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Editor

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# Contents

## Keynote Lectures

<b>Four Dichotomies on Digital Environments Between Art, Heritage and Education: Opening Address</b> .....	3
Alessandro Luigini	
<b>Virtual Reality: The Use of Images for the Interpretation and Experience of Culture and Heritage</b> .....	13
Eugene Ch'ng	
<b>The Digital Museum as a Third Space: Giving Shape to Conceptualization</b> .....	19
P. G. Rossi and C. Panciroli	
<b>Visitor's Approaches, Personality Traits and Psycho-Physiological Well-Being in Different Art Style Museums</b> .....	27
Stefano Mastandrea	
<b>New Interoperable Tools to Communicate Knowledge of Historic Cities and Their Preservation and Innovation</b> .....	34
Andrea Giordano	
<b>New Media Exhibit at the Musée des Civilisations de L'Europe et de la Méditerranée</b> .....	44
Franz Fischnaller	
<b>Digital Technologies in Heritage Conservation. Methods of Teaching and Learning This M.Sc. Degree, Unique in Germany</b> .....	53
M. Hess, C. Schlieder, A. Troi, O. Huth, M. Jagfeld, J. Hindmarch, and A. Henrich	

**Visual Heritage**

**Structure from Motion Systems: Application Possibilities in Education and Cultural Heritage. New Approach Methods to Education and Preservation** ..... 67

Marco Felli

**Video Games for Learning Projective Geometry: Analysis of Virtual Spaces Through the Disciplines of Representation** ..... 76

Ramona Feriozzi and Alessandro Olivieri

**Disciplines of Representation and Photographic Culture. The Strategic Plan for Photography Development in Italy 2018–2022** ..... 86

Antonella Salucci

**Venetian Perspective Boxes: When the Images Become Environments** ..... 95

Fabrizio Gay and Irene Cazzaro

**Automatic Image Recognition. Applications to Architecture** ..... 106

Igor Todisco, Geovanna Esther Menendez Giglio, and Ornella Zerlenga

**Kosmesis Design. Eco-nomica-logical Cultural** ..... 116

Maria Dolores Morelli

**Communication**

**Communicating the Heritage, a Transmedia-Driven Approach** ..... 129

Matteo Moretti and Gianluca Camillini

**Representing Heritage on the Web. A Survey of Online Platforms to Communicate Tangible Assets** ..... 138

Giovanni Caffio

**Digital Exploration in Archival Heritage. Research for the Knowledge, Use and Communication of Architecture Archives Through Digital Representation** ..... 147

Caterina Palestini

**PUDCAD Project. Towards a CAD-Based Game for the Implementation of Universal Design Principles in Design Education** ... 154

Giorgio Buratti, Giuseppe Amoroso, Fiammetta Costa, Margherita Pillan, Michela Rossi, Ozge Cordan, and Demet Arslan Dincay

**Digital Heritage 1**

**3D Printing Technology, Video Mapping and Immersive Audiovisual Scenography for Heritage Museum Exhibits** ..... 165

Franz Fischnaller and Francesca Fatta

**Digital Survey and Parametric Representation. The Hypoglies of Civita di Bagnoregio** ..... 174  
 A. Maiolatesi

**A Journey of Valorisation from the Sacred to the Secular. The Oratory of Sant’Antonio Abate in the Village of Mele (Genoa-Italy)** ... 184  
 R. Vecchiattini and C. Battini

**Project and Representation. A Dialogue for the Campania Hinterland** ..... 194  
 Lorenzo Giordano

**The Digital Platform of the *Gabinetto di Fisica* of the Gymnasium School Paolo Sarpi in Bergamo: A Case Study Between Research and Didactic** ..... 202  
 Alessio Cardaci, Antonella Versaci, and Pietro Azzola

**When the Future Is the Past. Digital Databases for the Virtualization of Museum Collection** ..... 212  
 S. Parrinello, F. Picchio, and A. Dell’Amico

**Education**

**The Pollicina Project: A Collaborative and Educational Social Suite to Build Cultural Itineraries** ..... 225  
 S. Calegari and M. Dominoni

**The District as a Heritage Asset to be Explored. Pathways to Discovery and Appropriation in Bicocca** ..... 235  
 Franca Zuccoli and Alessandra De Nicola

**Children’s Color Experience Across the Virtual and Material Dimensions. Reflections Based on Experimentation** ..... 243  
 A. Poli and F. Zuccoli

**Art-Based Methods. An Approach to Educational Research** ..... 249  
 Elisabetta Biffi, Nancy Gerber, Jacelyn Biondo, and Franca Zuccoli

**Using Cinema and Digital Technologies in the Classroom to Construct Spaces for Learning About Cultural Heritage** ..... 253  
 A. Poli

**Chromatic Dimensions as Heritage of the Project Culture. *Cromo: Interactive Teaching Manual*** ..... 261  
 Federico O. Oppedisano

**Semantic Models for Education. Representations, Between Research and Didactic, for Architecture and Design** ..... 271  
 Maurizio Unali

<b>European Digital Library for the Intercultural Dialogue. Interactive Environments for Education, Cultural Heritage and Civic Empowerment</b> .....	279
Giuseppe Amoruso and Valentina Battista	
<b>Visual Culture and Cultural Heritage: ViC-CH a Synthesis Between Digital Representation and Heritage Experience</b> .....	288
A. Luigini, G. A. Massari, S. Vattano, C. Pellegatta, and F. Luce	
<b>Augmented Reality</b>	
<b>Remediating the Historical City. Ubiquitous Augmented Reality for Cultural Heritage Enhancement</b> .....	305
S. Brusaporci, F. Graziosi, F. Franchi, and P. Maiezza	
<b>Digital Interactive Baroque Atria in Turin: A Project Aimed to Sharing and Enhancing Cultural Heritage</b> .....	314
V. Palma, R. Spallone, and M. Vitali	
<b>Representing and Communicating the Cultural Heritage Construction of Virtual Urban and Architectural Scale Places for Learning</b> .....	326
Alessandra Meschini and Ramona Feriozzi	
<b>The Augmented Reality as an Instrument for the Representation/ Visualization of Architecture</b> .....	336
Mirco Cannella	
<b>Digital Cultural Heritage: From Educational Experience to the Artefact in Augmented Reality</b> .....	345
C. Panciroli, A. Macaуда, and L. Corazza	
<b>SAR for Kids: Spatial Augmented Reality as Tool for Art Education</b> .....	355
Daniele Rossi	
<b>Art upon Art: The Spatial Augmented Reality as New Value for Contemporary Art and Educational Tool for Art History</b> .....	364
Donato Maniello	
<b>Augmented Cityscape: The GLOWFestival Case as Valuator of the Territory Cultural Heritage</b> .....	374
Donato Maniello	
<b>Digital Heritage 2</b>	
<b>Digital Museums, Digitized Museums</b> .....	387
M. Lo Turco and M. Calvano	

