

Conference Paper

Álvaro Siza and Carlos Castanheira's China Design Museum: Form, Contemporary City and Design Method

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Abstract

Portuguese architects, Álvaro Siza and Carlos Castanheira's China Design Museum of the China Academy of Art in Hangzhou (2012-2018) calls for a problematization of the theme of the "boundary" at different levels. In this essay the project is compared with other relevant works in regards to *form*, the *contemporary city* and *design method*. Formed by two bars and a partly sunken volume enclosing a triangular courtyard, the building is immediately reminiscent of other L and U plans by Siza that question private/public and interior/exterior relationships. After Rem Koolhaas published "The Generic City" in 1994, the Chinese city became the epitome of the contemporary city. Since Siza's architecture has been discussed in terms of its continuity with the city and tradition, the project of the China Design Museum raises the question: How does Siza work in the Chinese city? Siza and Castanheira's building is at the same time part of a large campus planned by the well-known local architects Wang Shu and Lu Wenyu/Amateur Architecture, whose experimental approach to drawing and craft skills suggests yet another set of comparisons. To sum up, Siza and Castanheira avoid easy solutions: the siting and massing, scale, spatial organization and material expression of the China Design Museum provide a measure between realities – open/closed, traditional/contemporary, local/universal – that first appeared incommensurable.

Keywords: Álvaro Siza, Carlos Castanheira, China Design Museum of the China Academy of Art, Form, contemporary city, design method

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1. Introduction

Clad in red sandstone, Álvaro Siza and Carlos Castanheira's China Design Museum of the China Academy of Art in Hangzhou (2012-2018) (Figure 1) consists of two bars and a partly sunken volume enclosing a triangular courtyard. The building is immediately reminiscent of other L and U plans by Siza. Starting from this aspect of *form*, this essay compares the China Design Museum with other relevant works from the perspectives of the *contemporary city* and *design method*. After Rem Koolhaas published "The Generic City" in 1994, the Chinese city became the epitome of the contemporary city. Since Siza's architecture has been usually considered in terms of its continuity with the city

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Figure 1: China Design Museum. Without touching each other, the bars define an entrance square that is turned to the interior of the campus. Photo by Fernando Guerra/FG+SG.

and tradition, the question emerges: How does Siza work in the Chinese city? Siza and Castanheira have designed several buildings in Asia in recent years and the question has been researched by Ilescas Marin (2017: 330), for whom the key is Siza's dynamic understanding of the meanings of place and identity. Siza and Castanheira's building is part of a large campus planned by the well-known local architects Wang Shu and Lu Wenyu/Amateur Architecture, whose experimental approach to drawing and craft skills suggests yet another set of comparisons between modernity and tradition.

2. Form: Corner/Courtyard Block

One of the long rectangular volumes of the China Design Museum is aligned with the street grid, the other breaks diagonally from the major traffic intersection claiming its autonomy. A lower volume barely keeps the other two connected to each other. The composition is unexpectedly turned away from the plot corner as the taller volumes converge towards the interior of the campus, defining at this point a recognizable fragment of urban space. By contrast, the wide void on the street side addresses the scale of the huge apartment complexes opposite it. The building's siting and massing offer a sort of measure between closed and open models of city, attesting to Siza and Castanheira's understanding of the far-reaching implications of form.

Block corners exemplify the capacity of a single building to organize and characterize a larger portion of city, for example, by suggesting unity, sequence or contrast. This is

evident in many of Siza's projects. In the Pinto & Sotto Mayor Bank in Oliveira de Azeméis (1971-1974) the mass is tightly assembled and then carved out. The building's three-dimensional interiors adhere to the geometry of the surrounding constructions, while its exterior echoes patterns of movement and light derived from the internal use of the bank. A curving-glass façade stresses the ambiguity of the boundaries between building and city, exterior and interior.

