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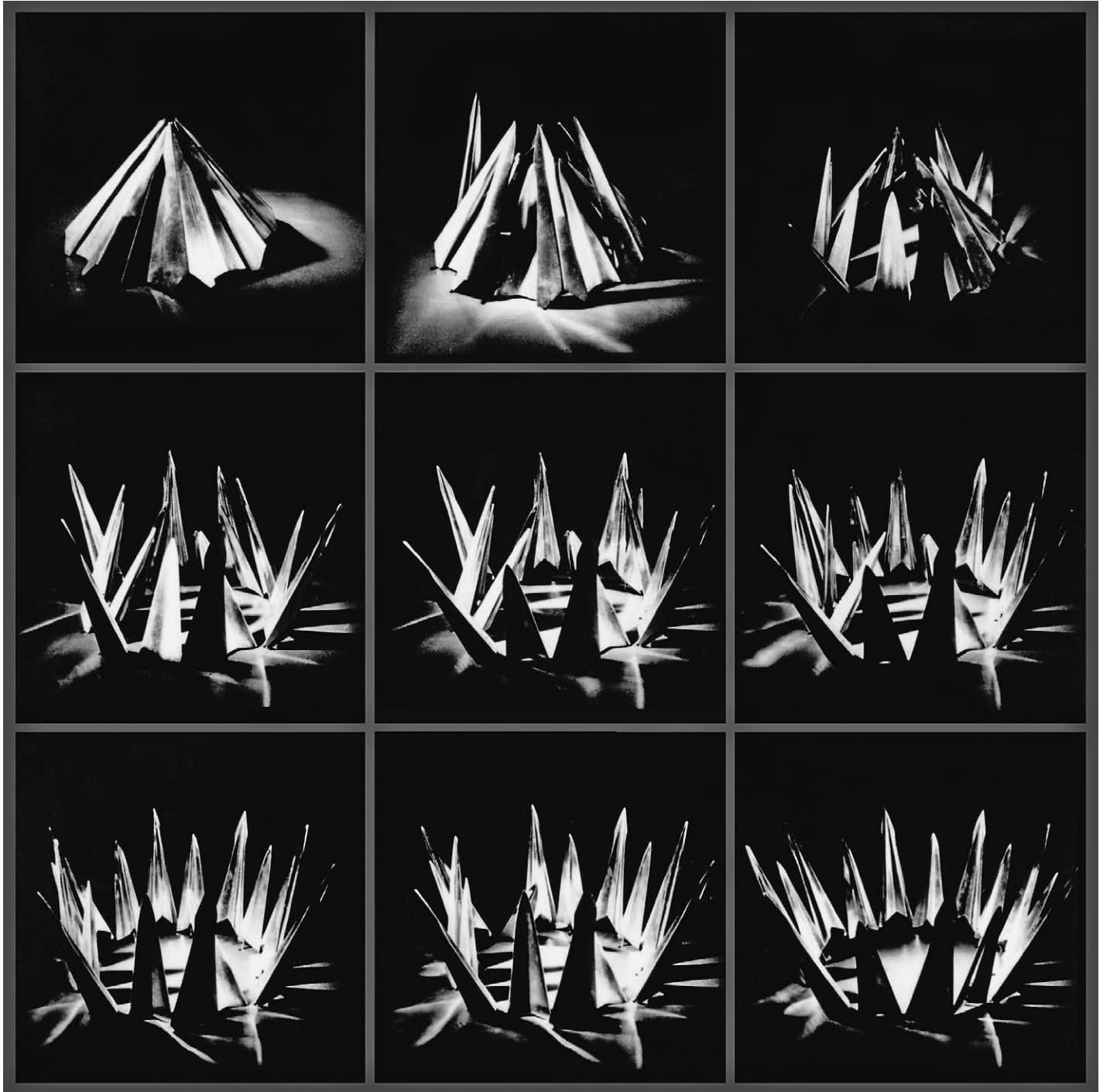ZNANSTVENI ČASOPIS ZA ARHITEKTURU I URBANIZAM

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Fig. 1 Church of St. Peter in Split, Andrija Mutnjaković, 1970

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# Conceptual Definition
# of the Term Experimental Architecture
## Ambiguity of Terminological Attributions

EXPERIMENTAL ARCHITECTURE
FUTURIST ARCHITECTURE
PAPER ARCHITECTURE
RADICAL ARCHITECTURE
UTOPIAN ARCHITECTURE
VISIONARY ARCHITECTURE

Academic literature lacks an unambiguous term to describe architectural and urban planning projects that are borderline feasible, firmly bound to reality but simultaneously also liberated from it, representing an inevitable component of the development of architecture as a discipline. This paper analyses the most commonly used terms in literature, illustrating them with examples and setting forth logical relationships between them as well as the context within which they are positioned. At the same time, the research sets the relationship between Croatian and international experimental architectural practices.

## Introduction

Experimental and exploratory architecture is pejoratively often called paper architecture (Armstrong, 2019: 43), and academic literature offers a variety of adjectives in attempts to describe it: experimental, utopian, radical, futurist, visionary, etc. It is, therefore, unsurprising that sometimes several terms are used in the same text:

"…Earning a reputation as **innovators** and **visionaries**, these **pioneers** convinced their clients that they were involved in **exciting projects**, and some of these practices were transformed into *brands*. At a certain point, the **speculative** aspects of these **experiments**, which suggested ways to transforming society by, for example, providing housing for workers, increasing public freedoms and fostering social solidarity, became tangible and returned **new ideas** to the realm of practice." (Armstrong, 2019: 6; Kaminer, 2011: ch. 6).