<b>Drawing and Project at the VChUTEMAS. Graphic Interpretations . . .</b>	<b>399</b>
Francesco Maggio and Starlight Vattano	
<b>Coherence of Visual and Epistemic Elements in Multimodal Artifacts for the Cultural Heritage Education. The Case Study of the Vitruvian Man by Leonardo da Vinci . . . . .</b>	<b>411</b>
Giampiero Dalai, Berta Martini, and Luciano Perondi	
<b>Interactive Installations and Suggestive Experiences. A Project for the Home of M. Obellius Firmus in Pompeii . . . . .</b>	<b>422</b>
M. Capone and D. Palomba	
<b>The Drawing and the Virtual Model of the Monastery of Archangels Michael and Gabriel in Kosovo. Survey and Modeling . . . . .</b>	<b>432</b>
Luigi Corniello, Enrico Mirra, and Gëzim Hasko	
<b>Amazon Mechanical Turk . . . . .</b>	<b>439</b>
Francesco Cervellini	
<b>Art Mistakes. . . . .</b>	<b>444</b>
Valeria Menchetelli	
<b>Museum Ideas</b>	
<b>Inclusive Memory. Museum Education to Promote the Creation of a New Shared Memory . . . . .</b>	<b>459</b>
Antonella Poce and Maria Rosaria Re	
<b>In Search for Recovered Object. Creative Heritage as the Aesthetic, Pedagogical and Desire-Related Outcome of “Fake” Museum Art . . . . .</b>	<b>469</b>
Emanuela Mancino	
<b>Through the Museum. New Models of Communication . . . . .</b>	<b>476</b>
Francesca Guadagnoli and Elena Ippoliti	
<b>Museums in the Era of Digital Revolution. Persuasive Communication and Multimodal Approaches for Overcoming the Digital Divide . . . . .</b>	<b>485</b>
Francesco Gabellone and Maria Chiffi	
<b>The Professionalism of the Museum Educator Between Heritage Competences and Digital Competences. . . . .</b>	<b>496</b>
Chiara Pancioli, Manuela Fabbri, and Veronica Russo	
<b>Calculating the Social Impact of Culture. A SROI Application in a Museum . . . . .</b>	<b>507</b>
Federica Viganó and Giovanni Lombardo	

## Immersive

<b>Travelling Salesperson in an Immersive Virtual Environment: Experimental Evaluation of Tracking System Device</b> .....	519
D. Basso, C. Saracini, P. Palladino, and M. Cottini	
<b>Displaying Performing Arts. The <i>Dumb Type</i> Case at Centre Pompidou-Metz</b> .....	530
G. Peressini	
<b>Immersive Experiences in Staircases. The Geometric System as Sensorial Stirring</b> .....	536
Vincenzo Cirillo and Pasquale Conte	
<b>Interactive/Participatory Designing the Experience of Contemporary Maquettes</b> .....	543
Marta Magagnini and Nicolò Sardo	
<b>Carving Time and Space: A Mutual Stimulation of IT and Archaeology to Craft Multidimensional VR Data-Inspection</b> .....	553
B. Fanini and E. Demetrescu	
<b>An Ongoing Experimentation for VR, AR and MAR of a Design Museum</b> .....	566
Cecilia Bolognesi	
<b>Mixed Virtuality in the Communication of Cultural Heritage</b> .....	575
Tommaso Empler	
<b>Advanced Simulation of Frank Lloyd Wright's Fallingwater: Digital Reconstruction and Virtual Reality</b> .....	587
Alberto Sdegno, Paola Cochelli, Veronica Riavis, and Simone Veneziano	
<b>Territory and Maps</b>	
<b>Representing a Space-Based Digital Archive on Historical Maps: A User-Centered Design Approach</b> .....	599
Letizia Bollini	
<b>A Digital Map as a Representational Tool Implications for the Instructional Design Process</b> .....	608
Laura Fedeli, Valentina Pennazio, and Maila Pentucci	
<b>Territorial Diagrams Planning Cycle Routes with Digital Tools Oriented to the Knowledge of the Territory</b> .....	618
Andrea Alberto Dutto and Stefano Dighero	
<b>3D Image Based Modelling Using Google Earth Imagery for 3D Landscape Modelling</b> .....	627
Laura Inzerillo and Ronald Roberts	

**Memory in Names. Toponyms in Historical Cadastres for the Analysis of the Religious Presence in the Walled City** ..... 635  
 Donatella Bontempi

**The Mediated Landscape. Methods and Media for the Re-knowledge of the Torbiere del Sebino** ..... 647  
 Ivana Passamani and Olivia Longo

**Archeology**

**Real Scale Augmented Reality. A Novel Paradigm for Archaeological Heritage Fruition** ..... 659  
 Aldo F. Dragoni, Ramona Quattrini, Paolo Sernani, and Ludovico Ruggeri

**Digital Technologies for the Fruition of Archaeological Heritage. The Visualisation of the Temple C Metopes Polychrome in Selinunte** ..... 671  
 Vincenza Garofalo

**Communicating Archaeology at Poggio del Molino. 3D Virtualization and the Visitor Experience On and Off Site** ..... 681  
 Carlo Baione, Tyler D. Johnson, and Carolina Megale