Corner blocks are largely a product of urbanization and a capitalist organization of society. A corner plot is a fraction of land that cannot be wasted. In the turn of the 20th century, visibility and accessibility of block corners turned them into potential sites for architects to show skill, but as cities expanded, block corners became potential sites of disputation. In Berlin, the Functionalist architects sought to replace the city of blocks with freestanding slab-blocks. Objections to corner buildings included aspects of representation and production, as corners signify a compromise in terms of sun exposure and demand exceptional design and building solutions. Architects such as Erich Mendelsohn and Ludwig Mies van der Rohe were able to claim the primacy of urban form over excessively empirical or abstract approaches. In contrast to the Functionalist plans from the 1920s, the open plan put forward in the 1957 Interbau exhibition in the then West Berlin had a loose organization with competing block types. In reaction to what was then seen as a rising individualism, the 1979 International Building Exhibition (IBA) suggested a re-evaluation of the closed city. Siza was invited to complete an existing IBA perimeter block. The first project he built abroad, the "Bonjour Tristesse" Housing (1980-1984) explores both the wide angle provided by the corner plot and the experience of the open plan city. A single window bay grants a sense of urbanity and anonymity to the building and the gently curving façade with a rectangular canopy on the street level and an undulating parapet above makes the block stand out from the city. A gap between new and existing buildings on one side gives access to the inner courtyard, challenging public/private boundaries. In the "Bonjour Tristesse" Housing Siza proposed a connection through the interior of the urban block to a kindergarten and residences for seniors but these were not built according to the original plan.

The theme of the block corner, with its urban, associative possibilities connects previous designs by Siza to the China Design Museum. The courtyard plan (Figure 2) is another design method to challenge boundaries in past and present Siza projects. This can be seen in the first testbed for Siza's later museum, the Galician Centre of Contemporary Art in Santiago de Compostela (1988-1993). The plan of the Galician Centre of Contemporary Art aligns with an historic street front and, together with the walls of an existing convent, defines a tiny public square and a diagonal access to the



Figure 2: China Design Museum. First floor plan. The courtyard divides the building in segments whose intersections generate the main entrance (above), auditorium (below left), and service gate (below right). Drawing by Álvaro Siza and Carlos Castanheira.

former convent's gardens, converted into a sculpture park. In contrast to the massive walls of the Medieval complex, a recessed volume and ramp announce the public character of the new building. This elevated void corner provides a favourable point of entry on the vertex of the L or V plan: below it, are the service spaces; above it, the gallery spaces, the tight shaft between wings providing opportunities for daylighting and visually connect interior and exterior. Siza (2015) himself has clarified the relationship established between the exhibition rooms and the surrounding landscape: “the garden is built on platforms that are adapted to the topography at different dimensions until one reaches the Oak Grove at the top. This trajectory is organised by the use of an upward motion by means of stairs and ramps. Somehow, that same structure and paths are also used inside the museum, as one enters a central triangular space in triple-height. After that, the trajectory is largely similar.”

The entrance to the China Design Museum is on the corner of the composition, through a double-height hall in which each corner flows into the next room. In the China Design Museum, the building wings are positioned wide enough to create a courtyard as well as to bring light into the underground level. As Siza explained, in Santiago, the room configurations, sequences and openings were developed in relation to the site. But what happens when there is no strong context to react to, as seems to be the case of a newly urbanized district in the periphery of Hangzhou?

To answer this it is worth comparing the China Design Museum with another museum project in Asia, the Mimesis Art Museum in South-Korea by Siza, Castanheira and Jun Sung Kim (2006-2009). The Mimesis is located in a newly developed industrial suburb of Seoul dedicated to book publishing. The plan is defensive, forming a corner on the outside and a curve on the inside, where a gently winding wall allows for a garden courtyard. The play of solids and voids with very few openings suggest an association with “zen” art – or is Siza resuming and transforming the strategy of the bank in Oliveira de Azeméis? The café is placed on the entrance level and the main exhibition space on the upper one. A service/technical floor inserted between them allows for a variety of room configurations, including double-height spaces, perforated slabs, mezzanines and hidden terraces. The previous comparisons suggest that for Siza and Castanheira it is equally valid to start from the site as from a dialogue with previous designs. In any case, the architects’ understanding of the Hangzhou site demand closer examination.

