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PRINCIPLES OF ORGANIC ARCHITECTURE IN BUILDINGS INSPIRED BY ANTHROPOSOPHY: PERMANENCE THROUGH SUSTAINABLE AND BIOCLIMATIC ARCHITECTURE

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Abstract: The text addresses the issue of the permanence of the concept of organic architecture today as an integral element of building projects linked to modern and contemporary societies. The concept of organic architecture is present in Brazil in significant works by renowned architects such as Oscar Niemeyer and Lina Bo Bardi, as well as in everyday works. The objective of the research is to identify the premises that appear as elements inherent to the design strategies linked to buildings that belong to the anthroposophical aspect of organic architecture, classified by Nóbrega (2020) as the conceptual line that represents Radical Organicism (or co-expressionism) and which has Rudolf Steiner (1861-1925) as its founder. The investigation selected as a territorial area the Alto da Boa Vista neighborhood, in the south zone of the city of São Paulo, which has its history linked to English and German immigration, the latter being responsible for transposing the anthroposophic current into the local cultural one. The methodological procedures used in the empirically based investigation involved the selection and analysis of examples constructed from the selected categories, arising from the reading and critical analysis of texts by the authors: Rudolf Lanz (1998), Adriana Romero (2001) and Melany Vargas Benites (2018). The results demonstrate that the permanence and validity of architectural examples inspired by anthroposophic architecture in São Paulo today can be justified by the fact that they present characteristics that are related to architectures called bioclimatic and sustainable, linked to the aspects of contemporary architecture.

Keywords: Organic architecture, Anthroposophic architecture, Sustainable architecture.

INTRODUCTION

According to Dário and Botero (2007), the conceptualization of organic architecture was led by two architects: The North American Frank Lloyd Wright (1867-1959) and the Italian Bruno Zevi (1918-2000), who based on their works architectural journals and publications introduced the topic within the field of architecture. Wright's architecture was inspired by nature and his design process sought to develop construction always from the inside out, which was fundamental for the formal rupture of the conventional and traditional box of buildings. According to Acayaba's analysis of the language of Wright's works:

> Frank Lloyd Wright produced, independent of European canons, an architectural language identified with the American people and their culture. This "organic" architecture was born solely from the landscape, the climate, the client's needs and the client's relationship with the architect (Acayaba's, 2011, p. 16).

The Italian historian Bruno Zevi, in turn, proposed a theoretical reevaluation of the Modern Movement based on the reading of organic architecture based on Wright's works. The author wrote a manifesto, in 1945, in which he questioned the true meaning of organic architecture, making mention of the conferences held by F. L. Wright at the Royal Institute of British Architects in London, in May 1939, in which the American architect defended the meeting of art, science and religion, with organic architecture at its center. In ``*Verso, una architectura organica*`` (1945), Zevi argues that the term organic when applied to architecture would have caused a lot of confusion among different architects, critics and other academics. The first mistake would be to consider organic architecture as "naturalistic", or intended to imitate nature (such as plants, leaves, trunks, mushrooms).

The other error, according to him, is to associate such architecture with "biology" or metaphors that refer to organic forms or the human body. What he points out to be of the greatest importance is its functionality in the integral sense, not just utilitarianism.

He talks about seeking material and psychological happiness within the space of organic architecture with a social and human attribute, more than humanistic. The main currents of modern architecture, according to its spatiality, as defined by Bruno Zevi (1978), are functionalism and organic movement. The first originates from the Chicago School (1880-1890), but is consolidated in Europe with Le Corbusier. The second has its peak in Frank Lloyd Wright. Hence, he writes: "Having the theme of the free plant in common, these currents understand it differently, the first only rationally, and the second organically and with full humanity" (ZEVI, 1978, p. 92). Architect Frank L. Wright, since the beginning of the 20th century, has been the prophet of the organic trend in architecture with his house anchored to the ground, unfinished materials and reintegrated landscape.

