Solid Utopias. Views and Models
in Urban Experimentation in the 1960s

Nicolò Sardo

Abstract

This contribution presents an analysis of several design experiences developed primarily between the late 1950s and early 1970s which constituted a true international trend where the issues of representation constituted a visionary thought that proposed original architecture and urban forms.
The communicational devices aim to clarify the diverse formal characteristics, often highlighting a 'possible realism'. Modifications, superposition, and experimentation are thus reflected in the processes of representation. Graphically, the choice fell mainly on the means appropriate for solving complexity and innovation: the use of collage and photomontage fundamentally adheres to meeting these needs.
The contribution of models is also effectively highlighted with the inclination of plastic figuration to oscillate between the abstraction and simulation of reality. There are models that, emphasizing realism and with the goal of mitigating the most imaginary nature of innovative urban hypotheses, are presented somehow as the anticipation of reality and a testimony to their possible 'buildability'. The model itself, with its special characteristics, often becomes a research tool; many examples contain references to the historical avant-garde, even through an aesthetic search that manages to combine experimentation with communication of the design thought.

Keywords: utopian architecture, experimental architecture, architectural models, architectural representation.

Introduction

Starting in the middle of the Fifties –with developments that would last until the 1970s– numerous project designs were dedicated to clarifying visions aimed at redetermining the urban space: a diverse group of designers presented new ideas ranging from defining experimental buildings to the proposal of 'new cities' [1]. The trend was so widespread that it was called the 'utopia international' by Manfredo Tafuri: "*una vera e propria accademia dell'utopia*", where, especially in the results most related to technological development, an "*ironica nostalgia del futuro*" was clear [Tafuri 1979, p. 347]. That the development of these reflections was expressed especially in urban hypotheses is not surprising since utopian thought has always viewed the city as the chosen place [2].

The crisis in many of the assumptions of modernism found a fundamental turning point in 1956 upon the tenth International Congresses of Modern Architecture (CIAM) held in Dubrovnik [3]; no less important was the focus on land use that had grown out of concern for the increase in population being analysed at the time. Among the concepts developed in many of the reflections, particular importance goes to 'mobility', which would be proposed by various authors, ranging from the definition of the individual living unit to concepts related to entire 'mobile' cities [4]. The extreme focus on these issues would also promote the formation of international groups that would serve as basic support for the debate. In 1958, Yona Friedman founded the Groupe d'Étude d'Architecture Mobile

(GEAM) [5] and in 1965, the French critic Michel Ragon formed the Groupe International d'Architecture Prospective (GIAP) [6].

Thus, the visionary position had to necessarily trace out new procedures to express a variety of reflections that found their equivalent in the visual richness of depiction [7]. Publishing became a necessary issue and led to the authors' use of often unconventional strategies to convey the design thought, and unusual architectural forms also required the authors' special dedication to using the tools of representation: "*Si le projet que nous venons de tracer en quelques grandes lignes risque d'être considéré comme un rêve fantaisiste, nous insistons sur le fait qu'il est réalisable du point de vue technique, qu'il est souhaitable du point de vue humain, qu'il sera indispensable du point de vue social. L'insatisfaction grandissante qui domine l'humanité entière arrivera à un point où nous serons tous poussés à exécuter les projets dont nous possédons les moyens; et qui pourront contribuer à la réalisation d'une vie plus riche et plus accomplie*" [Constant 1959, p. 40].

The need to use different devices for representation therefore emerged, which occurred through blending and the integrated use of various tools that sometimes tied these experiences to the historical avant-garde. These experiments viewed the tools of visual communication as an essential ally capable of making often complex and surprising concepts clear or at least plausible. Amid the developing spread of new urban ideas, it also became important to rely on editorial strategies that would frequently lead to the creation of numerous publications promoted by the same actors [8].

When representing projects, there was an oscillation between the display of an objectivity suitable for presenting a 'possible realism' and a desire for abstraction that pursued ideogrammatic clarity when presenting the hypothesis. Special attention focused on the choice of visual criteria with which the projects were illustrated: alongside explanatory orthographic views, the main choice fell on perspective views, sometimes included within real contexts through the extended use of collage and photomontage. It is not unusual to see how a new aesthetic was also developed in depiction, where it is possible to observe iconography deriving from the imagery of illustration, science-fiction cinematography, and comics.

With regard to systems of representation, the use of models [9] was accompanied by drawing, contributing significantly to clarifying the design ideas and their dissemination [10]. The models show the facets of a superposition that highlights the intrinsic formal and functional complexity of the project. As better 'analogues' to the built architecture, they hold the capacity to project the observer into a possible future, proposing a multiple code capable of satisfying both knowledgeable users and non-experts.

