

**JAMES STIRLING Y EL PROYECTO DE LA TATE GALLERY EN ALBERT DOCK, LIVERPOOL, 1982-88****JAMES STIRLING AND THE TATE GALLERY PROJECT IN ALBERT DOCK, LIVERPOOL, 1982-88**

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**p.135 INTRODUCTION**

In 1982 James Stirling drew his proposal for entrances for the Tate Gallery in Liverpool, located on Albert Dock. His plan was rejected and the architect designed the work on the abandoned warehouse, respecting the external aspect of the existing building as much as possible. However, the internal expression of the circulations in the final project subtly invoked the infrastructural nature of one of the most characteristic areas in Liverpool. We will first analyse the project he carried out in Albert Dock for the Tate (Figure 1) and then the project that he could not build (Figure 6) to understand how the city and the urban setting nourished Stirling's creativity, incorporating clear allusions to the shipping and industrial nature of the city and the docks.

*The project and his professional development*

James Stirling had just received the Pritzker Architecture Prize in 1981. He was working on the design and construction of the Clore Gallery in London (1980-86) to house the Turner Collection. He received the commission for the Liverpool Tate, known as the "Tate in the North", when he was finishing up the work on the Neue Staatsgalerie (New State Gallery) in Stuttgart (1977-84); this art gallery is important in his career, as it approached the contrast between contradictory paradigms<sup>1</sup> to give rise to urban problems.

The conservation of the Liverpool docks was approved in the 1970s, recognising the cultural value of this industrial heritage that reflected the strength of maritime traffic over more than two centuries. The docks were an extensive complex of wharves and loading bays allowing protected access for boats, whose merchandise was stored in sprawling buildings. Albert Dock (Jesse Hartley, 1846) was one of those privileged inheritances of the seven miles of wharves spread across the front of the River Mersey in Liverpool, located centrally in relation to the city's urban developed. Tate Gallery occupied the northwest corner of the entire ensemble.

James Frazer Stirling (Glasgow, 1926) was three when he moved with his family to Liverpool, where he studied architecture (1945-1950). He coincided there with Colin Rowe (a professor who would end up being his mentor), with

**p.136** Robert Maxwell (colleague and author of a few essays about his work) and with the members of the Polish School of Architecture (1942-47)<sup>2</sup>, followers of Le Corbusier. Stirling lived the epoch of dock activity before and after the Second World War, in which he participated as a paratrooper, and he lived the crisis that paralysed their activity and threatened to demolish them.

**THE LEGACY OF ALBERT DOCK AND THE WORK OF STIRLING. CHANGE EVERYTHING WITHOUT TOUCHING ANYTHING***Jesse Hartley's project, 1843-1847*

The Albert Dock building (Figures 2 and 3) in which Stirling participated provided the spatial and construction characteristics of most of the buildings raised along the River Mersey during the 19th century. They had various hypostyle floors, designated for storing merchandise from international maritime traffic, and were constructed with external brick walls and interior cast columns, whose frameworks were handled by brick vaults propped on metal Y- and V-shaped beams. The facades were built with brick walls, that had an opening or window in each structural entrance and in which an arcade or covered street was placed next to the wharf to facilitate loading and unloading between the boats and the interior. This arcade also constitutes a characteristic image of this type of docks, where (next to the cambered openings between great cast-iron columns that spanned two floors of the building) some larger openings were interspersed; these, crowned with elliptical arches, covered three floors of the building<sup>3</sup>.

**p.137** The construction was dealt with as a block that was supplied from the Albert Dock wharf. In the façade opposite the arcade there was a path to allow access and removal of merchandise by load carts. A more complex system of trains connected all the docks and made intercity and city connections possible.

*Stirling's project (Figure 3)*

Stirling knew the Liverpool docks directly during his younger days. There are still photographs Stirling took in that period<sup>4</sup>. His admiration for their architectural styles has even been used to justify the presence of shapes and images alluding to his foster city in other projects<sup>5</sup>. Together with the idea to bring to life the new image of museum that the old building should have<sup>6</sup>, the architect himself states his intention to maintain the industrial nature of the abandoned warehouse and to make as few changes as possible, underlining its tectonic heroism.

