

RAFI SEGAL*

THE BODY CONCRETE. MODERNISM'S ARCHITECTURE OF BARENESS

CIELESNOŚĆ BETONU. MODERNISTYCZNA ARCHITEKTURA NAGOŚCI

Abstract

This paper deals with the role of concrete in enabling certain aesthetic expressions of Modern architecture, specifically those of bareness, exposure, clarity of form and truth to materials. It first looks at the contemporaneous designs of the bikini and the modernist rediscovery of architecture, revealing both as part of a cultural moment fixated on the body and exposure. It then moves to Israel of the 1960s to look at the ways in which Alfred Neumann and Zvi Hecker's colored concrete sought to enhance the overall form and highlight its 'exposed' state, much like the way sun-tanning emphasized the exposed state of skin by, paradoxically, changing its surface. Ultimately, I argue that the Modern Movement's fixation on the exposed architectural body was given form and expression in concrete.

Keywords: concrete, aesthetic, Modern, bikini, Israel, exposure, brutalism, Alfred Neumann, Zvi Hecker, Le Corbusier

Streszczenie

Niniejszy artykuł poświęcony jest roli, jaką odgrywał beton w zaistnieniu pewnych środków wyrazu estetycznego architektury modernistycznej, a zwłaszcza nagości, ekspozycji, jasności formy i prawdy wobec materiałów. Najpierw przygląda się współczesnym projektom bikini i modernistycznemu ponownemu odkryciu architektury, ukazując oba zjawiska jako część kulturowego momentu zapatrzonego na ciało i ekspozycję. Następnie przenosi się do Izraela lat sześćdziesiątych, aby przyjrzeć się sposobom, w jaki barwiony beton Alfreda Neumanna i Zvi Heckera starał się ulepszyć ogólną formę i podkreślić jej „wyeksponowany” stan, podobnie jak opalanie podkreślało stan wyeksponowanego ciała, paradoksalnie, zmieniając jego powierzchnię. Autor stwierdza ostatecznie, że obsesja ruchu modernistycznego na punkcie wyeksponowanego architektonicznego ciała znalazła formę i wyraz w betonie.

Słowa kluczowe: beton, estetyka, modernizm, bikini, Izrael, ekspozycja, brutalizm, Alfred Neumann, Zvi Hecker, Le Corbusier

* Assoc. Prof. Ph.D Arch. Rafi Segal, Department of Architecture, Massachusetts Institute of Technology.

Concrete is not a new material. It has been in use for centuries, since the time of the Ancient Romans and even earlier. Yet concrete has not always been popular, nor has it always played a role in architecture as important as it did during Modernism. This paper will deal with the role of concrete in enabling certain aesthetic expressions of Modern architecture, specifically those of bareness, exposure, clarity of form and truth to materials. It first looks at the contemporaneous designs of the bikini and the modernist notion of architectural form, and then at the use of concrete in Israel in the 1950s and 1960s.

In the modern era, as concrete was rediscovered in Europe and with the invention of reinforced concrete, the material was picked up as a practical response to new construction challenges, whether infrastructural projects like tunnels and bridges, industrial structures such as grain silos, or as a material to aid in the fire proofing of walls for rural houses. Only much later did concrete enter the realm of architecture – what can be referred to as a more conscious and critical use of it as a form of architectural expression, rather than for engineering purposes. This takes place as concrete begins to serve a new set of aesthetic values, or what Peter Collins has referred to as “A New Vision.” This new vision as described by Collins, I argue, lies not in the use of concrete as a new building material of and in itself, but rather in what concrete enabled architecture to express. The Modern Movement’s ideal of exposure, bareness, primary forms, truth to material and open space – all found expression with the aid of concrete. But not simply concrete as a material responsible for the construction of a building, rather as a material intended to remain exposed and thus makes manifest the desire for bareness.

I emphasize the ability of concrete to shape a unified form, more than simply a structure. Scholars such as Rejean Legault for example, working on the early development of the use of exposed concrete in architecture—most evident in the work of August Perret—have emphasized the building frame as an important modernist architecture element enabled and expressed by reinforced concrete. But the frame as a value of modernism was not unique to concrete; it can also be seen through the use of steel construction. It is true that concrete offered a more intact and cohesive expression of a frame –as in Perret’s work. But what is unique to concrete, and what no other material of the time could achieve, was the complete integration of structure and enclosure, skeleton and wall, into a single architectural element. The result was a structural envelope that allowed the building to be expressed as a single continuous form. In time, the cast—the formwork onto which concrete was poured to construct the building—gains significance as it also controls the texture of the final outcome of the walls and ceilings in the event they remain exposed. Hence concrete became a means to explore and control varying degrees and attitudes about the nature of the architectural form, or what I would call the exposed architectural body.