In the figure 1, According to José Maria Montaner (1999), the theories presented by Corbusier in his texts reveal a French Cartesian and functionalist tradition, as well as his classicist mentality. In "For an Architecture", his speech is propagandistic with works of model engineers and "proposing a synthesis between the new universe of the machine, exemplified by transatlantics, airplanes and automobiles, and the constants extracted from great works of the past, especially Greek architecture -Roman" (Montaner, 1999, p. 38).

Figure 1: Buildings designed by Frank Lloyd Wright in Oak Park, Illinois, United States: Arthur Hertley residence (1902); Nathan Grier Moore residence (1895) and the residence and studio of architect F. L. Wright (1889).

Source: Authors' collection, 2022.

The author presents examples of series house projects, such as prototypes and similar to automobile production. For him, the ideal house has to be like a living machine.

The aesthetics of the machine is present in all avant-garde movements of the first decades of the 20th century, with its rationality being greatly admired by functionalists (Zevi, 1978). Frank Lloyd Wright's architecture in the United States comes after the rationalism of the Chicago school (1880-1893); In Europe, the organic movement has Alvar Aalto as its greatest representative. Bruno Zevi (1984) compares the mannerism that dismantled Renaissance classicism – in the 11th and 17th centuries – and paved the way for the Baroque, with what happened in Europe with the modern movement, and presents Scandinavian neo-empiricism and neo- post-war expressionism. Alvar Aalto, from the 1930s onwards, began to work on a synthesis between the rational and the organic in his projects (Figure 2). On a basis of modernity, artisanal methods result in proposals of a "progressive and humanistic character" (Montaner, 2001, p. 86). In modern

architecture, according to Bruno Zevi (1984), as well as in mannerism and baroque, in the past, expressionism is represented by Gaudí in Catalonia and Mendelsohn in Germany. Zevi describes Casa Milà in Barcelona (Figure 3) with its asymmetries and the Einstein Observatory with undulations and protuberances. Among other works with these characteristics is Rudolf Steiner's Goetheanum in Dornach, Switzerland, home to the center of the anthroposophical movement.

Figure 2: Baker House student housing complex (1948), in Cambridge, Massachusetts, designed by Finnish architect Alvar Aalto.

Source: Authors' collection, 2022.

Figure 3: Casa Milà (1907), in Barcelona, designed by Catalan architect Antoni Gaudí.

Source: Authors' collection, 2022.

Neo-empiricism takes place in Scandinavian countries (1940s and 1950s), as a reaction to the "excessive schematism of the architecture of the 1930s. On an urban scale, it avoids theoretical anticipation in favor of flexibility. At the scale of the building project, this architecture values traditional materials, textures, colors and 'domestic comfort'" (Montaner, 2001, p. 84). This school does not admit globalizing rationalist thinking, which has pre-established solutions or typologies in mind. This new design concept proposes more humanistic attitudes, as it respects the user's psychology and the surrounding and natural characteristics. "An architecture of diversity that will have its greatest subjection in the lack of a theoretical and cultural discourse" (Montaner, 2001, p. 94).

Brenda Nóbrega (2020) researched the movements, currents of thought and historical facts that supported what we currently call organicism. The author highlights that the process occurred gradually, incorporating the contributions and inspirations of each of these movements, but without following a direct correspondence or a complete commitment to the seven schools of thought researched, namely: enlightenment, romanticism, arts & crafts, art nouveau, eclecticism, modernism and expressionism. The same author grouped architectural production from the beginning of the 20th century into 9 organic conceptual strands: 1 – Radical organicism (or co-expressionism), represented by Rudolf Steiner (1861-1925) and anthroposophy; 2 – "Pure" free investigation architectural organicism, which encompasses the architecture and concepts of Frank Lloyd Wright, some works by Le Corbusier, the work of Álvaro Siza and his critical regionalism; 3 – Imitative organicism, represented by Biomorphic and Biomimetic Architecture; 4 – Organicism inspired by Biophilic Architecture and Biodesign; 5 – Functional organicism, which encompasses Sustainable Architecture and Gentle Architecture; 6 – Plastic organicism, represented by works by Lina Bo Bardi and Oscar Niemeyer; 7 – Historicist organicism, which captures the traditions, knowledge and memory of a people through vernacularism; 8 – Formalist organicism, exemplified by the Casa da Música project by Rem Koolhaas; 9 – Contemplative organicism, represented by the "phenomenological mirror" when proposing buildings that seek to awaken the senses and environmental perceptions.