Stirling's respectful intervention on the inside of the building produced a creation that was "atypical in his architectural path for the contention in language and the economy of means"<sup>7</sup>. The architect himself highlighted respect for the building as a criterion for taking on the alterations strictly needed for adapting it to the new museum use, alterations that are of two types: "Firstly, those required to establish a sequence of exhibition galleries and an entry foyer

appropriate for a public place of encounter. Secondly, to achieve the atmosphere necessary for the exhibitions of art from the international circuit"<sup>8</sup>. To do so, he based his work on three strategies: bringing the access up to date to the new use of the museum with respect to the image of the façade and to the spatiality of the entry foyer, materialising the different program areas and the communication among them with the insertion of a new communication and installation service backbone and, finally, dealing with the lighting and climate control installation needs of the new exhibitory use with a solution that showcases the rawness and bareness of the old production facilities in the building<sup>9</sup>.

*The three strategies of Stirling's intervention (Figure 4)*

The architect himself indicated the need to provide visibility and institutional identity. As the first proposal for accesses located in the outer entry patio was rejected, Stirling organised access to the gallery within the columned arcade. He emptied eight structural modules from the mezzanine to create a double-height foyer over which a bar and a bookshop with curved balconies appeared. This double-height space incorporated the entry, which was also centred with the biggest façade aperture topped with an arch, conserving the cranes that had served for merchandise loading and unloading. The closing of the new façade over the exterior arcaded space led back towards the inside enough to free the metal columns of the old structure. He combined glazed wall sections with other blind sections, depending on the inside uses, covering them with panels painted blue (*Blue Funnel Line*) which, together with a few circular perforations, evoked shapes and colours of the shipping past and served to "give visibility and identity, even, from the opposite end of the wharf"<sup>10</sup>.

Transforming the use from warehouse to museum meant going from a diaphanous space to a space that had to be broken up into exhibition rooms and lesser spaces. His second strategy was to place a backbone central and parallel to both the eastern and western façades that contained all the passages and circulation of people and installations and, at the same time, gathered in the pre-existing stairway in the building<sup>11</sup>.

Through this efficient hub for flows (more discrete than in the projects from his first epoch), the overall design of the programme is defined by section<sup>12</sup>: the ground, mezzanine, first and second floors were dedicated to permanent exhibitions and support spaces: the last floor, called the fourth, to artists' studios, conference hall, restaurant and temporary exhibitions; the third floor, to the installations and work storage areas; and the basement, a installations, lockers, toilets and staff.

This central backbone makes it possible to prioritise different passages. In addition to the main staircase along with the two lifts (which facilitate access to the different exhibition rooms on all the floors), it contains the following communication elements, with different use restrictions and numbered from south to north: the old stairway, with direct access from the unloading plaza, permits internal connection with the conference hall on the last floor and some work spaces on the intermediate floors; the service lift stops at all the levels; in a different way for each floor, connections between rooms located at both sides of the central backbone is made possible to make the exhibition circuit more flexible, with passages that go around the main nucleus of stairs and lifts; and, finally, a stairway for in-house use connects the administration and the ground floor seminars, and the mezzanine with the restaurant projected on the top floor. However, all this varied play of circulations remains precisely confined in the central backbone.

The third strategy took advantage of the expertise that Stirling had reached in the Clore Gallery (Figure 5), where **p.140** he made numerous sketches to find the appropriate agreement concerning the problem of lighting and climate control<sup>13</sup>. Unlike the museum in London, natural zenith lighting was impossible in Liverpool, given that the different rooms overlapped in height. He avoided false ceilings of installations that could hide his brick vaults, beams and metal braces<sup>14</sup>.