The increased free time for leisure and recreation on the scales of the masses was met during the early 20th century with urban programming and planning that accommodated outdoor recreation. Modernist urban planning principles zoned the city by different programs: dwelling, work, recreation, transportation, promoting the development of recreation as an important activity of its own – primarily the activity of swimming, with its own spaces, building types and economic activity, and of course with its own new types of clothing.

The active body became an expression of beauty, health and well-being and the desire to expose it was reflected through the emergence and design of the modern swimwear. But swimwear for swimming is only half the story, the 'form follows function' half of it, that which attempted to appropriate the form – swimsuit, to the function – swimming, i.e. a clothing that can be worn in water while the body is moving. Swimming as an activity gained immense popularity in the 1920s and 1930s, only second in popularity to movies, and especially among women with the introduction of women's swimming in the 1912 Olympics. But the other side of the story involves the expanded role of the swimsuit, as its design shifts through the middle of the 20th century for the purpose of sun tanning, or sun bathing as it is also called. The suit was designed to expose the body to maximize and control the desired degree of tanning.

The development of swimwear eventually led to the invention of the bikini, the most vivid example of perfecting a suit no longer aimed for swimming (the apparent original purpose of swimwear), but rather to achieve a new idea of beauty through the exposure and tanning of the female body. Louis Reard, the French mechanical engineer who was managing a family lingerie business near Paris of the 1940s described his inspiration for the bikini as derived from noticing the women on St. Tropez beaches rolling up and down the edges of their swimsuits to increase their tan. This led him to eventually produce a more minimal design for a swimsuit that for the first time ever exposed the woman's navel. The idea was so radical at the time that he had great difficulty in finding a fashion model to wear it. Eventually, he hired a 19-year-old nude dancer, Micheline Benardini from the Casino de Paris. This story is telling as it captures both the modernist engineering imperative of efficiency and innovation (minimum matter of maximum effect, in regard to clothing in this case) with the male gaze that seeks to objectify the modern women by re-shaping her body through exposure. It therefore comes as no surprise that one of the most iconic appearances of the bikini was by the first 'bond girl' Ursula Andress in the 1961 silver screen production of James Bond's Dr. No. (nicknamed the Dr. No bikini)

Even though its reception at first encountered resistance, the bikini with the aid of movie celebrities, eventually became the most popular of woman's swimwear. The tanned body became synonymous with a high lifestyle of leisure and vacationing, a marker of chic and "cool", a notion impacted by fashion icons such as Coco Chanel, who has been associated with promoting the tanning trend, accidentally or not, by returning to Paris one summer from the Riviera after catching too much sun.

The role of the sun in Modernism, and specifically in Modern architecture I argue cannot be understated, to recall Le Corbusier's mantra inspired by his fascination with the strong Mediterranean sun, that same sun that tanned Coco Chanel: "Architecture is the masterly, correct and magnificent play of masses brought together in light." Modern buildings like modern bodies, gained vitality when exposed under the sun, bodies of architecture revealed in their pure form, in their bareness.

Concrete and bareness gain further presence in the post WWII years, beyond the European context. In Israel of the 1950s and 60s exposed concrete is not only common architectural practice but more so becomes a subject of poetry, literature, popular theatre, and music. As



a material of building and construction, concrete symbolized the new Israeli nation's desire to establish strong and permanent roots in the landscape. The heavy and solid presence of concrete building signified a permanent and secure hold of the ground, as Gideon Ofrat described, "supplementing the act of forest plantation and plowing, as part of 'conquering the desert', in this sense [concrete] is an erotic conquering of the earth"¹.