Thus, it is observed that the concept of organic architecture is present in Brazil in significant works by renowned architects such as Oscar Niemeyer and Lina Bo Bardi, classified by Brenda Nóbrega (2020) as belonging to the aspect of plastic organicism, represented, for example, by the Pampulha Complex, a project by Niemeyer from 1943 (Figure 4) and the integration with nature proposed in the ``*Glass house*`` by Lina Bo Bardi, in 1951 (Figure 5). But the concepts belonging to organic architecture are also present in everyday works in São Paulo, through buildings linked to the precepts, for example, of Anthroposophical Architecture, Organicism inspired by Biophilic Architecture, plastic Organicism and Organicism present in Sustainable Architecture and Bioclimatic Architecture.

Figure 4: On the right, Church of São Francisco de Assis da Pampulha (1943) and, on the left, Casa do Baile (1943), both projects by Oscar Niemeyer in Belo Horizonte.

Source: Authors' collection, 2022.

Figure 5: Glass House (1951) designed and built by Lina Bo Bardi, in the Morumbi neighborhood in São Paulo.

Source: Authors' collection, 2022.

Among these currents of organic architecture that can be identified within Brazilian architectural production, the present research selected the conceptual aspect of radical Organicism originating in the conceptual propositions proposed by Rudolf Steiner at the beginning of the 20th century, called Anthroposophical Architecture, to investigate which physical aspects incorporated into buildings can be identified as responsible for keeping this conceptual aspect active in the contemporary city after almost a century of history. The argument assumes discussed by Brenda Nóbrega (2020) that the contemporary concept of sustainability incorporated precepts and design strategies widely used within the current of organic architecture, since the projects of Frank Lloyd Wright and with the same objectives and results obtained from what Today it is known as sustainable building systems and bioclimatic architecture.

The general objective of the research is to discuss the aspects inherent to the design premises of organic architecture incorporated in the anthroposophical aspect that justify its permanence in contemporary times. The specific objective is to demonstrate that the design strategies proposed and employed by anthroposophic architecture lasted for almost a century, due to their conceptual foundation linked to the aspects of sustainable and bioclimatic architecture. The research is based on historiography based on texts by Rudolf Lanz (1998) and Melany Vargas Benites (2018) with the aim of rescuing the premises proposed and used in buildings inspired by anthroposophy.

In parallel, we seek to identify and synthesize the guiding principles of current sustainable architecture and bioclimatic architecture. As references for architectural works, buildings located in Alto da Boa Vista, a neighborhood in the south of São Paulo, were selected.

RUDOLF STEINER AND ANTHROPOSOPHY

Anthroposophy is a spiritual science created by the Austrian pedagogue, philosopher and architect Rudolf Steiner (1861-1925) at the beginning of the 20th century and studies the human being from a broader angle using the same scientific rigor in its reasoning and application of its methods (LANZ, 1998). Rudolf Steiner, when he was still a young student, demonstrated an ability for scientific research and was asked to organize and edit the scientific writings of Johann Wolfgang von Goethe (1749-1832), a German researcher and writer. In 1826, at the age of 25, Steiner published a book entitled The Theory of Knowledge Implicit in Goethe's World Conception. He then published another book, Goethe the Scientist, which represents a valuable contribution to the philosophy of science.