Air and electricity were distributed horizontally through the inner lining of the walls and of the new surfaces where the works to exhibit were to be hung; in the offices, classrooms and reading rooms, they were placed behind the furniture and panelled. The biggest challenge was to introduce air into the large rooms. His Clore Gallery experience stimulated him to design a lineal conduction that contained the air and lighting and which was suspended from the ceiling, without touching it. These installations run through the centre of each brick vault and are fed from both ends to reduce their size. They are hung separated from the ceiling to hinder perception of them as little as possible.

These three strategies of intervention inside the building reflect attitudes that, although with a highly different formal expressivity, were already present in the rejected proposal of the initial sketch: the first incorporated institutional visibility with the new foyer and its new façade; the second orchestrated a flow hub in the central backbone; and, finally, the third tackled the problem of introducing technology in the old building. Stirling himself, as we will see below, justified such expressivity in relation to the social and urban context and to the industrial setting of the Liverpool docks.

*The unrealised proposal for the outside accesses. The 1982 sketch (Figure 6)*

The first documented idea that Stirling sketched for his Albert Dock work did not refer to the inner space, which we have previously analysed, but to the building accesses. His formal proposal contains, among other intentions, a clear claim for the museum identity of the institution. The proposal, which “was rejected by the rigid defenders of conservation”<sup>15</sup>, includes a collage alluding to the city of Liverpool and the history of the docks, of which Stirling had first-hand knowledge. For that reason, some years after the conservation of Albert Dock was approved (17 November 1976), he had the opportunity to project its recovery as a museum for the Tate Gallery; with that proposal, the recent past of the docks and their involvement in the city of Liverpool reappeared as a formal strategy.

Together with the drawings in perspective and horizontal alignment, there are texts and notes that reflect this<sup>16</sup>. In the upper left angle: “Albert Dock – L’pool: About 1958? The warehouses of the Dock were full of broken up ships parts – funnels, bridges, propellers, etc.” Other texts and notes included in the drawing: “Escalators, Ship bridge collage, new steps and ramp, existing blocs”; arrows indicated the various entrances and connections with the abandoned warehouse in the floor plan in the upper right angle; note “75-82” in the lower right angle; text in the lower central section with two parts: one incorporates a large arrow towards the main entrance and says: “entrance into / new building / where is / partly more of ships pieces; and the lower one incorporates a large arrow that seems to pointing to the left and to refer to the circulation by the arcaded gallery of the wharf: “entrance conducting / as Tug Boat”.

The floor plan that appears in the upper right corner reflects dimensions given between the old warehouse and the supporting buildings. However, the patio placed between them, where the new access proposal is set, is still too wide. Stirling framed three connections between the new foyer and the old warehouse structure, one in the ground floor from the volume of curved lines and another two using escalators that would connect the fourth or top floor, which would give access, depending on the programme of project uses, to the floor with the restaurant and the conference hall and temporary exhibitions. The other escalator would give access to the second or to the last floor of the permanent exhibition rooms in the gallery, and it would be possible to descent to complete the circuit. Between both landing points, there would be the third floor, allocated to installations and warehouse galleries of the museum.

Against the formal and material discretion with which Stirling acted inside, he turned to an identity symbology in various directions in this sketch, using some of the mechanisms and themes he loved: combining neutral shapes of significant shapes, industrial and infrastructural citations, using collage as a composition mechanism, diagonal geometries, constructivist references, plastic protagonism of the shapes that represent the flow, and casual placement of specific elements, as well as formal justification as an expression of uses and ways of life<sup>17</sup>.

The visibility of the institution would have been guaranteed with the meaning of its name, “Tate Gallery”, in the sign, built with technology similar to both pipes that would house the escalators that rise to the museum. The sign height would not have been less than that of some brick smokestacks in the industrial area of the docks. And the daytime and night time pageant of visitors ascending and descending on the escalators would have made up a memorable image of the museum, an optimistic sight evoking the walkways that served for centuries to go up to or come down from the ships and of the conveyor belts on which so much merchandise circulated between the ships and the old warehouses (Figure 7).