The models sometimes make all their 'sculptural' essence emerge, and they often acquire an aesthetic strength that overcomes the urgency to represent a construction or urban hypothesis with precision: the self-referential nature of their construction adheres to the need to declare their own autonomy as a three-dimensional object. It is therefore not unusual to find formal contiguity between some models and the most overtly artistic experiments [11].

Thus, the model may confirm the abstract perfection of the idea; or it can become a multiform, unstable tool in which the superposition of materials –recalling collages or photomontages– is the mark of a developing thought. This expression directly recalls the complex social assumptions that are nearly always inherent in the integrated idea of the project: a new urban nature somehow also assumes a 'new' resident.

Nevertheless, what remains is the idea of a model as an evocative device that allows the view to assume ever different distances and perspectives. There is no required view as in graphical representations, but the presentation of an essential visual interaction suitable for sparking the observer's imagination. Nor is the nature of the material a secondary element; the choice of materials is essential and participates in the spirit of the project. It also seems important –in models such as graphical representations– to maintain elements that, even in the most extreme proposals, allow observers to find conditions referring to their own perceptual experiences.

A recurring theme in many proposals for the urban structure is stratification: new structures are superimposed on the existing city [12]. In creating the models, this aspect is paramount, finding different solutions ranging from schematic representation of the building to the use of cartographic depiction as a base. The model is basically the synthesis and goal of the project itself. "As the most synthetic instrument for communicating, the relief model has itself become a project: however absurd, it soothes the neurotic and exorcizes almost certain failure" [Branzi 1974, p. 7] [13].
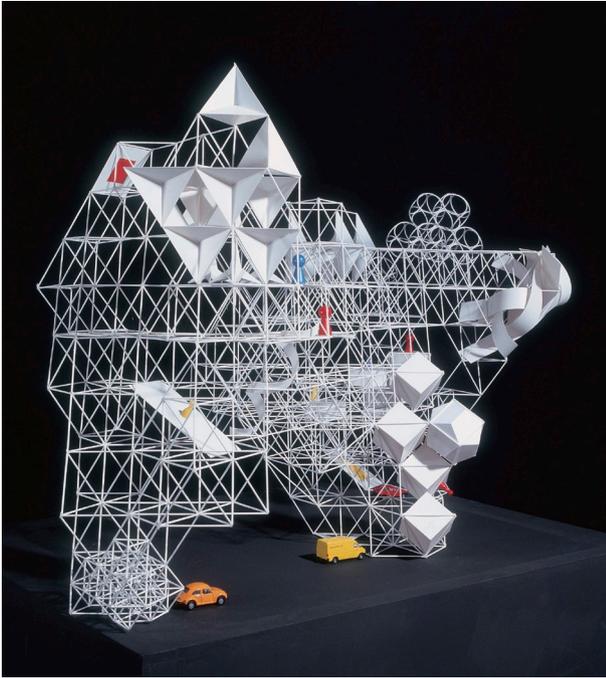
Fig. 1. Eckhard Schulze-Fielitz, Raumstadt, 1959, model: <https://www.noosphe.re/post/150392453927/eckhard-schulze-fielitz-raumstadt-1959> (accessed on 2021, August 10).
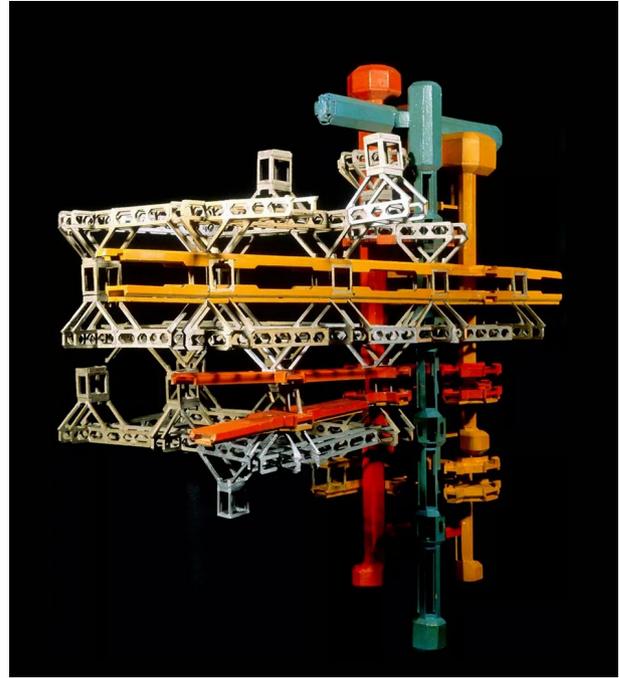

Fig. 2. Eilfried Huth and Günther Domenig, Stadt Ragnitz, 1963, model: <https://www.frac-centre.fr/> (accessed on 2021, August 10).

