architectural object plastic structure, giving it particular meanings and mood. Plastic images and images of action fit in and arrange the forming architectural object structure, affect and create its general image and plastic effects recognizable to viewers. Mechanisms of trans-temporal ideas and images transfer (without imitation) characteristic of avant-garde cultures and associated with the introduction of the *tumbleweed* concept are disclosed.

AUTHOR'S CONTRIBUTION

This article is written by the author independently and represents his theoretical study of the heritage and design actions of Russian avant-garde masters, in particular Konstantin Melnikov's creativity [16,17].

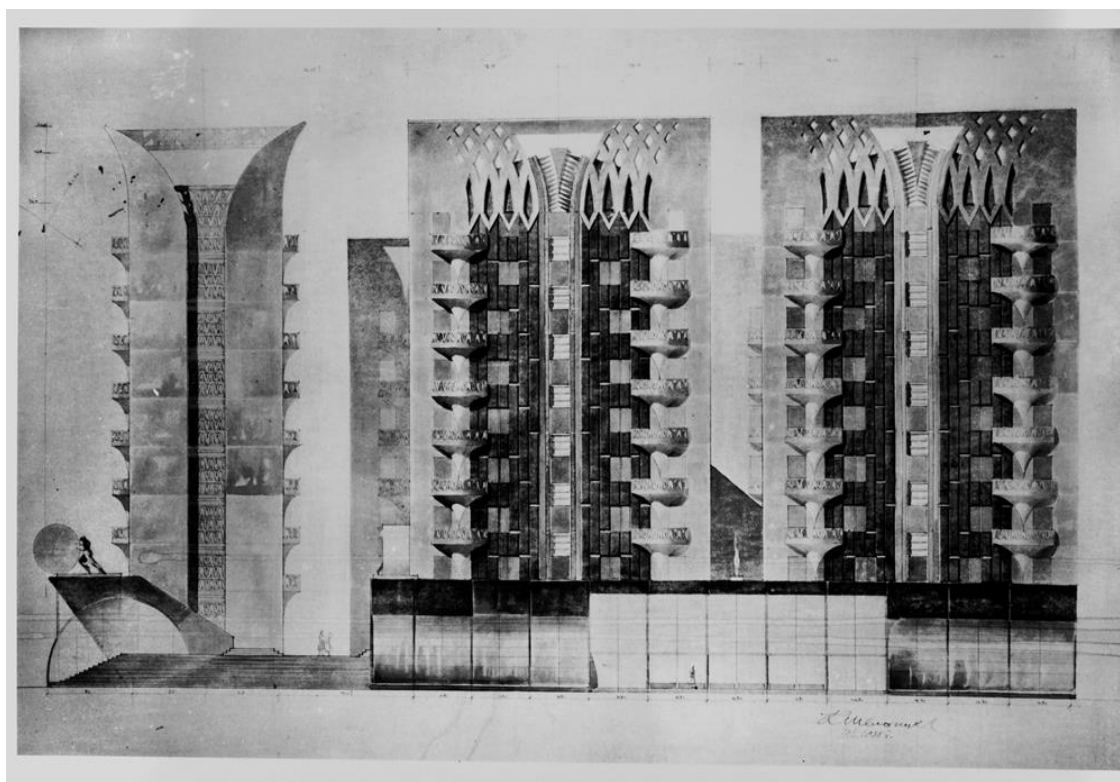


Figure 4. Konstantin Melnikov residential housing block for workers of Izvestiya newspaper in Moscow (1936). *"This is a dwelling house, and life is like a flower"* (K.S. Melnikov, [13], pp. 91).

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