In a moment of transition between the industrial decline of what was always the hallmark of an entire city and the political and social stimulus for its conservation, Stirling interprets the museum project like a “tugboat pulling the old docks”, opting for rebirth among so many “broken remains of the old ships”. That is what the composition in a constructivist key of the smokestack-sign and both escalators allude to, pieces that articulate, together with the image of the shipping remnants and the old warehouse, the Tafurian “archaeology of the present”<sup>18</sup>. This was not just because of the habitual dialectics that Stirling had established in earlier works and in relation to the shapes of modern architecture, but that, in this particular case, the internal coherence that flowered in the unrealised sketch for the Liverpool Tate explored the pivotal archaeology of the city, the docks and communication system themselves of Liverpool.

The history of the Liverpool docks marks the modern history of the city and its growth during the past two centuries<sup>19</sup>. By contrast to other cities, Liverpool did not inherit anything of its medieval past; it has essentially been created since the 19th century<sup>20</sup>. A natural cove in the River Mersey served to receive small ships that had been trading with Ireland from before 1660. It later needed to accommodate larger-sized ships that traded all types of products with North America (tobacco), the West Indies colonies (sugar), including trading of slaves from West Africa Occidental, for which Liverpool was the leading port in 1807.

During the 19th century, Liverpool continued expanding its maritime trade, widening its relationships with South America, India, the Orient and Australia and it increased trade with the United States and Canada, the repercussions of which were constructions of new docks and remodelling of old ones. The city continued important until the Second World War, when it was subjected to severe bombing, and fell into decline towards the end of the 50s.

#### *Symbolic significance of the circulation shapes*

In his work, Stirling frequently constructs a project image based on the formal strategy that organises and diversifies circulation. The image shape represented the answer to understanding the problem in each place beyond the strict functional requirements. Le Corbusier had already drawn this interpretation in his project for a hospital in Venice with respect to the Venetian context, which he used as a metaphor and analogy<sup>21</sup>.

Stirling himself grouped his works according to the distinct focuses on the problem of circulation: “The repetition of a series of elements of circulation, such as ramps, towers, galleries, stairways, sometimes placed as symbolic objects to indicate entrances and exits, interior and exterior movements (Sheffield – Leicester – Faculty of History at Cambridge – Queen’s College – Runcorn); circulation seen as scaffolding or an organising skeleton over which the settings are connected: circulation through ‘open-floor’ places and closed rooms. Areas of circulation for social contact, where the people meet one another occasionally, in contrast to the settings used for a specific activity (Sheffield – Leicester – Faculty of History at Cambridge – Andrew Melville Hall, St. Andrews – Olivetti Training Centre, Milton Keynes); primary importance of the shapes representing circulation, that is, vertical towers for the staircases, atriums and galleries in which to stroll and take shelter (Sheffield – Leicester – Faculty of History at Cambridge – Runcorn)”<sup>22</sup>.

The commencement of the Liverpool Tate project coincided with the end of the construction of the Neue Staatsgalerie in Stuttgart (1977-84), where the public and exterior circulations enabling people to go from one street to another through the building without going inside it find their crowning moment in the rotunda or sculpture patio (Figure 9). Discovering this rotunda is an unsuspected event within the *labyrinthine and picturesque circuit*<sup>23</sup>. In his rotunda, Stirling renews the dialectic dialogue that his own maestro at the School of Liverpool, Colin Rowe, revealed between the centred rotunda of Schinkel’s Altes Museum and Le Corbusier’s off-centre Chandigarh rotunda<sup>24</sup>, adding his different vision in the face of a different urban context. Unlike Chandigarh, Stirling channels and directs the circulations and, in contrast to the formal preservation of the Altes Museum rotunda, in Stuttgart the open air rotunda is ravaged by the ramp that introduces the circulations in it to emphasise its condition of the focus of attention<sup>25</sup>.