From the turn of the century onwards, Steiner began to develop his own philosophical principles based on a methodical research into psychological and spiritual phenomena, published several books and gave a series of lectures to publicize his proposal for a complete science of the spirit, Anthroposophy (RSARCHIVE, 2022).

Anthroposophy understands the human entity considering that the constitution of the human body is composed of substances and chemical elements such as carbon, oxygen, calcium, iron, that is, substances that also form the mineral kingdom and beings from the plant and animal kingdoms. What differentiates the inorganic world from the mineral kingdom, from beings in the plant and animal kingdoms, is what is called life, which comprises the phenomena of growth, reproduction and metabolism, among others. These phenomena give living beings a limited existence in time, unlike the mineral kingdom.

According to Lanz (1998), Anthroposophy attributes to organic beings a second non-physical body that permeates the physical, or mineral, body. Rudolf Steiner called this second body the plasmator or etheric body, which does not exist in minerals, only in plants, animals and man. From the understanding of this basic constitution of living beings and the acceptance of the etheric body, Rudolf Steiner developed research in several areas, with holistic approaches and considered innovative for the time, by his group of followers. After 1911, his attention and studies turned to painting, theater, eurythmy and architecture. After the end of World War, (I), he advanced his research into the fields of education, agriculture, therapy, and medicine.

Anthroposophic architecture emerged, therefore, from Rudolf Steiner's work as an architect at the beginning of the 20th century, at a cultural moment in which European and North American visual artists were looking for a new artistic expression. In 1913, Steiner began building a pavilion called Goetheanum, headquarters of the Anthroposophical Society in Dornach, Switzerland, where he developed a building with a volume that expressed organicity and an innovative artistic language for the time. The building was built in wood and concrete and already presented all the principles proposed by Steiner for the architectural language that represented his anthroposophic vision of life. The building ended up being the target of an arson attack in 1922 and, after the tragedy, Dr. Grossheintz, land owner and member of the Theosophical Society, donated the site for the construction of a new Goetheanum, also designed by Steiner, but this time in concrete structure. Furthermore, the complex where the Goetheanum is located has other works designed by Steiner: the Glaushaus, Boiler House, Duldeck House, Jooger House and the Eurtimaeus. The project included the participation of other architects, sculptors and painters, with the intention of integrating

all plastic arts into the work. For Steiner, architecture is the mother of all arts and houses painting, sculpture, music and dance; in an integrative context, architecture is a dialogical work that communicates with the user (SAB, 2022). As a parameter that generates the form and concept of the architectural work, Rudolf Steiner was inspired by the principle of metamorphosis, according to which each vegetation presents a sequence of forms exclusive to each species, in its different growth phases.

The architect adopted in his works the idea of metamorphosis in the formal expression of details and sculptural elements, as well as metamorphosis from the spaces generated in the organization of the project plan to the implementation of the volume in the local context. The formal sequence of architectural elements is based on a single principle and establishes a link between the part and the whole (SAB, 2022).

According to Benites (2018), the concept of organic architecture intrinsic to the anthroposophic architecture is related to the evolution of forms, as happens with a living being, and implies growth, development and movement; thus, it promotes a sensorial experience in people through free forms. To the author:

> Anthroposophic architecture avoids the use of right angles and adopts organic forms both in plan and in elevations and sections, this way the free forms create a constant dialogue between the ceilings and walls, just as anthroposophy seeks a dialogue between the parts and the whole (BENITES, 2018, p. 82).

This way, the environments suggested by anthroposophic school architecture, for example and, mainly, the classroom, are proposed as flexible spaces that encourage children's energies to develop through organic forms, allowing the class and the environment itself to be transformed according to the activities being carried out inside. Another fundamental issue for anthroposophic architecture is the environmental quality according to the activities carried out in a given space, as it is understood that every geometric composition of the form has an influence on the user, thus proposing the enhancement of lighting and natural ventilation, dimensioned beyond the simple functional efficiency that they attribute to the qualification of the space.