**The Cortona Heritage Project: Digital Applications in Education to Architectural and Archaeological Heritage** ..... 691  
 Paola Puma

**Museum Life**

**The New Muses and Their House** ..... 703  
 Santi Centineo

**Communication Design for the Dissemination of Scientific Knowledge. Languages, Tools, Technologies, Collaborative Processes for Museum Education** ..... 716  
 V. M. Viviana Trapani

**The Virtual Museum of the Upper Calore Valley** ..... 726  
 Bruno Fanini, Alfonsina Pagano, and Augusto Palombini

**Reshaping the Identity of University Museums: The Museo della Rappresentazione in Catania as Digital Innovation Hub for the Engagement of New Generations and the Development of the Territory** ..... 737  
 Cettina Santagati, Mariateresa Galizia, Alessandro Basso, and Federico Mario La Russa

*Sistina Experience The Giudizio Universale in the Age  
of “Artertainment”* ..... 747  
Paolo Belardi and Simone Bori

**Author Index** ..... 755





# Drawing and Project at the *VChUTEMAS*. Graphic Interpretations

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**Abstract.** The article deals with the graphic study of the project for the Kominern Palace designed in 1929 by Lidija Komarova, one of the students of the Russian Laboratories known by the acronym *VChUTEMAS*, founded in 1920 in Moscow. Strongly characterized by the revolutionary atmosphere that was delineating the artistic progress based on the synthesis of all the plastic arts, the Russian Laboratories attributed to the architecture a position of the first order, a perfect association between the scientific possibility and the art technique. The redrawing of this project allows to deepen the compositional principles of the new architectural formation of the Eastern European avant-garde, providing digital images of a graphic heritage, that characterizing the teaching of *VChUTEMAS*, of which only a few traces are its testimony. Through the graphic reading and redrawing of the project for the Komintern palace, this study sheds light on the facts that characterized the aesthetic culture of the post-tsarist revolutionary Russia and of a technical-industrial school a year prior to the foundation of the Bauhaus.

**Keywords:** Drawing · Avant-garde art · *VChUTEMAS* · Project · Digital modeling · Redrawing

## 1 Introduction

In the years between 1917 and 1923 there was the transition from the school of Painting, Sculpture and Architecture to the Moscow Technical-Artistic Laboratories, better known with the acronym *VChUTEMAS*, a teaching attempt by the socialist society to form a joint path between professional art and productive art (Kopp 1987). In the same revolutionary, artistic and cultural context the Constructivism started to configure its principles, as an avant-garde movement with a direct influence on social transformation, in harmony with the new public initiatives and the didactic action aimed at a close confrontation between the practical and theoretical elaborations of architecture and art (Rowell and Znder Rudenstine 1981).

The themes emerged as a result of the development of radical left artistic movements, Cubism, Futurism, Cubo-Futurism and abstract figurative art, brought into the field essential reflections which abandoned the surface of the plan to build an objective world in the space of the three dimensions, in the solids' volume and in the structural composition of the form (Finizio 1990).

The message of the new aesthetics proposed by the Russian laboratories was the result of that Trotskyist theory according to which «the proletariat takes the power in order to end once and for all with all the class cultures and to open the way to a culture of humanity» (Komarova 1996, p. 33), that is, a vision of the project and industrial process that takes into account the implication of the creative labor force in the mechanized collectivism of the new social state.

The revolutionary creed that distinguished the actors of the School of Art and Architecture of Moscow matched with the equal recognition system between teachers and students, on a creative level, of the design and artistic aptitude combined with the study of the form and architectural expression; in fact, both the teachers' and the students' works were published indistinctly on the constructivist journal «SA»<sup>1</sup>. With the aim of bringing to light the cultural heritage represented by the architectural experiments together with some of the design approaches that defined the didactic method of the VChUTEMAS, the article deals with the study of the project designed by Lidija Komarova for the Komintern building, in 1929, in the laboratories of Aleksandr Vesnin (Fig. 1), taking into account the intimate interaction between the participation in political issues and the creative research of art that in that period characterized the education of each student (Elia 2008).

Thus, in fact, Komarova remembers: «the Komsomol members' students assigned to the work group also partly took care of the edition of the mural newspaper: they wrote articles, but above all, they adorned the mural newspaper with caricatures and drawings, recruiting students to this work still not member of the party» (Komarova 1996, p. 115).

Together with the negation of academicism, perceived as nihilism of art, students were then introduced to new systems of investigation of the form on scientific and ideological bases directly intervened on the teaching approach, inspiring to the objective values of the psychoanalytic method and the aesthetic-formal problems of architecture.

<sup>1</sup> The constructivist journal *SA* (Contemporary Architecture) was published for the first time in 1926 directed by A. Vesnin e M. Ginzburg with the objective of doing propaganda to the progressist soviet architecture. Cf. Michelangeli, L. (2004). *Avanguardia russe*. Giunti Editorie, Firenze-Milano.

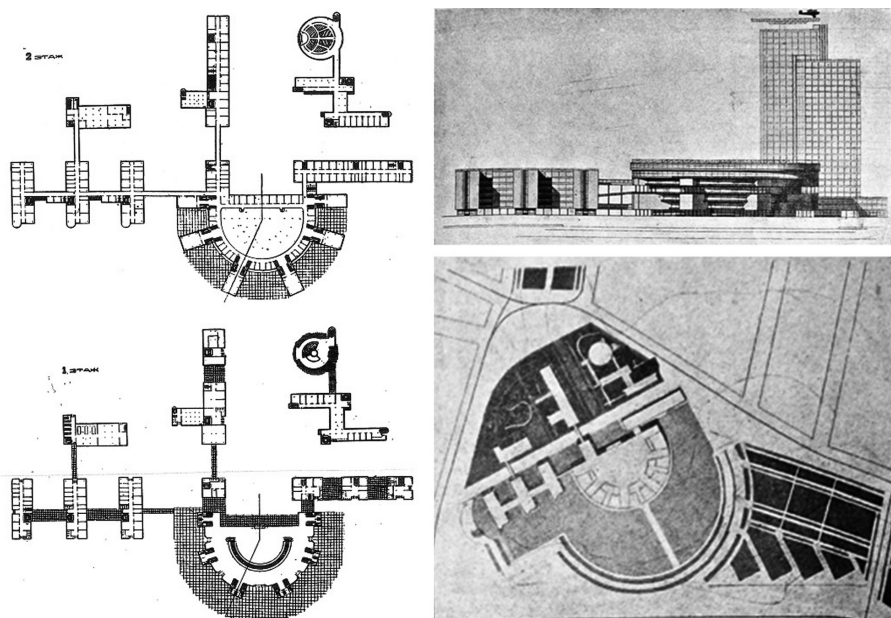


Fig. 1. Plan of the first floor, facade and general plan of the building for the Komintern.