#### *Change everything without touching anything*

Something of all of this is present in the individualised shapes of the escalators that diagonally connect the main foyer with the second and fourth floors: the discovery of the city from those escalators. This event would work in two directions: as an unusual view of Liverpool and the Mersey, and as an outside view showcasing the flow of museum visitors; the exploitation of the differences between the events on entering the museum or the restaurant and the conference hall.

In the requirement of the Stuttgart tender was the need to resolve this particular traffic flow. Stirling’s explanation clarifies the urban meaning the project assumes: “To lead the public to move diagonally through the area, in significant contact with the new building; not to divide the area with the new pedestrian street specified and not to make the people go behind a building”<sup>26</sup>. Some of these issues that combine “promenade and movement in a cross-breeding process”<sup>27</sup>, so relevant in the unrealised Liverpool proposal, already appeared in the other two projects that complete the German competitions in the 1960s, Düsseldorf and Cologne. In Cologne (Figure 9), two escalators connect Level 5 of the foyer with Level 10 of the amphitheatre. This crowns a cubic volume, whose lower floors are emptied to install the public space of a covered plaza. This mechanism of mechanical connection was the answer to the need to compose with isolated and self-contained volumes to resolve the formal symmetry between this box and the one he places on the other side of the highway, which together frame the view of the cathedral. In the Tate, he worked in a similar manner: the two escalators rescued the volumetric autonomy of the original Albert Dock warehouse, despite incorporating new accesses with significant powerful determination. He would have changed everything without touching anything.

#### *Tunnels and elevated trains. Liverpool’s circulation system (Figures 11 and 12)*

“The deep waters of the River Mersey have been the base of the growth on both sides, Liverpool and Wallasey”<sup>28</sup>. With these words, pronounced during the inauguration of the Kingsway Tunnel (24 June 1971), Queen Elizabeth emphasised how important the relationship between Liverpool and its river was. For years, the only way to cross the river between Wirral and Liverpool was to take the ferry, a method that had become overcrowded by the beginning of the 1900s. There are currently four ways to cross the river: by ferry, by the railway tunnel (opened in 1886 as the first train to go under water) and by two car tunnels below the River Mersey, the Queensway, in Birkenhead (1934), and the Kingsway, in Wallasey (1971). All of these have favoured the River Mersey for ship traffic.

In the case of both car tunnels, the pertinent commissions debated whether a bridge or a tunnel should be constructed; in both cases, the tunnel option was more economically sustainable<sup>29</sup>. In a city that had two occasions in the 20th century to think about making a bridge or a tunnel to cross the River Mersey—it had already done so before for the railway in the 19th century—both times the decision was an underground tunnel. This is the way in which one reaches Liverpool by train, with underground accesses to its two main stations, Lime Street Station and Central Station, and that is the way the train runs throughout the city.

However, everything related to the river, the traffic of ships on the Mersey or the Leeds Canal that starts from the Stanley Dock, obviously goes in the open air. And the people and merchandise embarking on the ships via conveyor belts and walkways were also in the open. And the train connecting all the docks not only was not underground, but so as not to interrupt the circulation of lorries, it was elevated; and all of them were images that remain in the visual memory of the city. The last, elevated, images were the ones that would have inspired Stirling’s design, with a curious numerical irony: he designs two independent escalators because he individualises the accesses in this way to permanent exhibitions (connection with the second floor) and to temporary exhibitions and the conference hall (connection with the fourth floor), coinciding in number with the two car traffic tunnels<sup>30</sup> (Figures 8, 10 and 12).

## CONCLUSIONS

The analysis based on the 1982 sketch demonstrates the temporal and territorial dimensions that sustained the project; the text and drawings in it emphasise this. The design represents an advanced stage in the maturation the project whose splitting of the accesses to each part of the functional programme through the exterior escalators would have fit in with the functional organisation finally projected, including the backbone-internal hub (Figure 10).