An example of the use of various terms to describe an architect and his work in Croatian architectural discourse is Andrija Mutnjaković, whose projects were characterized as **visionary** (Glavan, 1975: 17), and **utopian** (Pasinović, 1969: 31), while he was called a **futurist** architect (Cvetkova, 1991: 4). Mutnjaković first and foremost considered himself a visionary researcher, whose projects are a reality – it is just a question of time when they will be implemented (Cvetkova, 1991: 4). However, when describing his own projects and those by some of his contempo-

raries, he used the unifying term **experiment** (Galović, 2014: 18).

The research addresses the problem of terminology in the domain of *experimental architecture*, starting from the pluralism of its designations, used both in literature and in projects descriptions written by authors themselves. Given that experimental architecture commonly incorporates an extremely wide domain of social issues, the pluralism of its attributes, often overlapping in their meaning, is a logical outcome. Following that logic, the research attempts to distinguish the conceptual determinants of the used terms for the purpose of better understanding them. The goal of the research is, therefore, a more precise and solid definition of the designator's relationship to the architectural corpus implied by its domain. On the one hand, this is achieved by linking the projects and their accompanying designations through an analysis of contextual levels within which sets of projects are situated, and on the other hand, a cross-comparison of denominators-differentiated groups. The research has been carried out with regard to Croatian architectural practice, establishing its comparative relationship with the culmination of the world experimental architecture of the second half of the 20th century.

## Experimental architecture

The term "experimental architecture" was introduced in broader terms by Peter Cook in 1970, in his book *Experimental Architecture*. At the very beginning of this work, Cook debates the impossibility of comprehensive and simultaneous prediction of the future in a broader field, and thereby also the possibility of fruitful discourse that would be prompted by architectural thought or a project which clearly set limits on experimental architecture. Experimental projects generally deal with one aspect or a narrow facet of the future, while even in projects that are called experimental, Cook saw a major difference between the import of an image or form and the fundamental idea which precedes it. The discussion is dominated by a simplified view in which each new idea in architecture must result in a new form and vice versa, thus precluding any serious debate about experimental architecture, as Cook summarizes: "There is no real experiment, only built form which is unorthodox, or drawing which is unfamiliar" (Cook, 1970: 29).

Lebbeus Woods, an architect and founder of the Research Institute for Experimental Architecture, concludes with regret that experimental architecture has all but disappeared. According to Woods, today, there is little architecture or design that truly experiments, i.e., that plays with the unknown. The single

defining feature of an experiment is that no one knows what its outcome will be. The experimenter is looking for something, has a hypothesis to prove, but ultimately everything may result in something unexpected. Architecture is averse to this kind of risk (Woods, 2015: 34).

For Rachel Armstrong, a scientist and a pioneer in developing design based on "living technologies", experimental architecture is a visionary branch of architecture and a form of practical research. In a series of different projects, Armstrong explored how interdisciplinary experimental practice changes architecture as a profession. Designs that can be described as closest to the concept of experimental architecture are those in which implementation entails the use or implies an intention to use new technologies and materials that are produced and tested, their properties observed as potential future construction materials, etc. Results of such research and experimentation with, for example, living programmable organisms that have certain architectural properties, become tools for new, similar research. For Armstrong and her associates, the experimental component largely proceeds in laboratory conditions, which classifies her work as an experiment virtually by definition. Even though results of these experiments are only the beginning of something that certainly awaits us in the future, for now one may say that the experiment mostly pertains to the discovery of new construction elements, which are in this specific case based on living organisms, programmable, ecological, etc. (Armstrong, 2019: 49-50).

In the interview "Design in the Digital Age" (Goldberger, 2014), Rem Koolhaas states that architects create the uniqueness in a very repetitive world and that materialized architecture is always the "beta version", pointing to the developmental and research component of the discipline.

Several decades earlier, an internationally renowned Belgrade professor, architect, and theoretician Ranko Radović asserted that each valuable work of architecture was simultaneously in and of itself a sort of experiment, i.e., high-risk research. Uncertainty, an attempt, is inherent to large-scale architecture; the wings of the new, untested, are visible (Radović, 1969: 25).

By definition, an experiment is a procedure involving controlled observation and measurement of phenomena that is conducted in order to verify a scientific hypothesis as well as something that is experiential, exploratory, grounded in experience, confirmed by testing (Anić et al., 2002: 355). Insofar as we
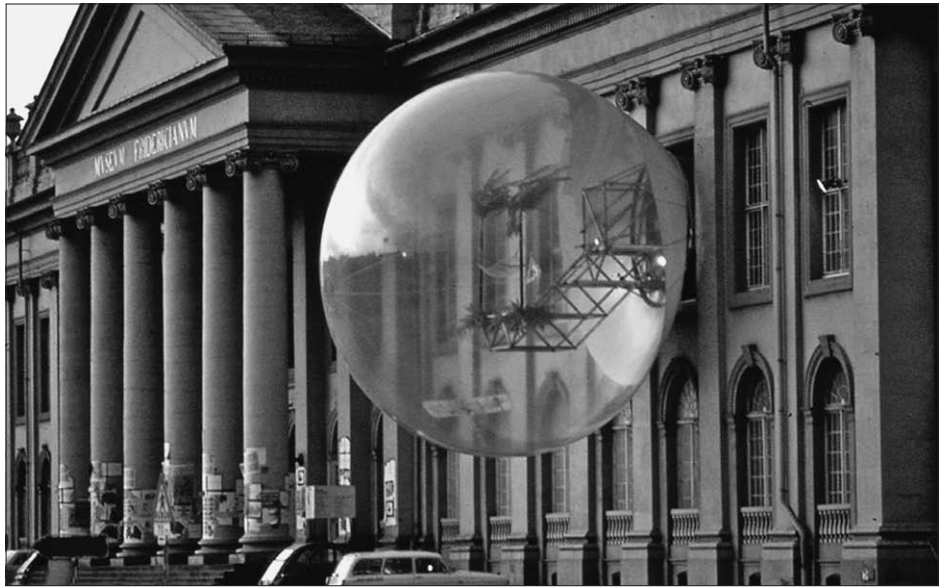