## 2 The Drawing in the Pedagogy of the VChUTEMAS

«Art, which reaches higher levels of quality, must first of all serve the industry, as well as the mechanical mass production of objects necessary from the social point of view» (Finizio 1990, p. 48). As stated in the deliberation of the Soviet of the People Commissioners on the foundation of the Moscow Higher Technical-Artistic Laboratories of 1920, the clear intention to train “artist-builders” able to understand the new needs of the working class translated into the architecture and in the so-called *vešči* (= objects of daily use) reproducible in series, in reduced times and costs, determining profound changes not only in the culture of the project, the configuration of the form and its perception in space, but also in the process of conception and representation of the object investigated. Many questions raised concerning the relationship between volume and space, between surface and color, in other words, between mass and properties of the form, considered necessary for the understanding of the plastic possibilities of architecture.

In this new perspective the drawing was the starting point of the reflections on the spatial rhythm, on the geometric combinations and on the visual movements of the observer in the perception of the represented object, through the experimentation of different methods and techniques in the courses offered by the didactic program.

In this regard, recalls Sokolov, one of the students of the Moscow laboratories: «I almost do not believe my eyes when I find in my college transcript the signatures of eminent artists such as L.A. Bruni and P.V. Miturič: they did not simply teach us how to draw, but they made us understand how the artistic content of a drawing can be vast.

In this sense the half-naked paintbrush drawing lessons were particularly useful to get used to the idea that the drawing was not made of a thin line that snaked along the sheet of paper, but which, with the help of this line, had to be included also the shape and the chiaroscuro of a nude» (Komarova 1996, p. 103). Add to the artistic and cultural revolution implemented by the VChUTEMAS the strong link with the left artistic circles, such as the INChUK, the Institute of artistic culture, through which some issues were explored, including: the materiality and weight of the object; geometric translation in simple forms of complex volumes; the relationship between the color and the material/body/weight of the object; the decomposition of the form into parts that sharpen its perception and rhythmic structure (Komarova 1996).

Through the exploratory possibilities offered by the drawing, the attention was turned towards the materiality, or *faktura*, of the objects, their spatiality and the volume of the form, enabling the artist-technician to define new contrasts, new rhythms, new expressive forces. In this context, the mysticism of Vasilij Kandinskij allowed to develop an education methodology based on the actuality of the object itself, rather than on the mere graphic description, as also in the case of the extreme abstraction by Malevič that was very close to the combinations of simplified architectural volumes (De Micheli 1999). The two methods, together with the studies on the surface in space of Vladimir Tatlin's *counter-reliefs*, were sharply criticized by the teachers of the laboratories of Moscow because of the extreme abstract connotation assumed by the vision of the three artists, even if Aleksandr Rodčenko elaborated a synthesis between abstract art and architecture, in favor of the so-called "productive art", with the clear intention of producing objects useful to the nascent society. The abstract graphic exercises, treated without a defined functional purpose, developed according to four compositional themes related to the surface, mass and weight, the volumetric composition and the space-depth composition.

Although moving in a purely theoretical field, the students investigated the questions of the form on a scale of representation similar to that of the architectural project; in fact, the next step was that of the so-called "productive themes", practical design exercises through which the compositional-formal processes of architecture were dealt with.

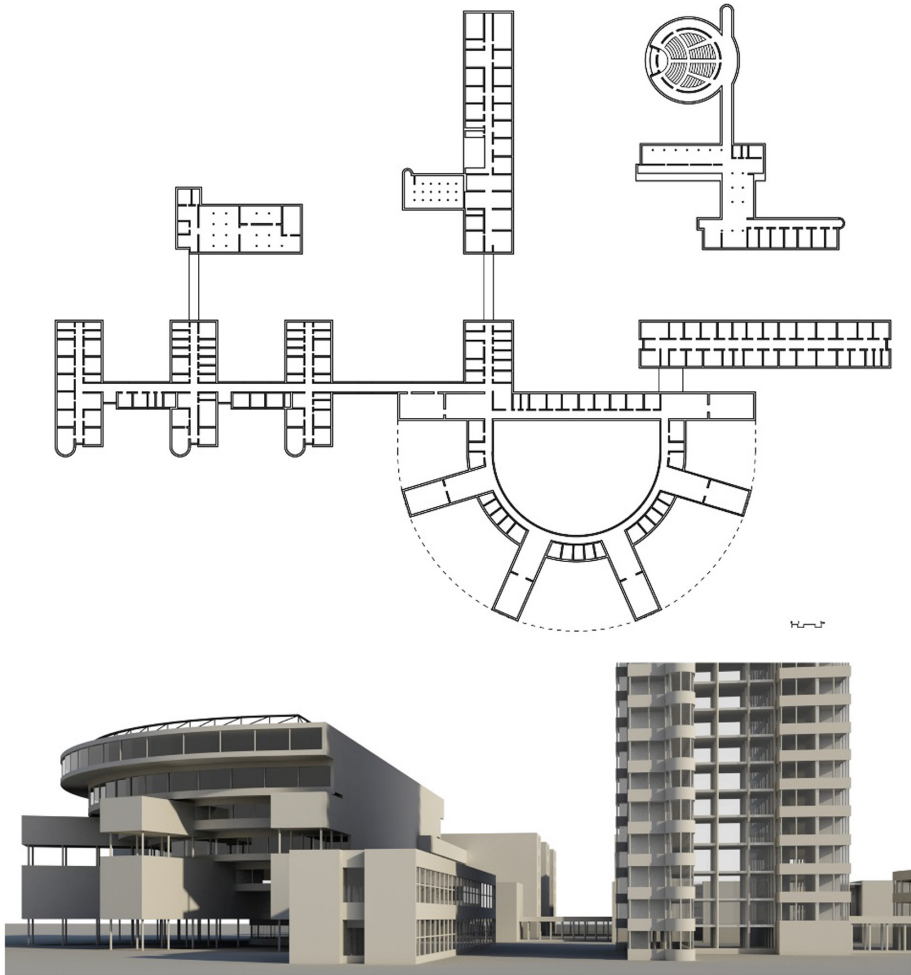
### **3 Graphic Analysis of the Project for the Palace of the Komintern by Lidija Komarova, 1929**