3. Contemporary City: Problems of Scale

In his polemical essay, “The Generic City”, Rem Koolhaas (1995) problematizes the changes provoked by urbanization, technology and the capitalist organisation of societies in the form of their cities and the practice of architecture. Koolhaas describes how cities have expanded suddenly, first horizontally into the suburbs and then vertically in the form of disconnected skyscrapers, producing a paradoxical inversion of the urban principle: “Density in isolation is the ideal” (Koolhaas, 1995: 1253). Koolhaas refers to the direct and indirect ways through which time has challenged space and cites the examples of elevators and escalators or where artificial lighting and mechanical ventilation have allowed the growth of interior spaces to the point of collapsing the familiar nature/artifice boundaries. Koolhaas (1995: 1261) explains: “Because the Generic City is largely Asian, its architecture is generally air-conditioned; this is where the paradox... becomes acute: the brutal means by which universal conditioning is achieved mimic inside the building the climatic conditions that once ‘happened’ outside – sudden storms, mini-tornadoes, freezing spells in the cafeteria, heat waves, even mist”. But, as he also adds, the logic of space was destabilized in broader ways by globalization, transportation and communications: “[The Generic City is] liberated from the captivity of center... big enough for everybody”, “nothing but a reflection of present need and present ability”, “what is left after large sections of urban life crossed over to the cyberspace”, and “founded by people on the move, poised to move on” (Koolhaas, 1995: 1249-1252). For Koolhaas (1995: 1250-51), the pace at which buildings are conceived,

built, used and discarded is not compatible with the sense of identity and solidarity on which a city depends: “the Generic City is *sedated*... Instead of concentration – simultaneous presence – in the Generic City individual ‘moments’ are spaced far apart... The serenity of the Generic City is achieved by the *evacuation* of the public realm... the urban plane now only accommodates necessary movement, fundamentally the car”. His conclusion is cathartic: architects need not just face up to but should embrace such emerging phenomena as “*tabula rasa*” (Koolhaas, 1995: 1253) and “*amnesia*” (Koolhaas, 1995: 1263).

For Siza and Castanheira, too, modernity raises challenges that cannot be ignored. But contrary to Koolhaas and as the China Design Museum demonstrates, for them the old never disappears entirely; the practice of architecture remains valid in its essence. Thus, it would be a mistake to approach the design of the China Design Museum in terms of a generic identity because working in the Chinese city demands careful consideration of the same problems as ever.



Figure 3: China Design Museum. Third floor plan. The taller volumes delimit a garden promenade that is intentionally raised from the street. Similarly, the entrance atrium is separated from the courtyard in order to establish the latter as a space of silence. (Drawing by Siza and Castanheira.)

At this point, it is worth noting the singular history and geography of Hangzhou, the capital of the Southern Song Dynasty, whose location, prosperity and beauty led Marco Polo (1993) to describe it as “the finest and the noblest in the world”. Polo’s (1993: 185-187) wrote of the architecture of Hangzhou as having a sense of public space that must have endured if only in the memories and expectations of Hangzhou citizens: “all around the West Lake are erected beautiful palaces and mansions, of the richest and

most exquisite structure... In the middle of the Lake are two Islands, on each of which stands a rich, beautiful and spacious edifice, furnished in such style as to seem fit for the palace of an Emperor. And when any of the citizens desired to hold a marriage feast, or to give any other entertainment, it used to be done at one of these palaces”.