Although concrete was used in the building of towns and houses throughout the early years of the Jewish settlement in Palestine, exposed or bare concrete gained prominence as an architectural expression in the 1950s. Stylistically, it was mainly attributed to influences from abroad such as Le Corbusier's postwar concrete works and the New Brutalism movement in England. Although the term has various connotations, Brutalism appealed to the younger generation of Israeli architects as a rough and unmediated expression, which went hand-in-hand with their image of the new Israel as an archaic presence with modern materials and means, recovering in the word of Ram Karmi, "the native-Canaanite dimension, erotic, which sings a song of praise to nakedness, youth, but especially to power: the power of the body in the image of the bare concrete"². Bare concrete, or so-called "Brutalism," best reflected Israel's modernist aspiration toward a "truth" of materials—a crude, forceful attachment of building to the land, and a strong manifestation of executing the "facts on ground" approach, where building established presence and control over the landscape, not to be moved or challenged, an eternal cast, immediate and solid. This Israeli Brutalism served a political objective of the new Jewish state seeking expressions of strength and security in face of hostile neighboring states. The new Israeli, as Karmi described was at the same time an ideological modernist (and Zionist) and a primitivist in other aspects, echoing the Canaanite, an ancient biblical culture that preceded the Hebrews' settlement in the Holy Land. The New Israeli was seen as a new born Jew, who, with the aid of modernism, could become all that the old European Jew was not: strong, rooted, exposed and bare, of a muscular bodily presence (men and women) rather than mere intellect.

The brutalist approach was the mainstream trend in Israeli architecture of the 1960s yet not the only attitude towards concrete. Alfred Neumann and Zvi Hecker's use of bare concrete, though, differed from it, although has often been mistaken as belonging to it. Neumann and Hecker moved away from the common Brutalist influences of a rough untreated surface as a building finish—toward a more refined expression exposing complex unconventional geometries. For Neumann and Hecker, concrete's sculptural qualities enabled a purity of form, a crystalline expression of the building's geometry as one continuous construct rather than an assembly of different pieces, very much in line with modernist principles. In the Bat Yam project, for example, particularly in the triangular planes of the roof elements that were intended to function as light and wind wells. Here we encounter a refined texture, minimized structural thickness of the casts with special attention to the precision of corners and edges. This work is much more in line with August Perret's elegant and refined use of concrete, something that most likely Neumann picked up while working as a young apprentice at Perret's Atelier de Bois in the late 1930s.

¹ Gideon Ofrat, "eiburha'betonha'mezuyan," OsnatRechter, editor, *YacovRechter Architect* (Tel-Aviv: HakibbutzHameuchad, 2003), p. 15–25, p. 15, the author's translation from Hebrew.

² *Ibidem*, Ofrat p. 20, the author's translation from Hebrew.

Another distinction between Neumann and Hecker's use of concrete and Israeli Brutalism pertained to color. While Brutalist architecture relied on concrete's direct and "truthful" expression for its material qualities and presence, Neumann and Hecker's emphasis was on the geometry and form that shaped spaces. Color was therefore used to highlight the geometric features of their designs, something that was often weakened by monotonous shades of gray in raw concrete. As Neumann and Hecker's polyhedral structures became more complex, so did the Space-Packing scheme that brought the single units together, and color became an important aspect of spatial differentiation. When all of the units shared the same material and color, the idea of an overall form made up of a stacking of individual units and the expressions of the individuality of the units was weakened. Their reading tended to collapse into one continuous surface rather than a conglomeration of several repetitive smaller elements. The rhythm, pace, and symmetry of the pattern was less noticeable. But ultimately it was the use of color that enhanced the attention to these features. The systematic coloring of the same side of a polyhedral unit throughout the building brought out its spatial quality and strengthened the perception of how the repetitive units created the whole. In many instances, concrete was painted but never a color close to the gray-white shades of raw concrete and never completely covering the raw natural concrete. This adhered to the rationale of Adolf Loos's "principle of cladding," which argued that a material could be painted any color except a color that could be confused as its natural color³. To clarify this distinction Loos offers an analogy, with that of the body, "It is thus easy to understand why the legs of our dancers when covered with knit stockinets have such an unaesthetic effect. Woven underclothing may be dyed any other color at all, just not skin color"⁴. Following this rule, concrete could be painted any color except that which too closely resembled its own natural color of gray. Colored concrete in the case of Neumann and Hecker's work, does not distract away from the natural hue of the material, on the contrary, it serves to enhance the overall form and highlight its 'exposed' state, in much the way that tanning alters the natural shade of the skin, to flaunt its bareness.

³ "We must work in such a way that a confusion of material clad with its cladding is impossible. That means, for example, that wood may be painted any color except one—the color of wood." Adolf Loos, "The Principle of Cladding", *Spoken into the Void—collected essays 1897–1900*, translated by Jane O. Newman and John H. Smith (Cambridge, MA, London: MIT Press, 1982), p. 67.

⁴ "The Principle of Cladding", *Spoken into the Void—collected essays 1897–1900*, translated by Jane O. Newman and John H. Smith (Cambridge, MA, London: MIT Press, 1982), p. 68.