Stirling, dealing with the urban scale and evoking the memory of the city, initially proposed a system of external accesses, aerial, individualised and supported on shipwrecks, with an eloquent infrastructural image alluding to the city's shipping industry. After the conservative rejection, all the circulation flows were resolved in a quieter and more abstract fashion in the interior backbone (Figure 4). The two options, so contrasting but not necessarily mutually exclusive, constitute an epitome of the debate that the city of Liverpool had posed itself as to its urban transit: it chose to bury train and car circulation in tunnels and made everything related to ships visible: conveyor belts, walkways, elevated trains to leave the way free for lorries and load carts (Figures 7, 8 and 11); themes that shaped a memorable image of the city throughout the last centuries (Figure 12). The 1982 sketch captured this memory of the city, which Stirling used as hopeful, vital archaeology in one of the moments of the greatest crises in Liverpool and of the architectural landscape that served as a support for the project.

The drawing mentioned documents two formal strategies in apparent contraposition: on the one hand, respect for the consolidated setting, reflected in accurate picture of the pre-existing elements inherited; and, on the other, the rule-breaking image of the new mechanical accesses that he inserted between them, although touching Albert Dock minimally: three already present empty spaces were the only three points of physical contact with the old warehouse. As opposed to the city renovation followed decades later by eliminating and emptying some pre-existing elements (Figure 2), Stirling demolished nothing and his differentiated and transgressive inclusion intensified the city's landscape.

He posed unconventional access through them to the new museum instead of entering by the arcaded street because his functional destination was something else. The truth is, transforming a port warehouse into a museum is accepting the obsolescence of an architecture whose main function has been displaced by the passage of time. The sketch cited captures this resilient attitude and the pledge for the future that Stirling launched in this scenario in crisis; it was his commitment to reach "high architectural aspirations" in each undertaking<sup>31</sup>. The evident formal transgression, which the defendants of pure conservation did not accept, incorporated the two dimensions of reflection in his design, the temporal and the territorial. Into the identifiable scenario of the old Liverpool docks, Stirling inserted a formal proposal whose defiance would have to bolster new events; we are referring not only to the expected sight of museum visits, but also to the action of contemplating simultaneously the city and the River Mersey from the escalators, shattering the visual barrier that the labyrinthine topstitching of the seven miles of docks—appropriate fractal analogy of the circulation hub of the museum's interior backbone (Figures 4 and 8)—had formed over the centuries. The formal and spatial intensity made it possible to paradoxically permeate this barrier between the Mersey and the city and, at the same, gave visibility to the memory of the dock space-support.

The project strategy of the sketch spotlights the temporal difference of the forms: maximum respect for and conservation of the consolidated setting, maximum transgression in the architecture of the new accesses and coexistence and simultaneity of contrasting shapes that are both a reflection of different times and support for new events. Simultaneity is a strategy that acts on time; it activates the inherited past and introduces it into a new dialogue with the present.

The last paragraphs have been dedicated to the territorial reference underlying the formal strategy of the new and unrealised accesses, a reference involving urban memory, docks and the system of circulations in Liverpool. ■

1. ROWE, Colin. James Stirling: glosa poco ordenada y muy personal [James Stirling: A highly personal and very disjointed memoir]. In: James STIRLING. *Obras y proyectos. James Stirling, Michael Wilford y asociados [Works and Projects. James Stirling, Michael Wilford and Associates]*. Barcelona: Gustavo Gili, 1985, pp. 10-27. COLQUHOUN, A. Un monumento per la città [A landmark for the city]. In: F. DAL CO; T. MUIRHEAD. *I Musei de James Stirling, Michel Wilford and Associates [Museums of James Stirling, Michel Wilford and Associates]*. Milan: Electa, 1990, p. 127.

2. I am grateful to Professor Neil Jackson for showing me the plaque in the Liverpool School of Architecture (LSA) foyer that commemorates the presence of the Polish School. Between October and December, the LSA hosted me as a Visiting Scholar in the CAVA, with Professor Richard Koeck, in a stay financed by the University of Valladolid. This paper is one of the results.