Models and new urban forms

The model participates in redefining these architectural and urban reflections with its specific nature as a representation capable of adhering to the formal and abstract assumptions in the project. The figuration exhibited by models oscillates between ideogrammatic schematism and an inclination to simulate reality. The imaginative character of the proposal is often tempered by an accentuated concreteness, and the model, with its material presence, constitutes a possible anticipation of the construction.

The project specifics are often exhibited by highlighting a geometry that strongly fixes the ideal of the design thought: compactness, symmetry, and regular forms such as triangles, squares, and circles constitute many of the design hypotheses and are also highlighted by the models. The first examples of models of experimental cities in the 1950s include *Spatiodynamic* City (1952), developed by Nicolas Schöffer together with Claude Parent and Ionel Schein. Here, the land is schematically reproduced with a plan representation and the structures are defined chromatically to highlight the compositional logic.

The compact, unitary form of the model –even with accentuation of the most abstract features– lends the project a particular symbolic strength. Particularly important examples include sculptural models such as those by Hans Hollein for his *Stadt* (1960), *Ville du Futur* (1960-1963) by Marino Di Teana, and *Compact City* (1963-1964) by Walter Pichler. With the same character, the model created by Frederick Kiesler in 1958 for *Endless House* [14] requires special mention.
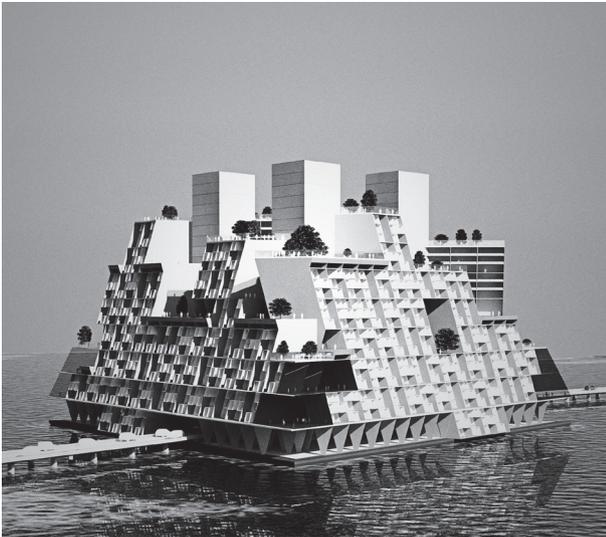
Models for urban megastructures [15] are also particularly fascinating. Starting in 1960, Walter Jonas designed his *Intrahaus* [16], an inverted cone-shaped urban construction. The metal, wood, plastic, and acrylic model is also particularly defined with colors. One feature of many megastructures is the ordering grid that is often resolved in spatial network configurations [17]. Also with regard to models, some of the most interesting examples include projects by Eckhard Schulze-Fielitz such as *Raumstadt* (1959), (fig. 1) [18].

The Austrian architects Günther Domenig and Eilfried Huth presented their urban structure *Stadt Ragnitz* (1963-1969) with a wood and plastic model (fig. 2) in which color plays a fundamental role in highlighting the constituent elements and their complex functions [19]. The megastructure also describes *Instant City* (1966) by Stanley Tigerman, a linear city composed by pyramid-shaped constructions. The built model, which presents just two units, was later photographed and multiplied with the use of mirrors [20].

A particular approach was implemented by Geoffrey Alan Jellicoe with *Motopia* (1961), a city featuring roadways built above the roofs. Both the detailed model and the perspective views designed by Gordon Cullen illustrate the project in a 'reassuring' way, attempting to convince people of its buildability [21].

The sea is an ideal place chosen to locate megastructures, whether urban expansions over the water or veritable floating cities. One of the most interesting projects situated on the sea is *Thalassa* by Paul Maymont (1963), which imagines an extension of the Principality of Monaco. In addition to its particular circular structure, this elegant model represents the surface of the sea with a translucent blue plane on which the construction rests, where the connection with the coast is highlighted [22]. A true artificial island off the coast of Monaco was instead reproduced in the model for the project designed in 1966 by Édouard Albert and Jacques-Yves Cousteau [23]. The idea of floating megastructure is also present in *Triton City* (1968) by Richard Buckminster Fuller and Shoji Sadao (fig. 3), an urban expansion located in Tokyo Bay. In addition to an urban model that clarifies the relationship with the existing city, a large detailed model of one of the residential units was also built for the project.

