

# The Brutalist Architecture of Dune: Rule-breaking Designs for the Future

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**Abstract.** The grandeur and rawness in architecture can be traced to the brutalism style raised up in soviet kingdom before ward war II. It seems that the post-war coldness in such design's associates with the setting of the Dune, leading to the pivotal climax: the Battle of Arrakeen. But why does Denis Villeneuve and Patrice Vermette, the director of production designer of Dune, choose to embrace brutalist architecture in the film? This paper will examine the legacy of brutalist architecture and its relationship to modern film aesthetics. This is because this paper wants to put off implication introduced by the Dune with its incorporation of such architecture, that is to fantasize a different style of modern architecture that adheres to the doctrine of the soviet architects from the past. in other words, to contemplate the potential of our society if the functionalist element didn't suppress the innovation of the soviet architects; if we are able to keep utilizing and developing the style of brutalism until now. Simultaneous, this paper intends to help recognize the limitations on today's architects and the potential for societal transformation that might result from giving them more freedom to create. Breaking convention is necessary if we are to go forward, even if the general public does not always find it appealing. Fortunately, many architects are starting to put this concept into practice and are reclaiming their creative independence in the field of architecture.

**Keywords:** Brutalist Architecture, Dune, Architecture Design, Rule-breaking

## 1. Introduction

The grandeur and rawness in architecture can be traced to the brutalism style raised up in soviet kingdom before ward war II. It seems that the post-war coldness in such design's associates with the setting of the Dune, leading to the pivotal climax: the Battle of Arrakeen. Brutalism ones is built by architects to urgent modernism in soviet [1]. According to my research, the reason of adapting brutalism in Dune is not solely rely on its majestic scale and futuristic aesthetics. There is more to the answer: Villeneuve intends to explore a possibility of the modern architecture style, and to hypothesize an ideal city by confirm the ideology that of the soviet architects. In this sense, the Dune has a greater meaning to the study of architecture, that is to encourage the freedom to build.

From the Blade Runner 2049 to Dune, brutalism has become one important factor that reoccurs in the sci-fi films of the Denis Villeneuve's. Dune (2021) won six Oscars prices, is notably of the cinematography visual effects. Very much indeed, the scene in the movie incorporates elements of the ancient aesthetics, showcasing minimalistic composition, providing a sense of magnificent grandeur and a salience beauty from the restrained use of ornament. The camera captures stories setting on Arrakis, an alien planet. Almost the whole surface is desert and barren, an amongst all that nothingness and simplicity. Therefore, the brutality of the nature is exemplified.

The challenge of recreating Dune, one of the year's most fantastical films, from American author Frank Herbert's original manuscript is huge. struggling to produce a feeling of awe, which relies on the incorporation of brutalism thorough the work, is not the sole reason. It is more difficult to reshape the audience's mind with a completely different view of the future world. This movie tends to put off a hypothesis of the humanity's future, that is living in a situation where people possess progressive technology, but at the same time, experiences the technology in a setting that is like the World War II era soviet--- when the raw concrete geometrics stands on every corner of the city [2]. In this case, Villeneuve warns us through his choice of brutalism that what is defined as the backward could still be the advanced.

To dive into the interpretation and application of brutalism both historically and in sci-fi film, this paper will be divided into four sections: recalling the history of brutalism, the twist in brutalism over functionality (or the misconception of some monumental brutalist architecture), comparing the brutalist style in both ancient soviet building and in Dune, and finally to touch upon a situation of modern architect's limited freedom to build. By following these steps, the readers of this paper will be led step by step to understand the argument this paper raised in advocating maximum design flexibility in such rigid society. In considering real word context and government regulations of urbanism. This paper will mainly focus on analyzing the athletics and interpreting the profound historical means behind Dune.

This paper make use of three different kinds of resources. First, secondary sources from the historical analysis, including images of the entire structure or designs of classic Soviet buildings. These second-hand analysis allow us to gain insight into other expert's opinion on the historical development of brutalism and ensure my writing considers their ground-breaking thinking. Second, secondary sources such as blogs and websites devoted to Dune's aesthetics and follower-created interpretations of the show's visuals as they relate to brutalism. They also include other sources that offer critical assessments of Dune's visuals. Third, the limited amount of primary research. This is because there is lack of original blueprints of the ancient building, and there are less scene design story board of the Dune accessible on the internet as well.