The social question within the Moscow laboratories was also addressed by Vladimir Tatlin who, interested in a sort of plastic appeal in relation to the cubist lesson on the organic combination of form, light and color, composed and modulated his spatial dynamics. The drawing became a dynamic expression of structures through a total form of design in which the spirit of art converged with the needs of community life.

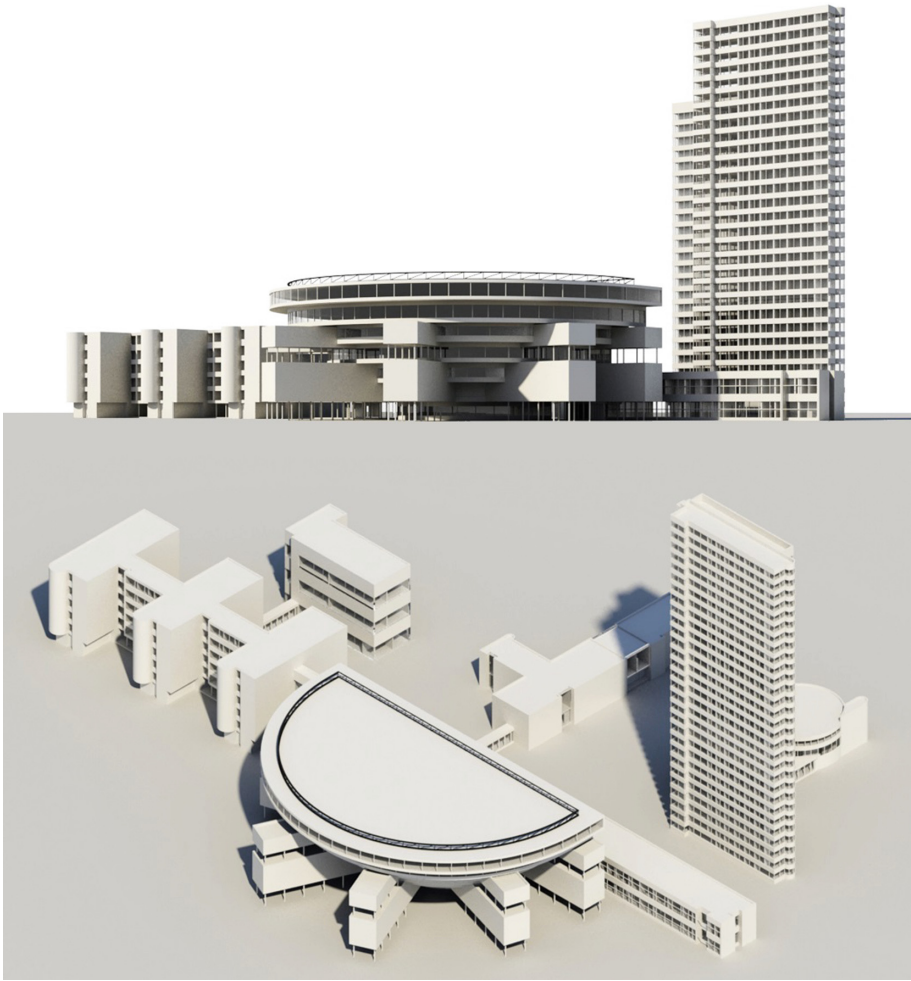
The attention was then directed towards the social role of architecture, the propaganda for new building techniques and the standardization.

Following the total rejection of any historical reference, the need to develop new contents and new values arose, which gave rise to a radical reconstruction of the Soviet nation, starting from the planning reflections on the ideal cities, on the potentialities of new materials and on the construction of the future.

Students were asked to work on the themes of large social buildings, museums, libraries or entire cities, thought as suspended airships with spaceships designed for residential or social use (Figs. 2 and 3).