From this historiographical survey of the proposition and development of anthroposophy, it is possible to extract the following guiding principles that were inserted into anthroposophic architecture: integration of architecture with other plastic arts; relevance of the chromatic composition in the building, due to the studies carried out by Steiner of Goethe's work; importance of the materiality of buildings, due to their studies of the compositions of natural elements: plants, animals and minerals; plant elements and their healing and food production properties, expressed in the importance of green areas as a source of healing and subsistence; comfort of indoor and outdoor environments, expressed in lighting and natural ventilation qualities; formal composition inspired by metamorphosis as a form-generating principle, expressed through organic and fluid forms in opposition to Cartesian rigor. Anthroposophic architecture began to be widespread in Brazil and in São Paulo specifically after the introduction of Waldorf Pedagogy, in 1956. The pedagogical method is based on the knowledge of human beings from Anthroposophy, and aims to provide children and young people with the integral development of their capabilities, considering the physical, emotional and spiritual spheres of the human being (LANZ, 1998).

Anthroposophy arrived in Brazil through some European immigrants who were contemporary to Rudolf Steiner, at the

beginning of the 20th century. Just before the Second World War, Mrs. Lavínia Viotti translated into Portuguese the book "How to Acquire Knowledge of the Superior Worlds" written by Steiner. Although there were already study groups in Rio de Janeiro and Porto Alegre, it was in São Paulo that Anthroposophy ended up being more quickly disseminated.

After the end of World War II, a group of immigrants who lived in São Paulo and studied the pedagogical works of Rudolf Steiner – the couples Schimidt, Mahle, Berkhout and Bromberg – decided to found a Waldorf school. The couple Selma and Dirk Berkhout offered a residential property on Rua Albuquerque Lins, in the Higienópolis neighborhood and, thus, on February 27, 1956, the first Waldorf school in Brazil was founded, initially called "*Higienópolis School*" (SAB, 2022). In 1958, the school changed its address and was installed on a large plot of land with an extensive green area in Alto da Boa Vista, in the district of Santo Amaro, south of São Paulo.

The neighborhood already had many families of English and, mainly, German origin, whose first immigrants arrived in the region in 1829.

SUSTAINABLE ARCHITECTURE AND BIOCLIMATIC ARCHITECTURE

In a more comprehensive definition of Sustainable Architecture, it is possible to say that it is one that aims to preserve the environment and takes into consideration, practices that aim to reduce the consumption of available resources, through the reuse, recycling and renewal of materials. Furthermore, it avoids toxic products and materials in different phases of construction (Diniz, 2008 apud SIVIRINO; FISHER E LINKE, 2021).

Juliana Rangel (2015, p. 4) presents another definition: "Sustainable Architecture is one that seeks to minimize impacts on the environment, being ecologically correct, but must also promote social and cultural development, in addition to being economically viable" This definition is based on the tripod of sustainability: environmental, social, economic, created in 1990 by John Elkington. An observation is worth making here: architecture can be ecological, but not necessarily sustainable. In other words: a sustainable architectural project is one that "commits to disseminating ways of building with less environmental impact and greater social gains, without, however, being economically unfeasible" (Cavalcanti, 2023, p.1).

Some recommendations from the Brazilian Association of Architectural Offices (ASBEA) for Sustainable Architecture are presented here: assessment of the impact on the environment; analysis of the implementation on the land and the surrounding area; use of non-toxic, reusable and recyclable materials; waste reduction; energy efficiency; reduction of water consumption; use of bioclimatic architecture (ASBEA apud Cavalcanti, 2023).

Nóbrega (2020) states that bioclimatic architecture is a response adopted by architectural buildings to pressing environmental concerns related to sustainability and natural conservation:

> The most environmentally committed architectural works began to adopt passive climate and environmental control systems, taking into consideration, internal and external energy exchanges, the so-called bioclimatic architecture. The so-called sustainable architecture also fits here as a category of organic architecture (Nóbrega, 2020, p. 1).