Siza and Castanheira find the Chinese city an interesting place to work in, precisely because of its challenges and contradictions. In this sense, the siting and massing of the China Design Museum acknowledge a certain discomfort caused by the contrasts of scale observed in the periphery. The same could be said of their decision to avoid a representative façade by turning the entrance to the interior of the plot, where the solids become fragmented and acquire a human scale. But as much as these *negative* gestures suggest a reversal of the traditional principle of aiming for monumentality through size and a questioning of the role of voids in the city characterized by sprawl, in the end they reaffirm long-established objectives and means for architecture. It is clear to Siza and Castanheira, as it is to Koolhaas, that increasingly big buildings are a threat to the public space constituted by parks, squares and streets. Still, Siza and Castanheira attempt through their architecture to conciliate public and private, nature and artifice (Figure 3). Without nostalgia, Siza and Castanheira address the heavy technical demands inherent in current museum programs by dividing the complex in parts according to their purpose: exhibition and storage, research and administration, auditorium, cafe and shop. Each of these parts has direct access to a street or terrace, as well as specific window and lighting solutions e.g. the skylights in the research office spaces. Volume modulations, indentations and openings further clarify the underlying conflict of scales. The building mass grows while humans remains the same size. The architects seem to ask: How can a window be opened in the wall under these circumstances?

Siza (2015) has explained that exhibition spaces must be flexible enough to accommodate the individuality of the artworks, and yet retain an architectural quality of their own. This is achieved through subtle spatial means. The exhibition spaces are stacked on two levels (Figure 4). The triangular arrangement of the lower spaces loosely refers to the triangular plan of the complex, whereas the upper spaces connect through a gallery, referring more directly to their prismatic container.

4. Design Method: Local and Universal

The China Design Museum must finally be examined in the context of the Xiangshan Campus, a suburban extension of the China Academy of Art – itself, an institution

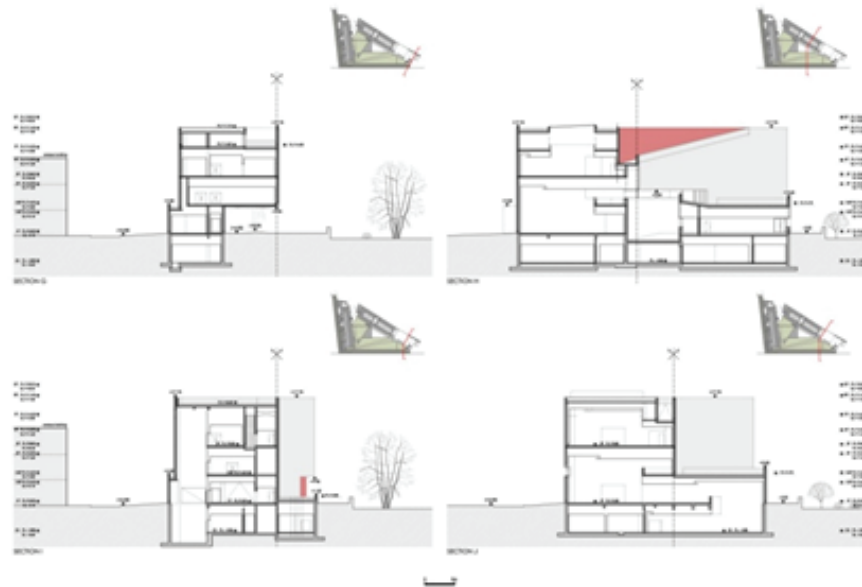


Figure 4: China Design Museum. The architects worked at great lengths in section to resolve the contradictory requirements of light, movement, services and infrastructure by means of windows, skylights, canopies and glass-ceilings. Drawing by Siza and Castanheira.

with a longstanding history of exchange with the West – planned and built by Wang Shu and Lu Wenyu in stages since 2004. Shu, a Professor in the Academy of Art, and Wenyu have personally supported the idea of commissioning to Siza, a museum dedicated to industrial design and including a large Bauhaus collection. At about the same time, Japanese architect Kengo Kuma was invited to design the Folk Art Museum. Kuma’s design is topographical, following a principle of aggregating modular clay elements by “disguising” rather expressing the building’s presence through solids. Shu and Wenyu have designed over twenty different courtyard buildings. Courtyard buildings are common in Chinese tradition, but in their buildings there is no reference to any particular model. The buildings can be freestanding or associated in usually large groups, following the rhythms of the site slopes and streams, and connected by meandering paths. As Shu (2012/2013) explains, courtyards provide a counterpoint to the noise of the city and are all the more necessary in the case of a school: “the house is a courtyard and every building is a house.” Siza and Castanheira’s Design Museum has a comparatively stronger urban character, but there are a series of methodological affinities between the architects’ practice (Figure 5).