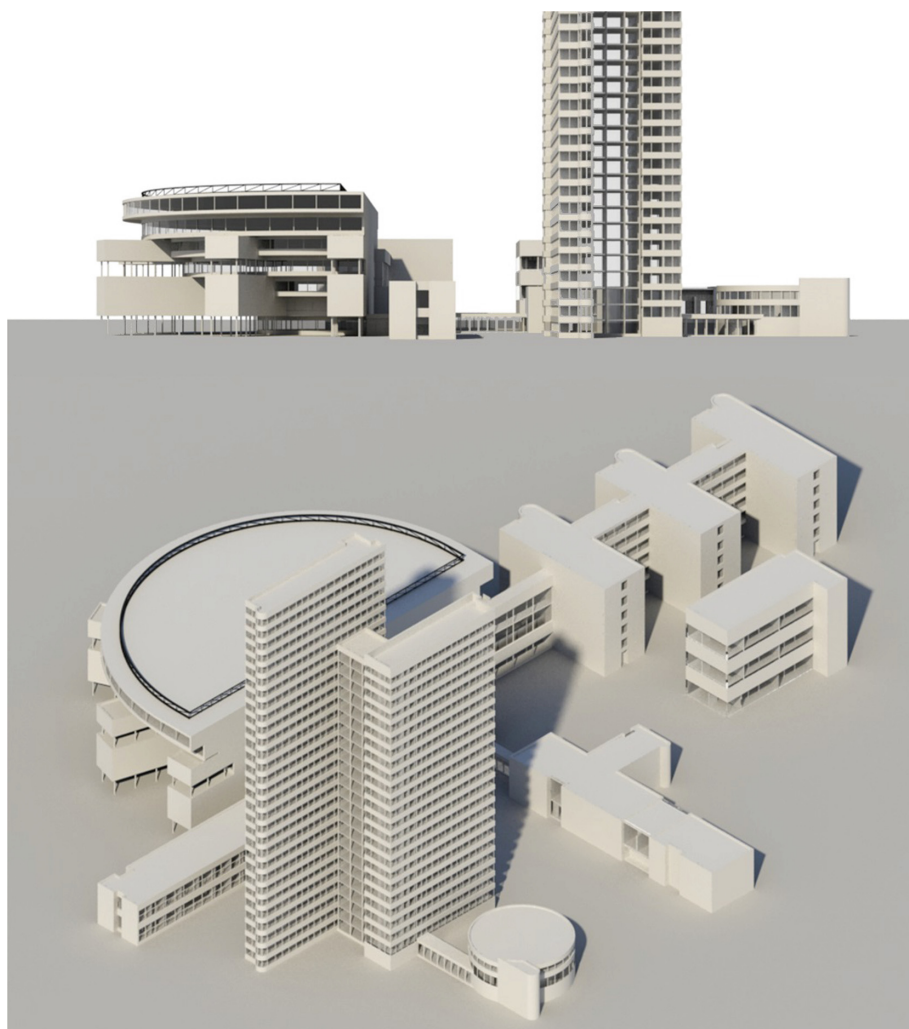


**Fig. 2.** Digital redrawing of the plan of the type-floor and perspective view.



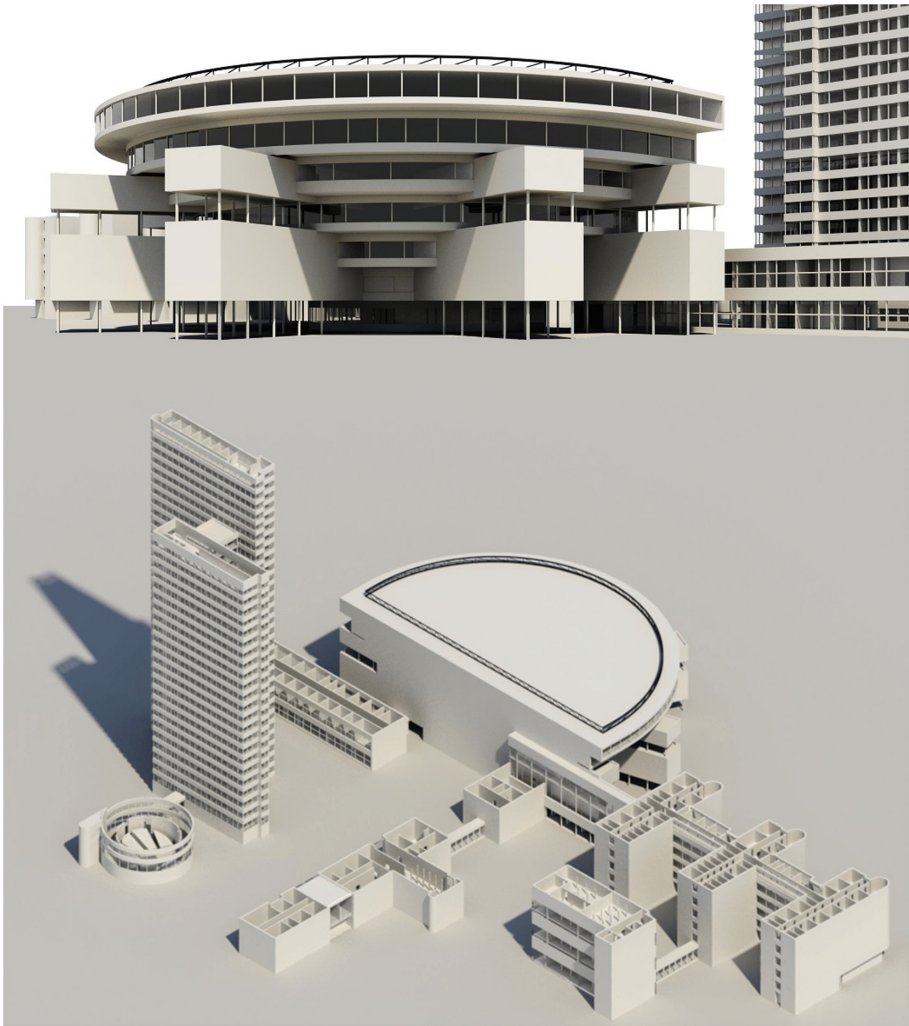
**Fig. 3.** Perspective view and axonometric view of the buildings' complex for the Komintern.

In the context of this attitude of Soviet architecture towards what was defined as “exploratory planning”, projects aimed at a future time, often unreal, were promoted, as it was for the flying city of Kutrikov; the young students of the VChUTEMAS were involved in the expression of the Soviet ideo-logical content through the design of architectural forms such as the Soviet palace, the Town Hall and the socialist city. The proposal by Lidija Komarova on the building complex for the Komintern was part of these educational experiences and was published in the magazine «SA» in 1929. The graphic elaborations on which the redrawing was based include a plan of the first floor, a plan of the floor-type of the other levels, a façade, a perspective view and a general plan of the whole complex of buildings (Figs. 1 and 7).



**Fig. 4.** Render facade and axonometric view of the buildings' complex for the Komintern.

The principle around which the project is developed is that of the international political forum where to build a spatial harmony between inside and outside through the interpenetration of volumes differentiated in height and proportions, with the aim of declaring, by means of the composition itself, the different functions (Fig. 4). A large public square generated by the expedient of the dynamic increase of buildings, starting from the main building, a hub of the urban system consisting of seven semicircles that correspond to the galleries of the congress hall (Fig. 5).