The Japanese Metabolists made important use of models and nearly all their urban projects are presented with these devices. One of the main references is certainly the

large model for the plan of Tokyo Bay (1960) developed by Kenzo Tange [24]. Wood was chosen for the model of *Clusters in the Air* (fig. 4), an urban hypothesis developed by Arata Isozaki at the beginning of the 1960s. This basic, elegant construction highlights the particular structures in the urban agglomeration [25].

The characteristic design attitude of Archigram [26] was certainly tied primarily to graphical representation –with the use of collage and photomontage– as the chosen tool to represent their proposals. From nearly all their works, however, there is no lack of interesting examples of models, from the most schematic and chromatically defined, such as *Plug-In City* (1966) by Peter Cook, where the focus is on highlighting the fixed structure with respect to the mobile, transitory elements, to particularly detailed models as in the case of *Montreal Tower* (1967), also designed by Cook [27]. The most fascinating models made by the group include the one made with wire and sheets of aluminium for *City Interchange* (1963) by Warren Chalk and Ron Herron (fig. 5).

For Paolo Soleri, models had an ability to prefigure his constructions in an extraordinary way. With their large size and attention to detail, the models for his Arcologies (fig. 6) [28] have an impact that strikes and excites the observer, who is catapulted into a unique perceptual experience [29]. Another important aspect of Soleri's models is often their material consistency, which simulates the visual effect of his completed buildings [30]. The large cardboard models such as the one for the megastructure *3D Jersey* (1968) are also impressive.

Just as for Nicolas Schöffer the difference in scale is often ephemeral and his models of urban structures overlap with experimental sculptures, the creation of 'histograms' (1969) in the work Superstudio (fig. 7) likewise creates a sort of short circuit between architecture and model. What they establish is a process in which the modular grid allows objects to be defined with the same logic despite the scale or decor of the larger structure [31].

Models and design experiments

Models are also an active tool for experimentation that combines conformational aspects with those that are more properly representative; the material itself, with its shapes and materials, is therefore one of the assumptions of the search. The experimental aspect is often echoed in

Fig. 5. Warren Chalk and Ron Herron (Archigram), City Interchange, 1963, model: <http://archigram.westminster.ac.uk/project.php?id=39> (accessed on 2021, August 10).

Fig. 6. Paolo Soleri with the model of Babelnoah (Arcology), 1967: <https://uxdesign.cc/hexahedron-paolo-soleris-utopia-in-context-375866438d52> (accessed on 2021, August 10).
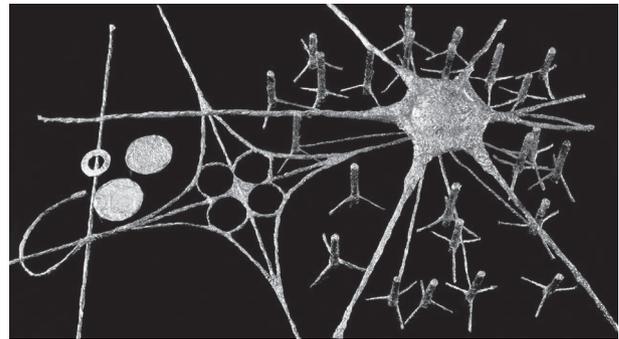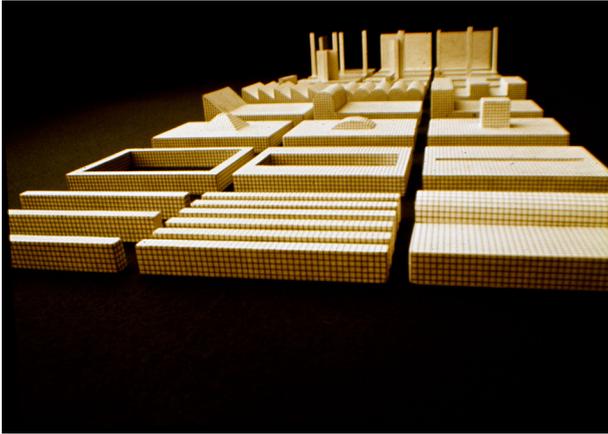
the use of '*objets trouvés*' or in proximity to artistic practices such as 'ready-made'.

