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The state of things

2021

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La llamada a una reflexión pausada, tras un inicio pandémico donde se evidenció la fragilidad de los ecosistemas, de lo público y de lo global, frente al paradójico resurgir del hábitat local, ha dado como resultado un número que pivota entre la redefinición de una realidad reciente y la necesidad de cambio. Los artículos y proyectos aquí presentes no pretenden abarcarlo todo pero sí son una muestra palpable de ciertos caminos por los que deberíamos transitar.

Se inicia este *estado de las cosas* con la pertinente llamada crítica a incorporar una conciencia paisajística. Para ello sería necesario alejar dicho concepto de todo romanticismo pictórico, otra paradoja visual más, que niega las singularidades temporales en las que se debe fundamentar un elemento aglutinador, donde continente y contenido solo cobran sentido cuando responden a ese cambio permanente. Claro ejemplo de esta conciencia paisajera se atisba en el artículo que sigue donde se muestra la compleja relación que existe entre la actividad humana de la pesca de la sardina, las transformaciones ambientales en el espacio de los ecosistemas marinos y una configuración urbana de carácter industrial. Construcción de un paisaje vivo en el norte de Portugal que prueba la intrincada relación que existe entre diferentes patrones biológicos, evoluciones tecnológicas y la propia arquitectura como expresión de este ecosistema. El siguiente artículo incide en ese devenir biológico del tiempo al plantear una reflexión sobre lo que significa la intervención sobre lo ya construido. Esta actitud aparentemente sostenible, a menudo definida como reciclaje, tiene el peligro de convertirse rápidamente en una estética o estilo tendente a la recuperación de un pasado de imagen llamativa. Otra vez la paradoja de lo visual nos está adelantado al recrearse en la imagen de lo aparentemente extraordinario. Por lo que parece necesario defender otra aproximación más contemplativa donde lo que se proyecta son posibilidades.

Un último artículo cierra esta trilogía con una reflexión sobre los métodos de producción arquitectónica contemporáneos basados en algoritmos y las posibilidades de incorporar una información de índole cultural inexistente en dichos procesos a través del manifiesto como herramienta paramétrica que trascienda el actual enfoque físico-formal. Para finalizar se presentan dos posturas que ejemplifican de algún modo lo comentado anteriormente. Ambos trabajan ámbitos similares, con el tiempo y con la conciencia de un paisaje o infraestructura como elemento vivo y cambiante.

The call for slow reflection, after a pandemic beginning in which the fragility of ecosystems, the public and the global became evident, in the face of the paradoxical resurgence of the local habitat, has resulted in an issue that veers between the redefinition of a recent reality and the need for change. The articles and projects presented here do not pretend to be all-encompassing, but they are a palpable sample of certain paths along which we should travel.

This *state of things* begins with the pertinent critical call to incorporate landscape awareness. To do so, it would be necessary to distance this concept from all pictorial romanticism, yet another visual paradox, which denies the temporal singularities on which a unifying element must be based, where the container and the content only make sense when they respond to this permanent change. A clear example of this landscape awareness can be seen in the following article, which explores the complex relationship between the human activity of sardine fishing, the environmental transformations in the space of marine ecosystems, and an urban configuration of an industrial nature. The construction of a living landscape in the north of Portugal demonstrates the intricate relationship between different biological patterns, technological evolutions and the architecture itself as an expression of this ecosystem.

The following article touches on this biological evolution of time by reflecting on what it means to intervene on what has already been built. This apparently sustainable attitude, often defined as recycling, runs the risk of quickly becoming an aesthetic or style tending towards the recovery of a past with a striking image. Once again the paradox of the visual is overtaking us by recreating itself in the image of the apparently extraordinary. So it seems necessary to defend another, more contemplative approach where what is planned are possibilities.

A final article closes this trilogy with a reflection on contemporary architectural production methods based on algorithms and the possibilities of incorporating non-existent cultural information into these processes through the manifesto as a parametric tool that transcends the current physical-formal approach. Finally, two approaches are presented that exemplify in some way what has been said above. Both work in similar fields, with time and with the awareness of a landscape or infrastructure as a living and changing element.