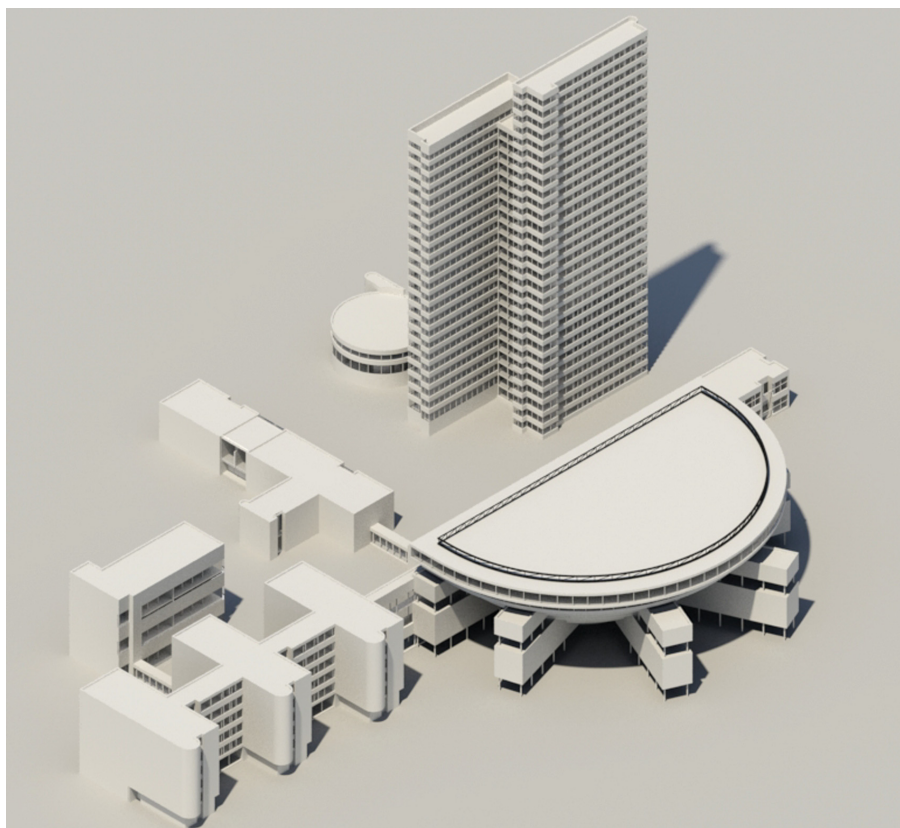
**Fig. 5.** Perspective view and axonometric exploded of the buildings' complex for the Komintern.

As it can be seen from the comparison with other contemporary projects realized by the students in response to Soviet ideological questions, the increasing development of the steps is one of the graphic-geometric values investigated during the volume and mass courses of the VChUTEMAS. The themes of rhythm, modeling of emptiness and plasticity of the movement, together with the sinuosity of the semicircular curve, provide a dynamic connotation to the Komarova project, through the annular concentricity that widens upwards. This movement also reflects the repetition of the six parallelepipeds arranged according to a radial development and grafted into the large funnel volume of the congress hall: probably the result of those reflections conducted



by the students within the courses of «Volume» and «Space» on the interaction between curved and broken lines generating dynamic solids.

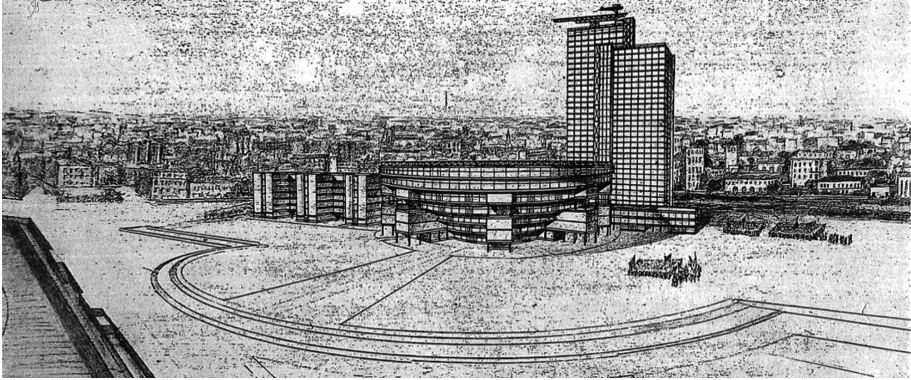
To underline the strict logic of the function, inherited from the laboratories, the six radial volums declared their social significance outside: balconies that were jutting onto the square like stages assembled during proletarian manifestations and raised from the ground on pilotis (Fig. 6).



**Fig. 6.** Axonometric view of the buildings' complex for the Komintern.

The whole complex of buildings, as represented in the perspective view (Fig. 7), seems to respond to the Soviet social question of those years. In fact, reading some of Komarova's reflections regarding her experience at the VChUTEMAS, one gets the feeling of recognizing in the Komintern project that Red Square of the October Revolution that expressed the student spirit of the new era: «I remember the Red Square at that time. I was lucky enough to see its during the solemn and austere funeral of the victims of the October Revolution fights. Forever I will remember May 1919 on the Red Square. That day I saw Lenin: he quickly passed from one to the other small

stands installed on the square, uttering a short speech, accompanied by the characteristic expressive gesture. The sun was shining, the animation of the party and the desire for general progress reigned all around» (Komarova 1996, p. 111).



**Fig. 7.** Perspective view of the buildings' complex for the Komintern by Lidija Komarova.

The system of the large square was characterized by two turreted volumes, a clear manifestation of technological progress and standardization processes, made transparent by the use of glass and steel: two points of reference with respect to the surrounding urban development that underlined the role of the Bolshevik ideology. Also, the connecting elements between the foreground and the backward volumes with respect to the square are thought as glass tunnels suspended on pilotis or fixed to the ground, as devices passing from one function to another.