Fig. 2 Oasis no. 7, Haus-Rucker-Co., 1972

should attempt to literally translate such a definition into the language of architecture, this would imply those projects that have nonetheless been implemented either in whole or in part in order to record certain observations, results or reactions. Since the physical implementation of experimental projects is generally not even contained in the basic idea of the project's creation, rendered designs that would correspond to this definition of experimental architecture are relatively few in number, just as their scale is small. Such examples are most often ephemeral and implemented using simple materials and tools. These are frequently pneumatic and similar constructions that are not financially demanding, so their designers were able to implement them on their own. Authors such as Ant Farm have even published handbooks of a sort for constructions based on their own experiences and observations (Ant Farm, 1971). There are examples in interiors, smaller residential units (domes, modules, etc.) but also at larger scales, among the pavilions for the World Expo, containing more complex structures and sizes.

An example of such an ephemeral project was the Oasis no. 7, installed on the façade of a building as part of the Documenta 5 exhibition in Kassel (Fig. 2). Like many other projects by the Austrian architectural collective Haus-Rucker-Co., this was also a temporary architectural intervention in which the basic element was a transparent, inflatable structure with a diameter of 8 m. Utilizing small scale and carefully chosen materials, this structure was oriented toward the bodily experience of the individual inside, and the examination of new possibilities for communication between architecture and the city and
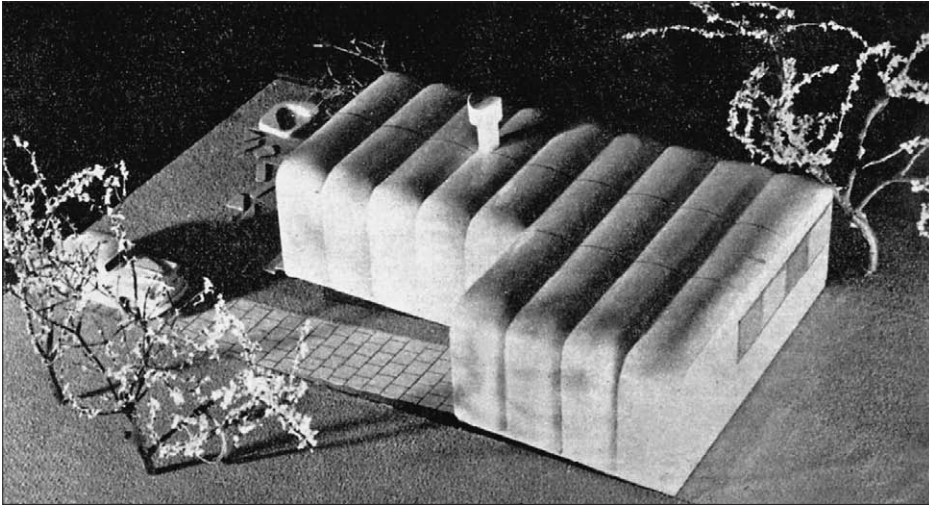
FIG. 3 SYNTHETIC HOUSE, JURAJ NEIDHARDT, 1966

citizens outside. These projects, thanks to the simplicity of their rendering, made it possible for the interaction between people and their environment to assume new meanings and alter our understanding of the physical environment through a new sensory experience.

Another project that emerged as a genuine experiment related to the context of Croatian architectural practice was the Synthetic House by Juraj Neidhardt in 1966. This project constituted an attempt to respond to the high demand for new housing units by means of inexpensive production of prefabricated individual family homes with the aid of the "material of the future" (polyester). In the execution of his idea, Neidhardt sought the assistance of the Materials and Construction Testing Institute in Sarajevo and the Construction Institute in Zagreb. The elements were crafted and tested in Zagreb (Fig. 3). Neidhardt himself confirmed that this was truly an experiment when he said: "…If this campaign succeeds…" – clearly indicating that the outcome was uncertain, and added that: "This will, however, require much more persistence and experimentation" (Neidhardt, 1966: 4).

Starting from opposite premises, yet both experimental in essence, projects Oasis no.7 and the Synthetic House illustrate the broad domain of the concept of architectural experimentation.

## UTOPIAN ARCHITECTURE

Another oft-used term is utopian architecture or utopian project. The term "utopia" designates any unattainable idea, dream, fancy or aspiration to overcome actual reality and build a new, ideally conceived reality from individual elements. Furthermore, utopias are distinguished from unrealistic efforts (fanta-

sies) by the logical tie between actual phenomena, causes, conditions and constants (Grubiša, Tatarin, 2015). The term's definition points to the conclusion that the achievement of utopian projects is impossible.

The view that the realization of utopias is impossible is also shared by the sociologist R. Levitas, an important researcher of utopias. She observes that a colloquially understood utopia contains two meanings: a good, but non-existent and therefore impossible, society. In the same book, she further observes that many problems which beset utopian scholars arise from the absence of a clear definition of the term which would separate its specialist academic use from the meanings present in everyday language (Levitas, 1991: 2).