An interesting area in which the use of models is particularly widespread relates to the representation of experimental residential hypotheses, which find an important precedent in studies made by Richard Buckminster Fuller [32]. With models, innovative houses, mobile dwellings, and housing cells find the perfect tool to display their features, even thanks to the use of dimensions that allow the details to be depicted precisely. From dwellings by Ionel Schein [33] such as *Maison tout en plastiques* (1956) and *Cabines hotelières mobiles* (1956), to *Maison de vacances volante* (1963) by Guy Rottier, the models clarify the structural qualities such as lightness and flexibility and the common characteristics tied to possible modularity. The development of housing cells was also investigated in models for projects by Pascal Häusermann (*Cellule*, 1960) and Chanéac (*Cellules polyvalentes superposables*, 1960-1971), as well as in the various hypotheses developed starting at the end of the 1960s by Antti Lovag for his *Maisons Bulles*. In 1969, Wolfgang Döring also presented some models of his Capsule Houses.

For Yona Friedman, the technological approach [34] unfolded in continuous experimentation from the constructive and formal points of view, starting with his profound criticism for many of the assumptions of the Modern Movement. The models for his projects are often characterized by their 'unfinished' nature, for their capacity to represent a process rather than a defined form. In Friedman's work, architecture, its representation through models, and the sculptural work of the author intersect and blend around the key concept of '*sculpter le vide*'. Everything highlights a vision of architecture where social substance is closely tied to the form; the indefiniteness of the models and their 'imprecision' [35] also represent a flexible urban structure ready to be modified and filled with inhabitants (fig. 8). Also important is Friedman's ability to choose the materials, often recycled, with a view to clearly defining different urban hypotheses. The 'light' character of his models and the lively approach play a fundamental role in favoring participation, which the author holds particularly dear: an open, expandable grid hosts living units that users may organize and 'decorate' as they wish [36].

New Babylon by Constant is probably one of the most important examples of the use of models for representing the experimental reflections of this period [37]. Constant's

is one of the most radical thoughts, even in defining new social forms. It is solidified in a complex urban structure for which the models made by the artist are the ideal tool for their dissemination. The use of materials such as steel, aluminium, and acrylic [38] contribute to defining an image unique to the realizations. He also commonly uses '*objets trouvés*' such as bicycle spokes, which become a cable structure in the model for *Spatiovore* (1960) (fig. 9). *New Babylon* is also a perfect example in which the desire to convey an innovative idea –Constant did not consider his project utopian– finds the perfect means in the integration of different tools and methods. The models are supported by a body of particular drawings, and the models themselves are also presented through photographs and a film directed by the author himself [39]. In *New Babylon* –as in *Ville Spatiale* by Friedman– expansion occurs through stratification that overlaps the existing fabric like a 'new skin'. The models manage to perfectly describe this logic just as they precisely represent the complex system of connections that mark Constant's hypothesis. Suspended structures –which certainly derive from one of the icons of modernity: Corbusier's framework– find their extreme development in New Babylon. The utmost attention was placed on the construction of models: they should be capable not only of depicting the formal characteristics of the project, but also manage to prefigure the perceptual approach in building the spaces [40]. This also gave rise to Constant's requirement to use models as the basis for photographic images [41]. Rather than leaving the model open to view, the idea was to control and guide the observer's gaze by means of snapshots 'selected' by the author and solidified through careful control of lighting and depth of field. The photos of the models [42] were adjusted with ink, colored pencils, and watercolors to create graphical representations. The models by the Austrian group Coop Himmelb(l)au stand out for their creativity, which makes them independent products. The model for *Cities with Pulsating Frame* (1967) (fig. 10) uses different materials to highlight –even with reference to the imagery of space flight– a strong symbolic character that shows the elements of the city as parts of a living body. The result, however, is certainly disorienting due to the extreme distance with respect to the figurative customs of the urban space. At the apex of experiments in depiction, the fascinating models of the urban concepts by Merete Mattern are worth mentioning. Projects such as those for the expan-

sions of Bratislava Petržalka (fig. 11) and Ratingen West, both from 1967, combine the hypotheses of megastructures with an expressionist aesthetic with strong visual impact [43].

It is important to consider how models continuously bring the visual aspect into play. Observers are guided in their observation and sometimes, as with Constant, it is photographs that mediate between the user and three-dimensional product [44]. The model also serves as an opportunity for optical tricks. An outstanding example is the use of mirrors as 'multipliers' in the model for *No-Stop City* (1971) by Archizoom to extend the urban image to infinity (fig. 12).