Bioclimatic architecture has antecedents in vernacular architecture, considered as an example of man's adequate response

to the demands imposed to preserve the environment. Within this concept, Adriana Romero defines bioclimatic architecture as: "a form of logical design that recognizes the persistence of what exists, is culturally appropriate to the place and local materials and uses the architectural conception itself as a mediator between man and the environment" (Romero, 2001, p. 28).

BUILDINGS INSPIRED BY ANTHROPOSOPHIC ARCHITECTURE IN ALTO DA BOA VISTA

In addition to the Rudolf Steiner Waldorf School, there are currently other buildings in Alto da Boa Vista that were built or renovated according to the principles of anthroposophic architecture, such as: the first Tobias Clinic, on Rua das Barcas and the new unit located on Rua São Benedict; the Weleda pharmacy and the Rudolf Steiner Cultural Space. Based on the identification of these examples, analyzes and descriptions of aspects of the buildings related to the principles of Anthroposophic Architecture, Sustainable Architecture and Bioclimatic Architecture were carried out.

RUDOLF STEINER WALDORF SCHOOL

After the founding of the Waldorf Rudolf Steiner school in 1956, the facilities were expanded and currently the school has classes from Kindergarten, Elementary and High School, in addition to having the Rudolf Steiner Faculty of Pedagogy. The functional program of the school complex includes a Kindergarten sector with gardens and welcoming classrooms, laboratories, Computer rooms, Crafts, Music, Art Workshops, Theater, Library, sports courts (indoor and outdoor), cafeteria, vegetable garden and gardening.

The classroom environments have wide ceilings, with generous openings made up of ribbon windows along the entire side, providing natural lighting and ventilation, in addition to allowing visual integration with the outdoor green area. The floor and furniture are made of natural wood. The laboratories follow the same principle, with wide openings and predominantly wooden furniture, and the floors are terracotta-colored ceramic. The Waldorf School theater is one of the most recent buildings built in the complex and its main facade is partially made of exposed concrete and partially painted light blue; their volumes demonstrate the asymmetry of the composition in this portion of the building (Figure 6). The project was designed by architect Michel Emil Mösch and, in addition to the auditorium, it also includes, on its upper floor, eurythmy, dance and music rooms. Internally, the auditorium has a contrasting atmosphere with the exterior, as it has terracotta fences and furniture made of wood in a natural color. The design of the volume's opening frames follows the asymmetrical composition and was inspired by the openings of the Goetheanum (KOOJI, 2015).

Figure 6: Facade of the Rudolf Steiner Waldorf School Theater, in Rua Job Lane, Alto da Boa Vista, São Paulo.

Source: Authors' collection, 2022.

TOBIAS CLINIC

The Tobias Clinic was founded in 1969 and represented the first medical center for anthroposophic treatment installed in South America. From the beginning, the Clinic encouraged the training of doctors and health

professionals within the principles of the anthroposophic movement, which gave rise to the Brazilian Association of Anthroposophical Medicine (ABMASP, 2022).

The Clinic was installed on Rua Regina Badra, in the heart of the Alto da Boa Vista neighborhood. In addition to offices for medical care and guidance, the Clinic had 8 beds for hospitalization and environments for rhythmic massage, art therapy and eurythmy. The internal environments had wooden floors, ceilings and furniture, in addition to having large wooden frame windows, overlooking the external green areas. The fences, both internal and external, were partially made of exposed ceramic brick masonry and partially covered and painted in light tones (Figure 7).

Figure 7: Façade of the old Tobias Clinic on Rua Regina Badra.

Source: Authors' collection, 2022.

WELEDA PHARMACY

Rudolf Steiner gave a series of lectures in 1920 to a group of doctors and students, beginning what would later be called anthroposophic medicine. He then formed a partnership with doctor Ita Wegman and together they began producing products that were based on the concept of connection between nature, body, mind and individuality, giving rise to the Weleda pharmacy. The origin of the name is associated with the term "Veleda" which was a title given to wise and healing women. The pharmacy sells anthroposophic medicines and cosmetics that are produced with 100% natural ingredients.