Utopias foresee improved living conditions which should replace the current ones, which is why their concern is narrowly linked not only to the future, but also ensues from the present and past. Given their ties to past events and places, as well as the present ones, and the attempt to respond to them, this is a far more complex process than the conventional view of utopia as the simple invention of a "new approach" (Coleman, 2007: ch.2,11). That the term utopian is understood very broadly is confirmed by R. Martin who talks about "ghosts" or outlines of utopia, seeing utopia as an event; recurring historically as a thought rather than as a thing, a place, or even an ideal (Singh, Martin, 2013: 80). Spanish architect Miguel Fissac considered architectural utopia a source of creativity, but with the caveat that an architectural utopia must follow an authentic orthogenesis like any project that shall be implemented tomorrow (Fissac, 1975: 14). Thus, in his view the utopian project is one for which there is no intention of realization.

In his book *Hrvatska arhitektura dvadesetog stoljeća – Neostvareni projekti* [Croatian Architecture of the 20th Century – Unbuilt Projects], Croatian architect and theorist Tomislav Odak called Le Corbusier's Plan Voisin an urban planning/architectural utopia that Le Corbusier himself never believed would be realized (Odak, 2006: 12). In the book *Utopijske vizije arhitekture grada* [Utopian Visions of the Architecture of the City] by Croatian architect Ivan Juras, most designs are unrealized projects, demonstrating that for that author, the concept of utopian is closely linked to the unbuilt (Juras, 1997). With the passage of time, from the moment they emerge, projects are more easily declared utopian, such as, for example, the Synthurbanism by Croatian architect Vjenceslav Richter (Fig. 4), which belongs to the group of techno-utopian urbanisms or urban utopias (Kulić, Mrduljaš, 2017: 120). However, Richter
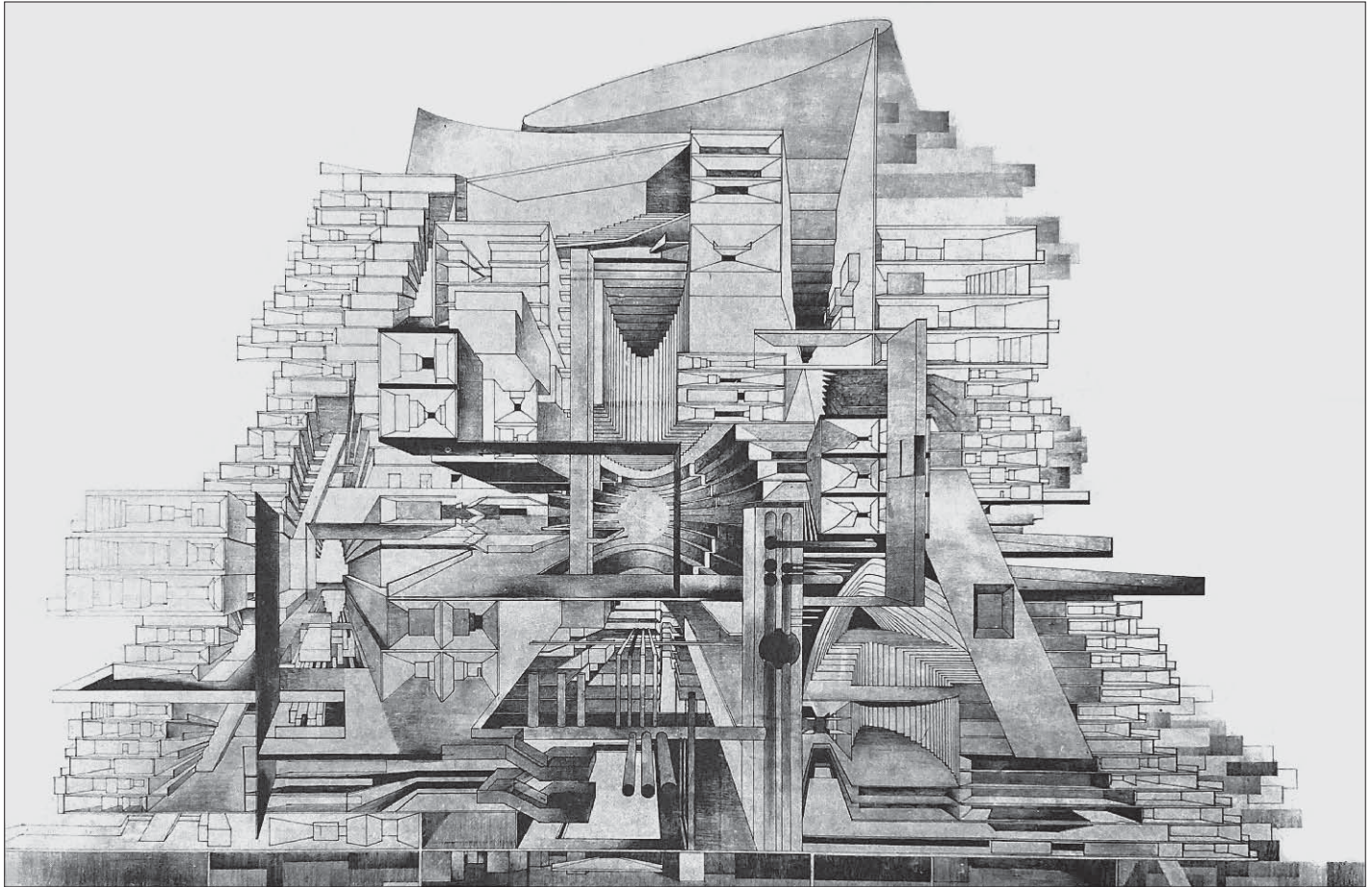
Fig. 4 Synthurbanism, Vjenceslav Richter, 1964

himself insisted on the opposite, and he only expressed his suspicion in the feasibility – and only temporary so – in the subsequent phase of Synthurbanism with rotating ziggurats in the Heliopolis project (Richter, 2016: 24).