3. These elliptical openings (an innovation by J. Hartley and an improvement that he introduced based on his study of the Saint Katharine dock in London) were the main spots for loading and unloading the boats and, in these openings, hoists and pulleys were placed to help with the works. POLLARD, R. *The Docks*. In: Joseph SHARPLES. *Liverpool*. New Haven-London: Yale University Press, 2004, p. 107. Albert Dock is the jewel in the crown of this forceful heritage of industrial architecture. It was decided to restore and recuperate it in 1981, adapting it to several uses: hotels, bars and restaurants, shops, offices, apartments, Mersey Maritime Museum, Beatles Museum and Tate Gallery. The building is constructed using brick wall facades, with thicknesses that range from 0.9 metres in the ground floor to 0.48 in the last floor. He dealt with the structure using a grid of cast metal columns, with 5.5x3.5-meter modules and two types of metal beams—inverted Y and V profiles—the latter over the front arcade columns. Reduced-curvature brick vaults lift off from the Y profiles. Jesse Hartley took in the experience of building the docks in London, particularly St. Katharine Dock, where the engineer Philip Hardwick had designed warehouses in 1826-27. From him he also took in the idea of the 4.6-meter Doric columns on the façade. Unlike St. Katharine, which had a wood structure, Hartley sought alternative solutions that were safer against fires. Between 1841 and 1843, he drew six alternative designs, generating the system of metal beams and columns described. He also applied a system of light trusses on the rooftop. The entire ensemble is surrounded by a brick perimeter wall 3.5 metres high to prevent robberies. *Ibidem*, pp. 103-111.

4. IULIANO, M.; SERRAZANETTI, F. *James Stirling. Inspiration and Process in Architecture*. Liverpool: Moleskine SpA, 2015, pp. 38-41. During the 2017-2018 school year, Professor Marco Iuliano, at the Liverpool School of Architecture, to whom I am grateful for his guidance with this paper, has developed with his students project proposals linked to this work by Stirling.

5. For the genealogy of the Stuttgart trusses among other subjects, see video. HENEGHAN, Tom. James Stirling: Speculations. Conference. University of Sydney, video, min. 57:58:15.

6. STIRLING, J. Tate in the North, Liverpool. In: F. DAL CO, op. cit. *supra*, note 1, p. 167.

7. BASSO PERESSUT, L. James Stirling. Tate Gallery to Liverpool. In: *Domus*, 1989, no. 702, pp. 1-3.

8. STIRLING, J.; WILFORD, M. Tate Gallery Liverpool. In: *A+U Architecture and Urbanism*. 1989, no. 228, p. 113.

9. After the works in 1984-88, adapting the third to sixth floors in the smaller-depth block and the last floor in the widest block was left pending. In 1997-98, these spaces were reformed for expositions, while some originally-planned uses dropped into oblivion: conference hall, restaurant and the studios for artists, all designed on the 4th floor (Level 6).

10. STIRLING, J.; WILFORD, M., op. cit. *supra*, note 8, p. 113.

11. This backbone, which incorporated the pre-existing inner brick wall, goes along the entire building height and contains the main escalator, two lifts, service lift, evacuation and internal stairs, vertical ducts of the installations, some moist spots (the toilets were placed in the cellar next to the lockers). Linked to this central backbone, the air treatment units were placed in the third floor of installations (Level 5), taking advantage of the existing windows. On the rooftop, he included a cooling tower, a cistern room and the lift machinery room.

12. MONEO, Rafael. *Inquietud teórica y estrategia proyectual en la obra de ocho arquitectos contemporáneos [Theoretical Restlessness and Design Strategy in the Work of Eight Contemporary Architects]*. Barcelona: Actar, 2004, pp. 9-10.