## **2. The history and development of Soviet brutalism**

### **2.1. The rising Brutalism: Satisfying the utilitarian purpose**

The European architect Le Corbusier is widely credited as the founder of Brutalism because of his notion of reinforced concrete. The "Unité d'Habitation" in Marseille, a groundbreaking housing project that inspired later brutalist architecture, was completed under his direction in 1952 [3]. However, it was the English architects Alison and Peter Smithson who were the fundamental pioneers of Brutalism. The style quickly went global, becoming a sign of a contemporary way of life in places like the United Kingdom, Yugoslavia, and Czechoslovakia, and most noticeably, the former Soviet Union.

While Brutalism did not appear until after World War II, its foundations were already set in the functionalism and massive simplicity that characterized earlier forms of architectural modernism like the International Style. Brutalism was an attempt to apply simple architectural principles to the urgent problem of urban renewal that arose after World War II. Brutalism was widely used for government structures and low-income housing. Made for the general public with the purest of intentions. In the 1950s, nations around the world struggled to rebuild war-ravaged cities on a tight budget. Government officials finally settled on Brutalist building as a simple, fast, and reliable answer to the situation.

Moreover, some ideals of old brutalism left behind and became the replicative residential buildings in the rural areas of the modernized city. This is what commonly recognized by public as the ugliness of brutalism. One of them was the Chinese brutalism. After the founding of the People's Republic of China in 1949, the first brutalist building is constructed. During this time, there was a surge in demand for functional buildings that could meet the country's housing and manufacturing needs in the same style as those in the former USSR. Following that was a pair of Beijing ancient sites, the Minzu Hotel and the Worker's Stadium. The terms old, broken-down, and debris are often used interchangeably with the sight of these functional buildings seen everywhere in the streets. It was the reason why the public began to view brutalism with distaste in the early 21st century.

### **2.2. A twist on Brutalism: the marching towards futurism**

However, led by Le Corbusier and Frank Lloyd wright, brutalism has become a new aesthetical trend of the time. Before the end of the Soviet era at the turn of the twentieth century, architects designed several stunning and frankly absurd constructions for the original objective of creating

structures for massive dwelling, but unexpectedly achieve something new otherwise. For instance, many architectures built by soviet architects shared the common principles of Using raw concrete and shaped like UFO; the resort in Ukriane, the Makedonium memorial, and the spiritual home of the Bulgarian communist party stands on a peak in Buzludzha etc. are the perfect examples. The typical and ugly perception of brutalism is challenged by these designs, which instead offer a fresh perspective on futurism. This is because the many forms are peculiar in the twentieth century and the resemblances of alien structures evoke a feeling of practical otherness. This is one of the explanations for the prevalence of brutalism in science fiction movies like Dune.

In addition, the term "brutalism" was named so because it was meant to appear like "beton brut," the French word for raw concrete, which, in the hands of an architect like Le Corbusier, could be stunningly beautiful. To that end, Reyner Banham, a determinedly hip and hugely bearded English architectural critic in the authoritative pages of the Architectural Review, used the word "Brutalists" to describe a new breed of bold young architects who, in the process of constructing a socialist utopia in the wake of World War II, would question the fundamental foundations of what they perceived as the 1930s bourgeois Modernism.

During this time period, brutalists have the freedom and, in some cases, the imperative expectation, to construct anything they see fit. Because of this, perhaps, the mythical and historical legacies they left behind are so monumental and are once again in favor on television and in cinemas. Yet in today's conservative society, no one would dream of constructing such daring structures.

### **2.3. The downfall of Brutalism: the transition into cinema**

Photographs by Danila Tkachenko titled "Restricted Area" offer many viewers a window into the decline of brutalism. She captured abandoned Soviet-Era Infrastructure that is once recognized as the "forgotten scientific triumphs" and "technocratic future that never came" (Walsh, 2019). Being was one of the most controversial styles of the 20th century, brutalism is characterized by massive, monolithic structures made of bare concrete [4]. Because of this, it has been given a negative reputation for being inhumane and unwelcoming due to the cold appurtenances it favors in its material selection, which brings back painful memories of the war's aftermath. In addition, economic considerations are at play as one of the reasons for its downfall. Many brutalist structures are need of renovation since governments and economists consider them to be of poor quality. And, because it was constructed to meet the functional needs of a past era, it is no longer adequate. Therefore, the demolishing process of such architectures begun globally.

Unfortunately, the fully functional buildings were not the only ones removed; inspiring historic masterpieces of brutalist architecture were also destroyed. British architects Peter and Alison Smithson had their Robin Hood Gardens housing project destroyed in 2018, and the Derby Assembly Rooms by Casson, Conder & Partners and the Swansea Civic Centre by CW Quick were also threatened with demolition in the same year. There is dissatisfaction among brutalists and young architects as a result of these actions. They feel left out of the chance to have a voice in the city's future design and the freedom to construct as they see fit.