The opposite of utopia is dystopia, so when interpreting his vision for the city of the future, "Ecumenopolis", Constantinos Doxiadis drew a distinction between the concept of utopia as a non-place and eutopia (or more precisely eftopia) as a good place, with dystopia on the other side of the spectrum, as a bad or dreadful place (Doxiadis, 1968: 32-33).

Besides the concept of utopian architecture, it is essential to mention the ideal city as a sort of an attempt to implement the utopian idea of an ideal society in a physical framework (Fig. 5; Mutnjaković, 2003: 232). The combination of utopia and the ideal city have resulted in models of cities that, even today, we look up to with awe (Rowe, Koetter, 2003: 14).

## Radical projects

Radical implies indispensable and thorough changes (Anić et al., 2002: 1202), so even in architecture we come across terms such as: radical urban visions (Kulić, Mrduljaš, 2017: 120) for Vjenceslav Richter's project Synthurbanism, which utilizes means and proposals significantly different from customary urban planning practices. Architects who re-examine existing conventions and offer radical solutions assume a special place in the history of contemporary architecture, and exhibitions such as "Radical Architects, 1960-75" have been organized (Dellale, 1996: 54).

Lebbeus Woods wrote about how the term radical once referred to paradigm shifts and important changes in theory and practice that contributed to human progress but is today associated with various extremist (terrorist) movements that undermine the social order. Architecture, as one of the instruments that reinforces the social order, thus loses the possibility of proposing radical programs and modes of use, while radical forms are as always welcome (Woods, 2015: 33).

In architecture, the term radical is associated with the late 1960s and groups such as Archigram from London and Archizoom and Superstudio from Florence, as representatives of
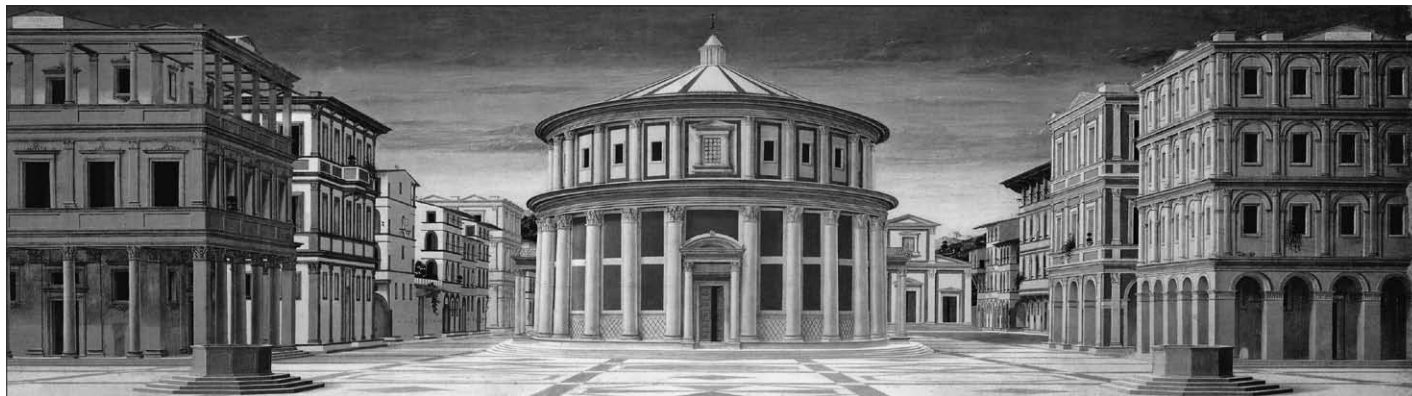
Fig. 5 Ideal city, Lucijan Vranjanin, 15th c.

**Radical Design.** The Radical Design Movement exhibited a desire similar to Speculative Design, representing a vision of a possible future as a means of criticism and provocation. They perhaps differed with regard to their motivation. Radical design wanted to break with the past, while speculative design demonstrates a more critical stance, present in its visions of projected futures (Smyth, Auger, Helgason, 2021: 24).

SPECULATIVE PROJECTS

What all of the thus far considered projects and the various designations that characterize them have in common is that they foresee a specific future and offer solutions in the form of projects in line with their postulates. However, predictions of the future have almost as a rule been proven inaccurate, particularly with regard to technology. Today, the term speculative is generally associated with design which uses visions of potential futures as tools to better understand the present and debate versions of the future that people want and those that people do not want (Dunne, Raby, 2013: 2). Even though the aforementioned architects, gathered in Archigram, Superstudio and Archizoom, operated for a relatively brief period, the radical architectural speculation by these teams is today becoming ever more relevant (Smyth et al., 2021: 24).

VISIONARY PROJECTS

Visionary projects are by definition classified in the speculative group because they imply a certain living notion of what should happen or be created. In the figurative sense, this is a conceived or foreseen objective that the individual or group intends to achieve in the future (*** 2021). If the definition is considered exclusively through the prism of the feasibility of implementation, then in architecture this would cover projects that could not be carried forward when they were conceived

due to technological, political, economic or some other reasons, but were implemented as a whole or in part subsequently, when the necessary conditions were met. An older example that corresponds to such a notion of visionary architecture is the Ideal City (Functional City) in two levels by Leonardo da Vinci from 1488, in which canal transport for the populace and craftsmen would be divided from roads for the nobility, a sewage system would be introduced, etc. In other words, he quite ingeniously anticipated traffic segregation in the cities of the future (Radović, 1969: 25). As under current conditions criteria for the feasibility of implementation are no longer dictated as much by technology, it is other factors, economic or social, that determine what is visionary or not (Drexler, 1963: 4).