Nor is the use of photographic reproduction unusual in models as an element of collage or other creations. Beyond Constant's use of images of models, a unique example is the work of Peter Cook, who, in the collage *Dirigeable Instant City M3* (1969), uses the photograph of the model of the *Zeppelin* –made by Archigram for an installation– as a component of Instant City.

Conclusion

"I believe that there are […] utopias that have a precise, real place, a place that can be located on a map; utopias that have a determined time" [Foucault 2006, p. 11]. Thus

Fig. 9. Constant in his studio in Amsterdam. On the right the model for Spatiovore (1960), 1968 (Ph. Nico Koster): <https://stichtingconstant.nl/documentation/constant-amongst-his-models-ii> (accessed on 2021, August 10).
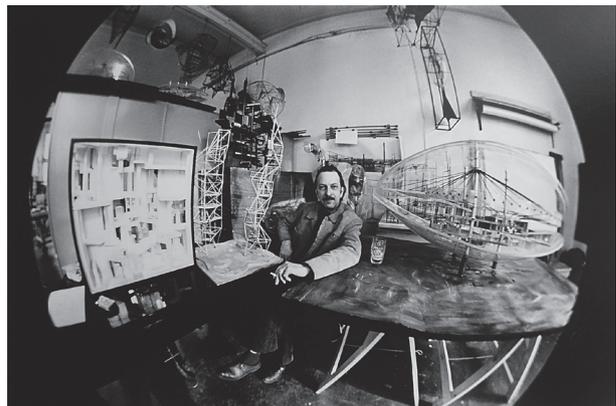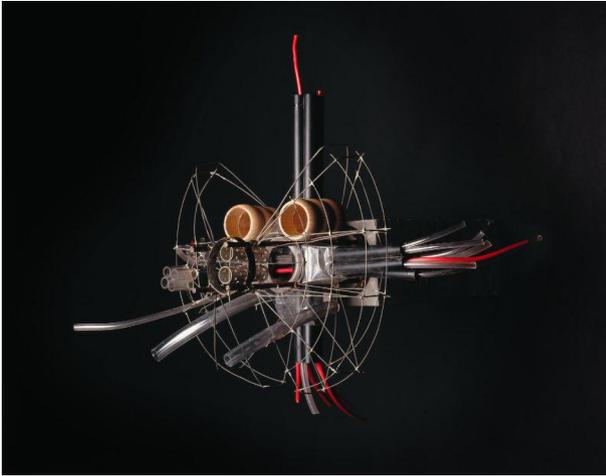
Fig. 10. Coop Himmelb(l)au, Cities with pulsating frame, model, 1967: <https://www.centrepompidou.fr/fr/ressources/oeuvre/c7p5K6K> (accessed on 2021, August 10).

Michel Foucault describes "heteropias", veritable "different spaces", "located utopias". This is perhaps the true character of many of the urban hypotheses discussed here, which are nearly always located in real places and often intersect with or overlap them. Models are a story made physical with this essence, and the examples described also testify to the importance of these products within this particular trend that, while changing direction in the course of just a few years, also had an important impact on the development of design thought in later decades.

In proposing original urban hypotheses, it is undeniable that the model is defined by its physical nature and capacity to highlight itself with a visual strength that elicits special sensations in the observer. While sometimes 'con-trolled', the view never aims to be passive; the goal is always to evoke surprise, but always making the observer an active subject that interacts with the product.

The physical reality of a model lies in the visionary essence of the buildings especially as an evocative object, although, as was seen above, it is common to observe a push towards a reassuring realism contributed to with the same tools of representation.

Sometimes ambiguous objects, models have often marked their self-sufficiency in stamping themselves with any need to pre-visualize the possible future construction of the work. They find strength in their autonomous existence capable of causing the observer to reflect, and presenting an "objection to all other spaces" [Foucault 2006, p. 25].

What remains of utopia today? Has it meant developing new structures and new forms of living? Any possible 'optimism' about future opportunities has certainly disappeared. Even the virtual nature of digital drawing has occupied the ideal space of experimenting with urban thought. However, the push to think about new urban conformations does not seem to have vanished completely. In recent years, Arata Isozaki designed *Mirage City* (1995), a return to the idea of urban expansion over the sea on an artificial island [45]. At the Venice Biennale in 2004, the Austrian firm Ortner & Ortner presented *Sea City*, where even in the features of the model the urban structures located off the coast of Tel Aviv recall proposals by Hans Hollein.