The Weleda do Alto da Boa Vista pharmacy is located on Rua da Fraternidade and the store project was designed by the firm Dabus Arquitetura, the work was completed in 2013.

It is a 50 square meter commercial space that is used in the interior environments, ecologically correct materials such as demolition wood, ecological mineral paint and ecological sustainable concrete flooring (DABUS, 2013). The furniture is wooden with rounded edges. The lining and a side wall have openings in irregular organic shapes.

The facade facing the street is partially covered with wood, which frames the storefront in the center and has an irregularly shaped frame (Figure 8). On the right side, there is a secondary entrance that contains a tropical garden, with a wooden deck floor, a concrete pergola covered in wood and a green wall.

Figure 8 – Weleda Pharmacy Facade in Rua da Fraternidade, Alto da Boa Vista, São Paulo.

RUDOLF STEINER CULTURAL SPACE

The Rudolf Steiner Cultural Space houses the headquarters of the Anthroposophical Society in Brazil and the program contains an auditorium, library and meeting rooms. The institution promotes events and courses. The building was designed by architect Michel Emil Mösch. The building made of reinforced concrete makes up a single volume that houses environments where free forms predominate, with curvatures and without Cartesian angles. The openings, frames, marquees and balconies are also made up of asymmetrical

shapes. The interiors have furniture in which wood predominates. The front facade has a reinforced concrete panel with corrugations, in ocher color, in contrast to the terracotta color and gray of the exposed concrete.

Figure 9: Facade of the Anthroposophical Center, on Rua da Fraternidade, Alto da Boa Vista, São Paulo.

Source: Authors' collection, 2022.

The analysis of the selected works allowed us to identify variables proposed by anthroposophic architecture applied in buildings based on Rudolf Steiner's concepts, as presented in Table 1.

Among the variables listed, the following aspects can be highlighted as directly related to sustainability in architecture: use of natural materials in construction; green areas, food cultivation and phytotherapeutic use; environmental comfort, natural lighting and ventilation; formal composition based on organic and fluid forms.

CONCLUSION

The principles of organic architecture defined by the architect Frank Lloyd Wright and the Italian historian Bruno Zevi, in the mid-20th century, are present in aspects of contemporary architecture in different expressions from different parts of the world. One of the precursor aspects identified by Nóbrega (2020) as Radical Organicism gained representation from the works of Rudolf Steiner, and its principles are in force in São Paulo architecture to this day. The buildings in the Alto da Boa Vista neighborhood, in São Paulo, selected and analyzed in this article, presented design principles of anthroposophic architecture; at the same time, characteristics were identified that are currently considered precepts of sustainable architecture and bioclimatic architecture, such as: adaptation of the building to the surroundings and the place in which they are located; consideration of climatic conditions and use of large openings to capture natural lighting and ventilation. Precepts that contribute to caring for the environment, reducing energy costs and that are present in the aspect of organic architecture that Brenda Nóbrega (2020) called Functional Organicism, encompassing Sustainable Architecture and Gentle Architecture. This commitment to the concept of sustainability is the paradigm that still makes coherent the existence and permanence of the principles of Anthroposophical Architecture in the 21st century.

Concepts of anthroposophic architecture	Rudolf Steiner Waldorf School	Tobias Clinic (old)	Weleda Pharmacy	Rudolf Steiner Cultural Space
Integration between architecture and fine arts	■			■
Enhancement of chromatic composition	■	■		■
Use of natural materials in construction	■	■	■	■
Green areas, food cultivation and phytotherapeutic use	■	■	■	■
Environmental comfort: natural lighting and ventilation	■	■	■	
Formal composition based on organic and fluid forms	■	■	■	■

Table 1: Application of the concepts of anthroposophic architecture in the buildings analyzed.

Source: Prepared by the authors, 2023.

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