Modern conditions of production made traditional Chinese building systems impractical, precipitating – even more dramatically than in the West – rapid changes in the built environment. For Shu and Wenyu, like for Siza and Castanheira, this process stresses a need for continuity, which in turn calls for a dynamic reaction. Faced with cities that



Figure 5: China Design Museum. Starting from the “secret” triangular courtyard, a series of slanting roofs lead upwards to a roof terrace that, like a mountain promontory, offer a panorama of the campus. Shu and Wenyu’s buildings are in the foreground. Kuma’s Folk Art Museum (2015) is in the background right. Photo by Fernando Guerra/FG+SG.

are often highly dilapidated, Shu and Wenyu found in the art of landscape painting - with its examples of how to place and dimension buildings - a more abstract but arguably more vivid reference to collective memory than the remaining building stock itself. Similarly, they found in calligraphy – which, like architecture, expresses a bond between universal and individual dimensions – a simultaneously practical and reflective instrument. Calligraphy relies on the use of the hand: designing freehand is as Shu (2012/2013) explains, “like writing calligraphy: combining and varying several simple elements, and measuring the surrounding elements of all scales with the inner ruler of the mind, so sensitive and accurate. On the other hand, freehand drawing tends to produce plainer buildings. It is an active restriction that prevents over-showy spaces and the loss of scale that usually result from computer design.” Siza’s practice of sketching comes immediately to mind, noting Siza’s (2000) adage: “Architecture is geometrizing”. On a more superficial level, it can be said that the plan of the Design Museum evokes, in its broad gestures and subtle inflections, the simplicity and personality of Chinese calligraphy.

Shu and Wenyu’s creative reuse of local materials and elements, and their encouragement of local craftsmanship has received much attention. For Kenneth Frampton (2017), their method is “in categorical opposition” to the business-oriented development of the Chinese city – and thus aligns with Siza’s architectural Critical Regionalist practice. Shu (2012/2013) himself notes that the appropriation and transformation of familiar things

is a widespread practice in China, but his choice stands as a conscious provocation to growing materialism and the decline of craftsmanship. In contrast to this expression of improvisation and incompleteness, the China Design Museum is comparatively geometric and solid. For Siza and Castanheira, a museum represents precision and durability – especially today, when the status of public buildings is in crisis. These have long been motives for formerly employing stone in monumental buildings; a material that can hardly be used today. It's worth resuming Polo's (1993: 187) description of Hangzhou once again, as it hints how stone acquires through material durability a cultural meaning: "The houses of the city are provided lofty towers of stone in which articles of value are stored for fear of fire; the most of the houses themselves are of timber, and fires are very frequent in the city".

Siza famously introduces granite cladding in the Galician Contemporary Art Centre. In the Serralves Museum (1997) in his hometown of Porto he simply uses a layer of industrially produced thermal insulation material. The Mimesis Art Museum and several other projects in Asia are finished in exposed concrete. Siza (2015) rejects reducing the choice of material to a matter of local provenience: "In a globalised world, where communications make any material accessible, the stone can come from anywhere; the local one means something else." Similarly, Siza (2017) rejects naïve contextualist explanations: "I chose Greek marble [on the interior of the Galician Contemporary Art Centre] because at the time it was cheaper. I also wanted to use the same marble on the facades but that provoked opposition from the locals. I wanted the museum to be white for two reasons – to distinguish its civic importance and also because in the past, the whole city was painted white... Only in recent times, stucco was removed to reveal stone and granite. So every building is a response to specific circumstance and I don't have a strict theory. Of course, I do have a theory, otherwise how could I have a practice? But this theory does not limit my work." Stone cladding has retained the meanings associated with masonry but in addition, stone plates endure relatively well the effects of weathering and air pollution. All in all, the solution refers to tradition reflecting current circumstances in China (Figure 6).