13. JENKINS, David. *Clare Gallery, Tate Gallery, Liverpool*. London: Phaidon, 1992.

14. STIRLING, J.; WILFORD, M., op. cit. *supra*, note 8, p. 113.

15. STIRLING, James. *Musei e Gallerie [Museums and Galleries]*. In: DAL CO, op. cit. *supra*, note 1, p. 64.

16. STIRLING, James. *Sketch for the New Tate Gallery*, 1982. Montreal, Canadian Centre for Architecture. Author's translation. The drawing has been reproduced in: STIRLING, J.; WILFORD, M., op. cit. *supra*, note 8, p. 130; DAL CO, F.; MUIRHEAD, T., op. cit. *supra*, note 1, p. 167; JENKINS, David, op. cit. *supra*, note 13, Fig. 39; IULIANO, M., SERRAZANETTI, F., op. cit. *supra*, note 4, pp. 110-111.

17. STIRLING, J. Due conferenze [Two conferences]. In: A. IZZO; C. GUBITOSI. *James Stirling*. Rome: Officina Edizioni, 1976, pp. 25-27.

18. "Stirling has 'rewritten' the 'words' of modern architecture, building a true 'architecture of the present'". TAFURI, Manfredo. Da L'Architecture dans le boudoir [Architecture in Private Sitting Rooms]: The Language of Criticism and the Criticism of Language. In: *Oppositions*, 1974, no. 3.

19. STAMMERS, M. *Liverpool Docks*. Gloucestershire: The History Press, 2010, pp. 7-8.

20. SHARPLES, J., op. cit. *supra*, note 3, p. 3.

21. ALONSO GARCÍA, E. El espacio público en Le Corbusier [Public Space in Le Corbusier]. In: J. TORRES CUECO. *Le Corbusier 50 años después [Le Corbusier 50 Years Later]*. Valencia: UPV, 2015, p. 92.

22. STIRLING, J. Due conferenze [Two conferences], op. cit. *supra*, note 17, pp. 25-26.

23. COLQUHOUN, A., op. cit. *supra*, note 1, p. 125.

24. ROWE, Colin. *Manierismo y arquitectura moderna y otros ensayos [Mannerism and Modern Architecture and Other Essays]*. Barcelona: Gustavo Gili, 1978, pp. 9-33.

25. CORTÉS VÁZQUEZ DE PARGA, J. A. La caja de Pandora [Pandora's Box]. In: *Escritos sobre arquitectura contemporánea [Writings on Contemporary Architecture]*. COAM: Madrid, 1991, p. 143.

26. STIRLING, J. *Neue Staatsgalerie & Kammertheater [New State Gallery and Chamber Theatre]*, Stuttgart. In DAL CO, op. cit. *supra*, note 1, p. 109.

27. MONEO, R., op. cit. *supra*, note 12, p. 42.

28. JACKSON-LEE, P. *The Mersey Road Tunnels*. Amberley: Gloucestershire, 2017, p. 72.

29. Queensway designing began in 1923, work commenced in 1925 and it was inaugurated in 1934 by King Georges V, included the six ventilation stations. Its circular section has a diameter of 13 meters and two branches of entrances at each side of the river. Increased traffic reopened the debate in 1959 over the need for a new tunnel, which was finally inaugurated on 24 June 1971 by Queen Elizabeth. Its circular section is 9.63 meters in diameter.

30. In Staatsgalerie, in the design of the entry marquees to the three areas, museum, theatre and library, "he achieves a deliberate numerical allusion (...), in the library the marquee has just one roof, in the theatre two and in the museum three". ÁLVAREZ ÁLVAREZ, Darío. James Stirling y la contradicción como método [James Stirling and Contradiction as a Method]. In: *Anales de Arquitectura [Architecture Annals]*. Valladolid: Dpto. de Teoría de la Arquitectura y Proyectos Arquitectónicos, 1993-94, no. 5, p. 237.

31. STIRLING, James. Acceptance speech. In: Rubén A. ALCOLEA et al., eds. *Premios Pritzker. Discursos de aceptación, 1979-2015 [Pritzker Architecture Prize. Acceptance Speeches, 1979-2015]*. Barcelona: Fundación Arquia, 2015, p. 50.