In Croatian architecture, one of the oft-cited examples of a visionary project is the Outdoor and Indoor Swimming Facility on the site of Delta in Rijeka by Vladimir Turina, Ivan Seifert, Ninoslav Kučan and Zvonimir Radić from 1948 (Kovač et al., 2020: 330). Even though it was conceived as a theoretical project (Čerina et al., 1997: 71), it was elaborated in great detail, foreseeing what were at the time non-existent technologies that are today standard in construction. A lesser known example is the design for the Church of St. Peter in Split from 1974 by Andrija Mutnjaković which, according to the architect, came near implementation in 1980 for the needs of the Olympics in the then socialist Soviet Union, albeit no longer as a church, but rather a cultural hall (Fig. 1; Čerina, 2021).

FUTURIST PROJECTS, OR PROJECTS
OF THE FUTURE

Futurist projects are essentially speculative, but their focus is generally future based on technological development and possible social changes that run parallel to technological progress (*** 2021). Futurist projects (Fig. 6)

may be associated with futurology, which, among other things, aims at scientific prediction and research into the future of the human community based on the objective facts of the present day, in order to deliberately, consciously and purposively impact humanity's future (Keller, 1973: 19).

Here a distinction should be drawn between futurist projects turned to the future and the artistic movement called Futurism from the onset of the 20th century, in which architecture eschewed everything old while extolling the advancement of technology, transportation and speed and viewed cities as being in constant motion.

## INTENTIONAL ARCHITECTURE

The term intentional architecture is associated with the titles of two exhibitions held in Wrocław, Poland, "Terra-1" in 1975 and "Terra-2" in 1981, organized by Polish architect Stefan Müller with the sub-title: "International Exhibition of Intentional Architecture." Participants from the entire world were invited to the exhibition to contribute to its theme: "the relationship between art, science and technology as a social development factor of our era" (Duda, Rutkowski, 2011: 42). The term "intentional architecture", which has been attributed to Müller, contains within itself a utopian component and primarily implies pure architecture, liberated from all material limitations, reduced only to ideas and thoughts (Lisowski, 2011). Stefan Müller claimed that the material limitations that exist today may not be limitations in some near future (Duda, Rutkowski, 2011: 43).

Andrija Mutnjaković also took part in both exhibitions by invitation with the project *Domobil*/Homobil at the first exhibition and the floating house project called *Kokonplan*/Cocoonplane at the secondone (Mutnjaković, 2018: 8; Fig. 7).

One may conclude that these are projects that do not necessarily have their point of departure in some common theory or orientation, rather they can be autonomous architectural ideas. However, even the term "intentional" is very broad and virtually encompasses every idea or project, because all projects are a result of the creator's thoughts and intentions.

## PAPER ARCHITECTURE

Paper architecture, like the terms analysed previously in the text, encompasses architecture that often cannot even be constructed, but which has always been the primary laboratory of architectural thought (Blažević, 2015). By the same token, the term paper architecture does not mean that the medium by
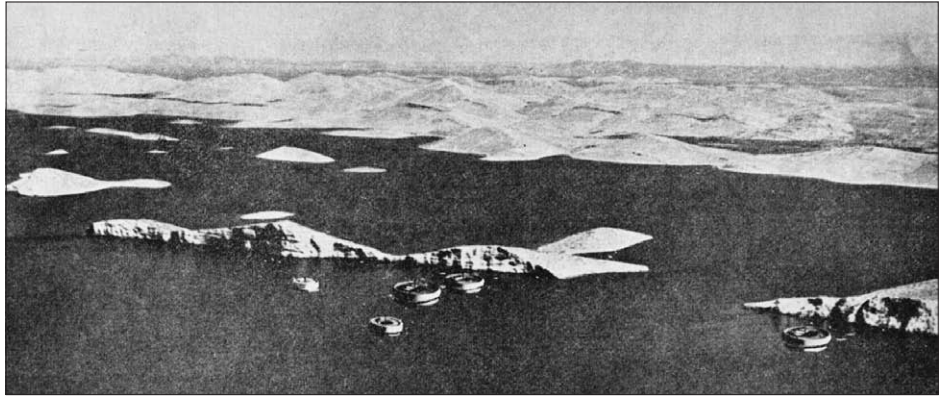


Fig. 6 Hydroid, Vojtjeh Delfin, 1966

which an architectural idea is presented must exclusively be paper. It implies all other forms of presentation of theoretical texts, engaged performances, campaigns, educational initiatives, film and video, etc. The expression paper architecture is used by many scholars, but perhaps the most precise definition was provided by Tahl Kaminer: "Paper architecture is the most explicit form of architectural autonomy, reducing architecture to its own medium – the drawing – and bypassing the building, the end-product of design which does not solely depend on the architect but also the investment, engineering, regulations and contractors. Actually, the very existence of paper architecture offers "evidence" that architecture is not situated in a building itself, but rather in an idea, in a project." (Kaminer, 2011: ch.1).