5. Conclusion

Frampton's and Koolhaas' views clash directly. For Koolhaas (1995), the contemporary city is "generic", even superficial, in spite of our best intentions. As he put it provocatively, today's pace signifies the triumph of silicone as building material and expression: "Buildings that are complex in form depend on the curtain-wall industry, on ever more effective

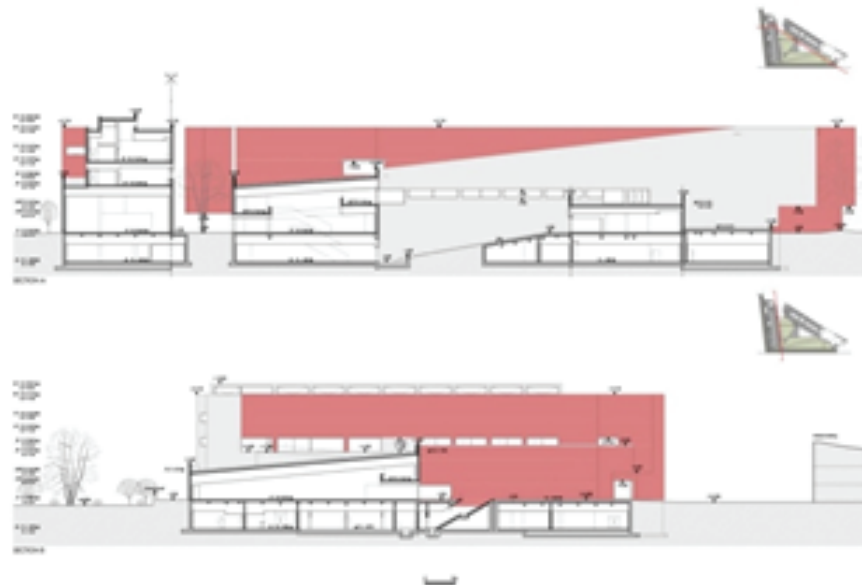


Figure 6: The China Design Museum has a rusticated red sandstone cladding on the exterior and white marble on the inner side, where the material doubles as a protective layer and light-reflector for the courtyard-facing rooms. Red is widely used in the palaces of ancient China; white marble is more readily associated with the western tradition. Drawing by Siza and Castanheira.

adhesives and sealants that turn each building into a mixture of straitjacket and oxygen tent”. (p. 1261). Elsewhere, Koolhaas (2007) clarified his objections to Critical Regionalism by suggesting turning the argument on its head. What is needed is a universal approach that enables architects to engage with specific places and circumstances: “the world is globalizing, but in a distant valley in Himalayas there is still a local culture... in true globalization, new local conditions emerge and they are as different as they used to be just between valleys.” (p. 345). This formulation results surprisingly helpful to understand Siza and Castanheira’s approach to the China Design Museum, allowing us to ponder even the architects’ indebtedness to the Modern Movement. There is one passage in “The Generic City” in which Koolhaas (1995) concedes that “infinite variety... comes close, at least, to making variety normal: banalized, in a reversal of expectation, it is repetition that has become unusual, therefore, potentially, daring, exhilarating. But that is for the 21st century” (p. 1262). Perhaps inadvertently, Koolhaas allow us a glimpse of the radicality and originality of Siza’s position, which is why his work remains difficult to categorize.

Can architects understand and engage with a foreign place or circumstance? This aspiration to universality has always been central to architecture, and Siza’s work – even if it has been more often observed from the point of view of its links to locality and tradition – confirms this. But does universality imply a neglect of place and circumstance? Siza’s recent works in Asia, and the China Design Museum in

particular, provide evidence against this. Siza and Castanheira's handling of the corner and courtyard themes demonstrates a courageous consideration of the contemporary city, not as an idealized but as a problematic place. Moreover, their concentration on architectural means suggests that under volatile conditions, a certain disciplinary autonomy is necessary to address problems in a truly open and intelligible way. Thus, their design method reflects both openness to the unknown, outside world, and a preoccupation to provide through form a measure between realities that first appeared incommensurable.

Conflict of Interest

The author has no conflict of interest to declare.

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