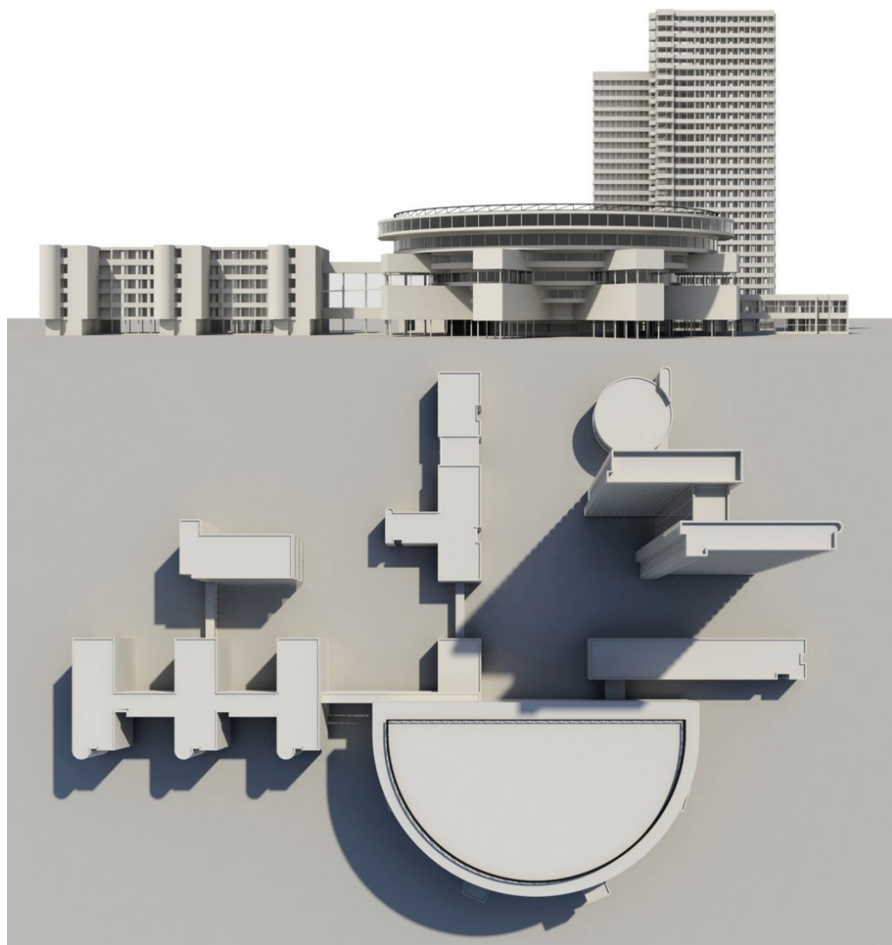
On the roof of one of the two tall buildings, Komarova places an airstrip for the airplanes: further imprint of a future vision on the nascent proletarian society in power. The plasticity of the buildings' complex, the dynamism of the façades obtained from the placement and orientation of the volumes in the large square and the gradual progression of the concentric shapes, as in the case of the congress hall and the radial balconies, were the architectural choices that allowed Lidija Komarova to put together the Soviet teaching methodology, on the construction and understanding of the form/volume, together with the constructive and artistic ideas of the Russian avant-garde.

In this regard, in his book on the Soviet architecture, Kirillov wrote: «the most striking thing about this project was the architectural solution of the congress hall, articulated in seven concentric semicircles that spread upwards, giving it an absolutely unusual funnel shape. The steps of the semicircular foyers surrounding the hall correspond to the gradual rise and widening of the galleries of the amphitheater» (Komarova 1996, p. 121).

In line with these values, the student used the architectural expedient to “organize life” thinking of the need for revolutionary society to use “expressions of movement, of dynamics!” (Komarova 1996, p. 64). The question of dynamism applied to architecture, in fact, constituted the plastic synthesis between artistic aspiration to technological progress and the new didactic programs adopted by the VChUTEMAS.

Add to this the eclectic character of Komarova, as one reads from the reflections of Nikolaj Sokolov, one of the classmates: «enthusiastic about unusual designs, which she herself created with a constant affectionate smile, activist, tireless organizer» (Komarova 1996, p. 105).

The future architecture explored by Komarova, presents many of the architectural and urban elements which previously interested Rodčenko, as in the case of turreted and light buildings, bridges, paths or transparent roofing to configure the new facade concept: a real dynamic system, observable from the outside, understanding the material to read the modeling of the internal vacuum. A plurality of the point of view from above that was probably affected by the development of aeronautics, as evidenced also by the inclusion of the airstrip obtained in one of the two skyscrapers of the project by Lidija Komarova.



**Fig. 8.** Facade and planivolumetric of the buildings' complex for the Komintern.

Also, Rodčenko dealt with a “façade seen from above”, as a result of a multiplicity of the points of view gained as a result of the dynamic character of the emerging Soviet architecture (Fig. 8).

## 4 Conclusions

The intense and multidisciplinary vision of the Moscow laboratories addressed the students to the formation of an autonomous artistic-scientific vision of reality, contributing, at the same time, to the definition of an ideological awareness that intervened directly on the architectural thought. The redrawing of this project, left on paper as many of the projects realized by Komarova and the other students of the VChUTEMAS, allowed us to deepen the compositional principles of the architectural education organized within the Eastern European avant-garde.

The possibility provided by the digital drawing to bring to light the cultural heritage represented by the architectural experiments of the Moscow didactical-productive laboratories allows to catalog new images that demonstrate the design and cultural contribution of the models of technical-artistic schools based on the interaction between different aspects of art and scientific-engineering training, in parallel with what was happening in the same years in the Bauhaus.

The exercises conducted by the students of the VChUTEMAS on the properties of volume and space, through the redrawing of the few archival works and the digital modeling as a way of visualizing the architecture, establish a system of images borrowed by means of the compositional possibilities of the drawing and at the same time purged from the obligation of its realization. These are testimonies of an educational methodology aimed at the investigation of architecture through the values of the Soviet artistic avant-gardes that, at the suspended stage of the project, declare their belonging to the possible dimensions of the drawing.

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