Both projects fall in line with the architectural and urban experiments developed during the years covered in this contribution. What appears, however, is a sort of coolness stemming from substantial disenchantment, and a sort of push towards the 'spectacle', 'irony', and 'nostalgia for the future' now seems to have completely disappeared. What remains is a knowledgeable reflection that, aware of the complexity of the urban reality, has abandoned the search for any all-embracing seduction.

Notes

[1] For a historical and critical ovierview of the trend, see Brayer 2003; Rouillard 2004; Schaik-Máčel 2005; Friedman 2006; Busbea 2007; Ley-Richter 2008; Koolhaas-Obrist 2011.

[2] Cfr. Eaton 2001.

[3] At the conference, Charles Péré-Lahaille and Guy Rottier presented their project for a *Cité Mobile*.

[4] Cfr. also Roy 2008b. In this regard, see also Friedman 1958.

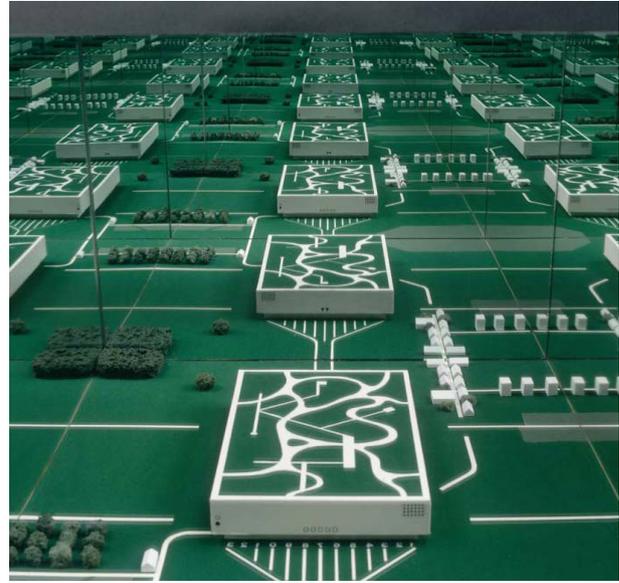*Fig. 11. Merete Mattern, Urban expansion of Bratislava Petržalka, 1967, model [Elser-Cachola Schmal 2012, p. 319].*

Fig. 12. Archizoom, No-Stop City, 1971, model: <https://www.frac-centre.fr/> (accessed on 2021, August 10).

[5] Members of the group from its foundation were Jean Pecquet, Roger Aujame, Jerzy Soltan, Georges Emmerich, and Jan Trapman. They were later joined by Frei Otto, Eckhard Schultze-Fielitz, Gunther Gunschel, Makowski, Werner Ruhnau, Gunther Kuhne, Masata Otaka, Erik Friberger, Camille Frieden and Paul Maymont. The group was dissolved in 1962.

[6] The GIAP saw the participation of Yona Friedman, Paul Maymont, Pascal Haüsermann, Walter Jonas, Ionel Schein, and Nicolas Schöffer. Ragon was also important for the spread of new ideas through a series of popular books that presented innovative projects developed in those years, with particular attention for the situation in France and where the images of models were widespread. See Ragon 1963; 1965; 1966; 1968.

[7] Cfr. Jungmann 1996; Riley 2002; Sardo 2014.

[8] Cfr. Colomina, Buckley 2010; Buckley 2011.

[9] For more information on the use of models in modern and contemporary architecture, see Sardo 2004; Healy 2008; Elser, Cachola Schmal 2012; Quantin-Biancalani 2020.

[10] In the early decades of the twentieth century, there was no shortage of important models of innovative urban projects, such as the one for *Plan Voisin* (1925) by Le Corbusier or *Broadacre City* (1932) by Frank Lloyd Wright. Following the Second World War, an important example –also for the great influence it held over the authors examined here– is the model of *City Tower* in Philadelphia that Louis Kahn conceived in the mid-1950s. The reasons for its spread also include the fact it has been exposed at the *Visionary Architecture* exhibition at the MoMA in 1960. This exhibition was probably the first testimony of the attention developing at the time. In addition to Kahn's model, the models for *Bridge City* (1960) by James Fitzgibbon and Endless House (1958) by Frederick Kiesler were also exhibited.

[11] Important cases include works by Nicolas Schöffer; cfr. Schöffer 1969.

[12] Among others, the projects *Cluster in the Air* by Arata Isozaki, *Ville Spatiale* by Yona Friedman, and *New Babylon* by Constant were developed in this way.

[13] See: Branzi, A. (1974). Un plastico d'oro (Radical Notes no. 16). In *Casabella*, n. 390, p. 7.