Fig. 7 Cocoonplane, Andrija Mutnjaković, 1981
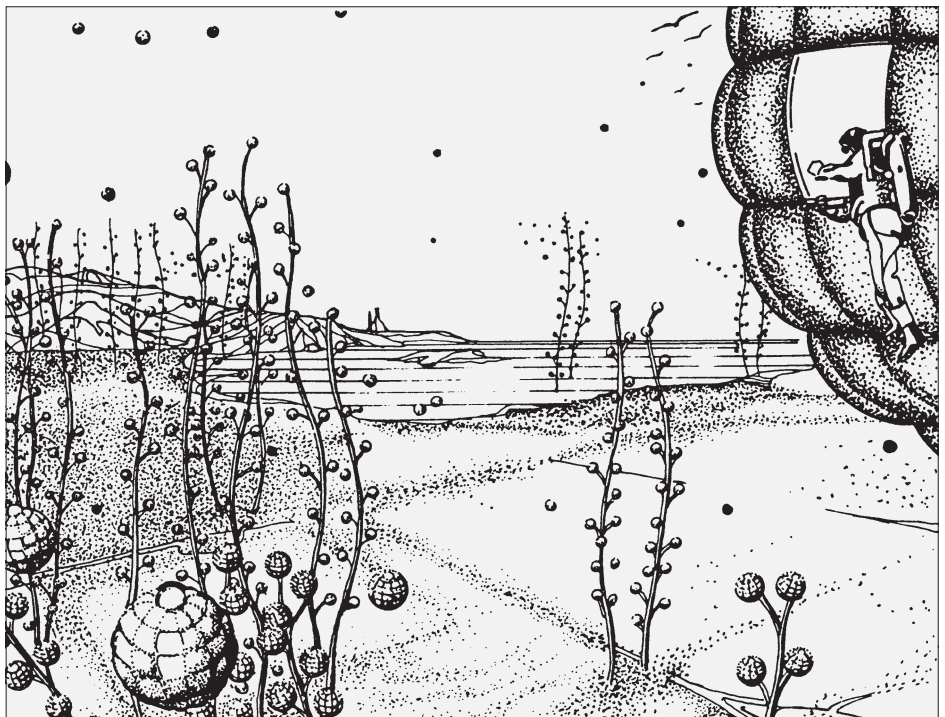
## Conclusion

There is no uniform term that would encompass all categories of projects included in this overview, and frequently several terms are used for the same projects, particularly if texts by different authors are considered. The meaning of terms and their relationship to the relevant projects often overlap, while their use depends on the specific aspects of the project itself, or the problem-oriented discourse instigated by the project. The authors of projects use different terms under different circumstances to describe their projects, or they accept terms that others use. Even though they use terms that underscore the fact that the project will likely never be implemented, in many cases the architects believe in the force and feasibility of their ideas, and that which stands in the way of implementation is technology, money, politics and social will, etc.

The terms used, however, do not fall into the same conceptual category and the heterogeneity of their origin contribute to their overlapping meanings. While some relate to the nature of the proposed intervention (experimental, speculative), the others enter the domain of the proposed content (utopian, ideal) or its specific characteristics (visionary, futuristic). Some of the terms are institutionalized through recognizable gallery practices by which they are strongly determined (radical, intentional).

What should be considered is that the observed attributes used by different authors could be aimed at directing the reader into the particular narrative of the text itself, hence set without a crucial critical stance toward the nature of the signified. Therefore, their uncritical acceptance could be misleading. Merely the application of such simplified attributions is insufficient for an in-depth study of experimental architecture, where it is necessary to deeply reexamine the relationship between the signified and the signifier, that is, the characteristics inherent to the projects and the terms used to describe them. Further on, while observing Croatian experimental architectural practices, it is necessary to consider the particularities of the context within which they are developed, and the causes of their distancing from or overlapping with world trends. Those facts could be taken as a direction for further research.

The term experimental project, although it cannot be simply superimposed upon architecture in the sense of its definition, encompasses the broadest spectrum of projects because it has no ideological, temporal or other determinant, but rather implies architectural research in the broadest sense of the word.

[Translated by Projectus grupa]

# Bibliography and sources

1. Anić, Š., Klaić, N., Domović, Ž. (2002) *Rječnik stranih riječi*. Zagreb: Sani-plus

2. Ant Farm (1971) *Inflato Cookbook*, self-published

3. Armstrong, R. (2019) *Experimental Architecture: Designing the Unknown*. Abingdon-on-Thames, UK: Routledge. https://doi.org/10.4324/9781351272483

4. Blažević, D. (2015) *Granice arhitektonske kreativnosti*. Available at: https://vizkultura.hr/granice-arhitektonske-kreativnosti/ [accessed: 21.3.2022.]

5. Bobić, M. (1984) „O traganju za pozitivnom utopijom", *Čovjek i prostor*, 380, p. 7.

6. Cook, P. (1970) *Experimental architecture*. New York: Princeton Architectural Press.

7. Coleman, N. (2007) *Utopias and Architecture*. Abingdon: Routledge. https://doi.org/10.4324/9780203536872

8. Cvetkova, E. (1975) „Kuće kao cvjetovi – razgovor s Andrijom Mutnjakovićem", *Večernji list*, 17.3., p. 4.

9. Cvetkova, E. (1991) „Pokretni cvjetovi na laguni – razgovor s Andrijom Mutnjakovićem", *Večernji list*, 13.10., p. 18.

10. Čerina, T., Galović, I., Mišković, P. (1997) *Razgovor s akademikom Borisom Magašem*. In: Vukadin-Doronjga, H. (ed.) (2006) *Iskorak Vladimira Turine*, Zagreb: Muzej grada Zagreba

11. Čerina, T., Mutnjaković, A. (2021) *Intervju s arhitektom Andrijom Mutnjakovićem*

12. Delfin, V. (1967) „Turistički hidromobilni sistem", *Čovjek i prostor*, 171, pp. 8-9.

13. Dellale, R. (1996) „Postmoderna arhitektura na sporednom kolosjeku", *Čovjek i prostor*, 508-509, p. 54.

14. Doxiadis, C. (1968) *Ecumenopolis: Tomorrow's City*. In: Encyclopedia Britannica (ed.) *Britannica Book of the year 1968*, Chicago: Encyclopedia Britannica Inc., pp. 32-33. Available at: https://www.doxiadis.org/ViewArticle.aspx?ArticleId=14929 [accessed: 2.3.2021.]