Since constructing a brutalist city is so challenging, architects and artists have turned to the medium of film to present the audience the beauty hidden within this paradoxical style. In this case of producing Dune, Denis Villeneuve shows his understanding of the young architect's frustration while also appreciates brutalism's aesthetic and transformational possibilities. The vision of the soviet brutalists is immortalized in the digital cinema, and he uses Dune to construct an idea city to achieve so. Through the use of brutalism in Dune, he was able to give every scene an air of grandiosity, also shedding new light on brutalist architecture and demonstrating how its feeling of raw beauty can leave viewers in awe.

### 3. The Aesthetics of futuristic brutalism in both film and real-life context

#### 3.1. common characteristics in brutalism

Perhaps no other architectural style, on-screen or off, causes as strong an emotional reaction as brutalism. Brutalist buildings may appear solid and unyielding from the outside, but their sculptural aesthetic gives them distinctive traits that use dimension to create patterns and compositions with light and shadow. The Soviets were the masters of this style, with its austerity, roughness, and geometric forms that recall huge concrete spaceships. Some claim that the popularity of these frigid buildings can be attributed to their austere appearance. Audiences were taken back to the Soviet Union after World War II because of Dune's similarly monolithic and 'blocky' appearance, frigid geometric style, and extensive use of poured concrete.

In addition, there is a substantial degree of debate in the brutalism style, as it is both loved and disliked, in the same vein as Dune: the audiences express concern with the worldview and the central message that the film was trying to convey. Denis Villeneuve, on the other hand, aimed to create an air of mystery and complexity with his film's plot. This sense of the unknown and the bizarre is heightened by the exotic brutalism that dominates his work.

#### 3.2. Building analysis

##### 3.2.1 Brutalism in Dune: The Imperial Ecological Testing Station

Denis Villeneuve and Patrice Vermette, discussed their interest in incorporating a brutalist aesthetic, influenced by the colonial display of power shows in the film. Returning to Arrakis, viewers see the city in its original state of its dust-and-spice-composited setting. The story then shifts to the plot where the colonialists come to Arrakis to take advantage of the planet's abundant natural resources [5]. They used Brutalist style in effort to assert their authority. Vermette and Villeneuve agree that the brutalist design is the most appropriate choice to complement the ancient power structure seen in the Dune universe. Vermette and Villeneuve consider the mansion or palace to be the largest palace ever constructed by humanity and, as such, the most significant to design. This ties up with the film's depiction of the Arrakis's Imperial Testing Station. Certainly, its design will convey a sense of scale. This antique, scaled architecture also acts as a nostalgic, romantic reminder of the brutal reality of Arrakis for the protagonist Paul's visual journey.



**Figure 1.** Interior of Imperial Testing station in Dune.

The majestic scale, the use of concrete, and the intriguing dimension all perfectly exemplify brutalism in this structure. For instance, Vermette estimated that this testing station would have been 150 feet tall. This decision is also a reminiscent of brutalism at its essence of grandeur in scale. He created a simple concrete enclosure inside the structure by using a single, incredibly huge opening in the top center. Vermette must therefore employ unique design in addition to incorporation light and shadow manipulation to enhance and explore the space's dimensions. To further emphasize its exotic nature, forms resembling UFOs are also utilized, much like many

brutalist buildings in real life. An opening was created to allow natural light to enter the interior space to make up for the lack of electric lighting. By allowing sunlight inside the stark, concrete building, a sense of holiness is created, giving the space a solemn look. The sole display of a light source in the central area also evokes the protagonist's solitude and fosters a somber tone. Additionally, to contrast the minimalism of humankind to the grandeur of brutalist constructions, cold concrete in contact with natural factors like sunlight can facilitate a connection between the character and the environment they are in. This decision in the movie seems to reflect Paul's mental condition of being overawed by his situation of witnessing the invade of his home planet. Vermette introduces the audience to the search of natural beauty by highlighting a stunning visual effect through the incorporation of brutalist architecture [6].

Many significant diplomatic or fortitudinous buildings in the movie, such as the Imperial Ecological Testing Station, are depicted with less emphasis on forms and ornamentation, rather more attention to its scale and lighting effect. This is because, for the people of Arrakis, these structures are highly significant from a technological or cultural perspective but not ornamental. This design principle of rawness causes viewers to analyze brutalism's relevance both inside and outside of the movie. They can conclude that brutalism is the ideal compromise between a cultural documentation and a distant future; such concept is presented in the character's attire and tools as well. The materials of the buildings are powerful and old-feeling, while the shapes are powerful and sci-fi. Thus, Vermette offers a fresh definition of utopianism in connection to the almost successful style shift that occurred during the soviet era following World War II, that is, the shift from functionalism to futuristic brutalism. Therefore, Vermette is brave enough to employ brutalism, his own vision of futuristic architecture, to present to the audience a perfect universe of designs that would have been possible to realize in earlier historical periods. Therefore, he advocates for the brutalists, whose voice of such futuristic choice has been suppressed in the early 20<sup>th</sup> century; using another media to build and realize what they dreamed about.