[14] More than 30 years earlier, Kiesler had already shown his visionary thought with the project for *Raumstadt* presented in a large model at the 1925 *Exposition internationale des Arts décoratifs et industriels modernes* in Paris.

[15] With regard to megastructures, see Dahinden 1972; Banham 1976.

[16] Cfr. Jonas 1962.

[17] For their development, studies by Richard Buckminster Fuller, Robert Le Ricolais, and Konrad Wachsmann were important.

[18] In addition to the model created in 1959, which had a grid structure and white pyramids, another was made in 1966 featuring the use of colored elements. Another interesting model by Schulze-Fielitz is the one for *Study for an Urban Agglomeration* (1964).

[19] The project, already ideated in 1963 for the Austrian municipality of Ragnitz, was presented in 1969 at the *Grand Prix International d'Urbanisme et d'Architecture* in Cannes, where the jury held, among others, Louis Kahn, Jean Prouvé, Robert Le Ricolais, Jacob B. Bakema, Henri Lefebvre, and Bruno Zevi. Cfr. Stanek 2011, p. 42.

[20] Another interesting project by Tigerman for which a model was made is *Urban Matrix*, where once again the shape used for the large units is an (overturned) pyramid.

[21] Cfr. Jellicoe 1961.

[22] Another project of urban expansion over the sea, again for the Principality of Monaco, was for an artificial peninsula developed in 1966 by Manfredi Nicoletti.

[23] Cfr. Marrey 1998.

[24] With regard to Tange and the Metabolists, see Lin 2010; Koolhaas, Olbrist 2011.

[25] Other projects in the Metabolist group that are important for the models created, are *Agricultural City* (1960) and *Cluster City* (1961) by Kisho Kurokawa and *Unabara* (floating industrial city, 1960) and *Marine City* (1963) by Kiyonori Kikutake.

[26] The manifesto of Archigram –composed of Peter Cook, Warren Chalk, Ron Herron, Mike Webb, and David Greene– was presented in 1961. With regard to their work, see Cook 1972; Crompton 1998; Simon 2005; Roy 2008a.

[27] Other examples of particularly detailed models include those for Sin Centre (1958-1962) by Webb, *City Synthesis* (1963) by Crompton, *Living Pod* (1966) by Greene, and *Control and Choice* (1967) by Cook, Crompton and Herron.

[28] Cfr. Soleri 1969.

[29] For expositions, elevated structures were built to observe the models from above.

[30] Cfr. Soleri, Davis 1984.

[31] The group consisted of Adolfo Natalini, Cristiano Toraldo di Francia, Gian Piero Frassinelli, Alessandro Magris, Roberto Magris and Alessandro Poli. With regard to work by Superstudio, see Lang, Menking, 2003; Gargiani, Lampariello, 2010; Mastrigli 2016. On the 'radical' trend in Italy, see Pettena 1996; Migayrou 2001.

[32] Cfr. Emili 2003; Hays-Miller 2008.

[33] For more information about Schein's work, see Berselli 2015.

[34] The influence of Konrad Wachsmann is important.

[35] The choice of materials and their assembly are also indicative of his approach: for his models, Friedman uses paper, paperboard and wire, but also recycled materials such as blocks of polystyrene, Indian bracelets, rolls of paper towel, pieces of wood, etc.

[36] For Friedman, there is naturally no shortage of examples of particularly defined, detailed models, as in the case of the 1963 project for *Ville Ponte* on the English Channel.

[37] With regard to Constant's work, see Constant 1974; Sadler 1998; Careri 2001; Zegher, Wigley 2001.

[38] Acrylic was Constant's chosen material; before *New Babylon*, he had already used it at the end of the 1950s for the Spatiovore project.

[39] To disseminate New Babylon, Constant created a periodical in 1965, De New Babylon Informatief. The four issues were published for expositions; the last was presented for the 33rd Venice Biennale in 1966.

[40] In exhibiting his models, Constant experimented with light and sound.

[41] Cfr. Wigley 1998.

[42] Another interesting point is Constant's use of some traditional photographic techniques and large-scale printing to lend greater visual impact to his representations. Cfr. Roy 2008a, p. 305.

[43] Cfr. Elser, Cachola Schmal 2012, pp. 317-322.

[44] With regard to photography and models, see Deriu 2012.

[45] In the project, the island is situated in the South China Sea, off the coast of Macau.

Author

Nicolò Sardo, School of Architecture and Design, University of Camerino, nicolo.sardo@unicam.it

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