15. Drexler, A. (1963) „Vizionarska arhitektura", *Čovjek i prostor*, 127, p. 4.

16. Dunne, A., Raby, F. (2013) *Speculative everything*. London: MIT Press.

17. Fissac, M.J. (1975) „Arhitektonska utopija kao izvor stvaralaštva", *Čovjek i prostor*, 272, p. 14.

18. Galović, K. (2014) „Razgovor: Andrija Mutnjaković", *Vijenac*, 277, 14.10., p. 18.

19. Glavan, D. (1975) „Urbanizam kao problem društvenog opredjeljenja – razgovor s Andrijom Mutnjakovićem", *Omladinski tjednik*, 18.2., p. 17.

20. Goldberger, P., Fadell, T., Koolhaas, R. (2014) *Design in the Digital Age*. Available at: https://www.youtube.com/watch?v=YiSlogVfLrw [accessed: 10.9.2021.]

21. Juras, I. (1997) *Utopijske vizije arhitekture grada*. Zagreb: Školska knjiga.

22. Kaminer, T. (2011) *Architecture, Crisis and Resuscitation. The Reproduction of Post-Fordism in Late-Twentieth-Century Architecture*. Abingdon: Routledge.

23. Keller, G. (1973) „Futorologija – Budućnost kakvu zavređujemo", *Čovjek i prostor*, 241, pp. 19-22.

24. Kovač, T., Štulhofer, A., Vukadin-Doronjga, H. (2020) „Projekt Centra za vodene sportove (Kombinirano plivalište) Rijeka-Sušak arhitekta Vladimira Turine, 1949.", *Prostor*, 28 (2 /60/), pp. 300-317, https://doi.org/10.31522/p.28.2(60).7

25. Kulić, V., Mrduljaš, M. (2017) *Richterov Sinturbanizam / Prošireno polje sinteze: Urbanizam, umjetnost, politika*. In: Meštrić, V., Munivrana, M. (eds.) *Buntovnik bez razloga: retrospektivna izložba Vjenceslava Richtera*, katalog izložbe. Zagreb: Muzej suvremene umjetnosti, pp. 120-161.

26. Levitas, R. (1991) *The Concept of Utopia*. New York: Syracuse University Press.

27. Lisowski, P. (2011) *Terra x – Ideal city* [online]. Available at: https://idealcity.pl/en/paths/terra-x/ [accessed: 5.9.2021.]

28. Mutnjaković, A. (1981) „Kokonplan", *Arhitektura*, 178-179, pp. 2-3.

29. Mutnjaković, A. (2003) *Arhitekt Lucijan Vranjanin*. Zagreb: Art studio Azinović.

30. Mutnjaković, A. (2012) *Idealni grad – The Ideal City*. Zagreb: Art studio Azinović.

31. Mutnjaković, A. (2018) *Intencijska arhitektura – Intentional architecture*. Zagreb: Art studio Azinović.

32. Neidhardt, J. (1966) „Sintetička kuća", *Čovjek i prostor*, 164, pp. 4-5.

33. Odak, T. (2006) *Hrvatska arhitektura dvadesetog stoljeća – Neostvareni projekti*. Zagreb: UPI-2M PLUS.

34. Pasinović, A. (1969) „Ideja, utopija, vizija u djelima Andrije Mutnjakovica", *Arhitektura-urbanizam*, 60, pp. 25-30.

35. Radović, R. (1969) „Smisao i vrednosti eksperimenta i istraživanja u arhitekturi", *Arhitektura-urbanizam*, 60, pp. 31-36.

36. Richter, V. (2016) *Moj misaoni prostor*, Zagreb: Muzej suvremene umjetnosti.

37. Rowe, C., Koetter, F. (1978) *Collage City*, Cambridge, Mass.: MIT Press

38. Singh, I.R., Martin, R. (2013) „Utopia: An Interview with Reinhold Martin", *Journal of Architectural Education*, 67 (1). https://doi.org/10.1080/10464883.2013.767127

39. Smyth, M., Auger, J., Helgason, I. (2021) *Echoes of Futures Past – Speculations and Fictions from History*. In: Mitrović, I., Auger, J., Hanna, J., Helgason, I. (eds.) *Beyond Speculative Design: Past – Present – Future*. Split: SpeculativEdu, Arts Academy, University of Split, pp. 24-67.

40. Woods, L. (2015) *Slow manifesto: Lebbeus Woods blog*. In: Jacobson, C. (ur.) New York: Princeton Architectural Press

41. *** (2021) Hrvatska enciklopedija, mrežno izdanje. Zagreb: Leksikografski zavod Miroslav Krleža. Available at: http://www.enciklopedija.hr/Natuknica.aspx?ID=17422 [accessed: 5.12.2021.]

## Sources of illustrations

Fig. 1 Mutnjaković, personal archive

Fig. 2 Available at: https://www.spatialagency.net/database/haus-rucker-co (accessed: 8 September 2022.), adapted by authors

Fig. 3 Neidhardt, 1966: 4

Fig. 4 Archive of Vjenceslav Richter, Museum of Contemporary Art, Zagreb

Fig. 5 Mutnjaković, 2012: 158

Fig. 6 Delfin, 1967: 9

Fig. 7 Mutnjaković, 1981: 3

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