### **3.2.2. Brutalism in real life: The Buzludazha monument**

The Imperial Testing Station's circular layout immediately reminds me of the abandoned monument Buzludazha in Bulgaria. It has the surreal appearance of an alien ship straight out of a sci-fi movie, and in this case, is strikingly comparable to the style of building used in Dune. It is situated atop a historical hilltop in Central Stara Planina, where there is nothing but snow. Once in the history, a small army overthrow the Ottomans atop Mount Buzludzha during the Russo-Turkish War of 1877–1878, resulting in Bulgaria's independence. Later in 1891, a group of socialists led by Dimitar Blagoev met secretly in the region to start an organized socialist organization that resulted in the establishment of the Bulgarian Social Democratic Party, the ancestor of the Bulgarian Communist Party. This occasion was commemorated the monument, implicating that it was created at a turbulent time and is only intended for a select group of individuals, much to the Imperial Testing Station in Dune.



**Figure 2.** Exterior of the Buzludazha monument.



**Figure 3.** Auditorium of Buludazha monument.

The parallels between these two constructions can be seen in their utilization of scale, form, and light, but more importantly in their significance and role. Those who first catch sight of this enigmatic concrete structure, which rises from the peak of the hill, are filled with a mixture of anxious and suspense [7]. This concrete brutalist monument evokes memories of the serenity and mystery of the important event it commemorates. Therefore, the central large auditorium is called Solemn Hall in accordance with this mysterious feeling. Its rounded shape draws the viewer's attention to the center, where a communist emblem is depicted in mosaic on the roof. The modest concrete structure gains a dimension of richness from this specially designed central top, which is reminiscent of the Imperial Testing Station in Dune [8].



**Figure 4.** Outer ring of Buzludzha monuement.

The outer ring, which is located above the hall, is where the concrete beams cause the formation of light and shadow at various times of day. It contributes to bringing out the building's dimensions together with the use of mosaic graffiti, which reads like some sort of secret alien language, to put off futuristic feel [9]. This was a popular idea and achieve among Soviet architects in the 20th century, but it was uncommon for it to be recognized by the public and valued by those whose minds were still shaking from the horrors of World War II. Thus, this gigantic structure meets the same fate as the other brutalist structures, experiences its downfall. In other words, it hurries to rise and to give people a glimpse into the future, but humanity almost instantly reject it since no one is yet prepared to go into the future [10]. Therefore, the Buzludzha Monument serves as a kind of bizarre time capsule for next generations, documenting what is believed to be fashionable once in the history and encouraging people to consider potential future.

#### **4. Conclusion**

Futuristic aesthetics, and the functional benefit to society is frequently what matters. This cruel reality has crushed the souls of architects who adore the rugged beauty in the brutalist constructions. Because there isn't enough room or a need for it in the modern setting, even though it would have been appropriate in the past, bold, edgy brutalism is only seen in movies. Breaking convention is necessary if we are to go forward, even if the general public does not always find it appealing. Not only sci-fi film like Dune expresses the pursuit of an ideal future, but architects nowadays are creating things that are rule breaking. Returning to the most well-known CCTV Beijing, it takes courage for Koolhaas to research the Chinese market and to have his work influence Chinese consumers' current aesthetics. Practically all traditional Chinese disapprove of it, but a lot of young people do. This design is significant because the beauty of transcends in time, that it will not be appreciated immediately but soon in the future. By building the Row home Sumi Yoshi, Tadao Ando created an anti-naturalistic design aesthetic. The structure is strikingly different from the nearby wooden houses in that it almost completely resembles an enclosure in concrete. Additionally, it is partially without a roof, allowing individuals to unavoidably experience both pleasant and unfavorable weather. He depicts the ethereal and metaphysical aspects of nature, but his true focus is on the contradictory nature of everyday life. The producer director of Dune together with some architects didn't just sit back and let society shape them; they took the initiative to speak up for their peers, share their thoughts on the state of the constructing industry, and attempt to influence future design. To foster growth in our society, rule-breaking is necessary, and a creative vision of the future city is essential. Fortunately, many architects are starting to put this concept into practice and are reclaiming their creative independence in the field of architecture.

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