Pablo Gallego Picard
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Circling¹

Elías Barczuk Pasamán
Florencia Köncke

Resumen

En la voluntad de formular un razonamiento nuevo que recoja unas reflexiones respecto a la pausa al mundo obligada que nos reclamó este último año, traemos a colación el término *circling* para describir nuestra percepción acerca de los sucesos que han tenido lugar. Entendiendo conceptualmente al *estado* como un momento preciso y determinado que acarrea intrínsecamente al cambio y al paisaje como protagonista y escenario de dicha transformación, es objetivo de este apartado cuestionarnos todas aquellas nociones referidas a la consciente comprensión de la sociedad ante la necesidad de cambio que el medio le reclama. O, por el contrario, su indiferencia e inevitable retorno hacia a la posición inicial. A tal efecto, el argumento se forja bajo la idea de que todo cambio real precisa un compromiso minucioso y sincero que incorpore una conciencia paisajística desde todos los agentes que intervienen en nuestro entorno.

Palabras clave: estado, presente, cambio, paisaje, ciudad.

Abstract

In the will to formulate a new reasoning that includes some reflections regarding the obligatory pause in the world that this past year has demanded of us, we bring up the term *circling* to describe our perception of the events that have taken place. Conceptually understanding the *state* as a precise and determined moment that intrinsically entails change and the landscape as the protagonist and scenario of such transformation, it is the purpose of this article to question all those notions referring to society's conscious understanding of the need for change that the environment demands of it. Or, on the contrary, its indifference and inevitable return to the initial position. To this end, the argument is forged under the idea that any real change requires a thorough and sincere commitment that incorporates a landscape awareness from all agents involved in our environment.

Keywords: state, present, change, landscape, city.

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En relación a unos retratos de Giacometti, Enric Miralles comenta: “una pintura es así, un trozo de tiempo”². Sea cual sea la definición de *estado* que quien lea este texto pueda apuntar, a menudo seríamos capaces de identificar en ellas la prominencia que adquiere la caracterización de instantáneo. *Estado es presente*. Indefectiblemente. Como una pintura para Miralles, un trozo de tiempo. Ahora bien, el carácter de inmediato que reviste la noción de *estado* nos obliga a hacer referencia, por consiguiente, a la idea implícita de *cambio* que acarrea la definición. Un cambio que observamos desde dos aproximaciones. Una urbana y evolutiva que se deslinda mediante el análisis de su constancia, cambios violentos y breves —darwinianos—, o de su inconstancia, modificaciones moduladas y lentas —lamarckianas—³. Y un acercamiento psicológico y social donde las transformaciones describen una etapa inicial de desconocimiento, una segunda de acceso a cierta información, una tercera de entendimiento de la transformación como suceso lógico y una última donde el apetito de cambio se convierte en motivación suficiente para la incorporación y concreción del mismo⁴. Si bien el cambio es síntoma de la buena salud que goza una sociedad, la velocidad e impetuosidad de este provoca, casi siempre, el efecto contrario. En la voluntad de configurar un nuevo pensamiento sobre el paréntesis obligado que nos reclamó el último año, la inercia del tiempo se concibe como antagonista principal en esta historia. Repensar el *estado de las cosas*, aunque pronto en algunos sentidos y demasiado trillado en otros, se vuelve, sino la única la más pertinente manera de empezar a interiorizar y capitalizar el cambio. El paisaje, idea revolucionaria, aglutinadora de disciplinas y víctima de ingentes transformaciones, resuelve, en este apartado, la integración entre nuestras ciudades, las singularidades del tiempo y el cambio. (Fig. 01)

En general, la gente se siente parte de un paisaje “[...] con el que establece profundas complicidades. Este sentimiento es legítimo y universal y, aunque la tensión entre lo local y lo global afecta a los lugares, seguimos actuando como una cultura territorializada. El paisaje ejerce un rol social y cultural destacado”⁵. En coincidencia con el Convenio Europeo del Paisaje⁶, creemos que esta

In relation to several portraits by Giacometti, Enric Miralles says: “a painting is like that, a piece of time”². Whatever the definition of *state* that anyone reading this text may point to, we would often be able to identify in them the prominence that the characterization of instantaneous acquires. *State is present*. Indefectibly. Like a painting for Miralles, a piece of time. However, the immediate nature of the concept of *state* obliges us to refer, therefore, to the implicit idea of *change* that the definition entails. A change that we observe from two approaches. An urban and evolutionary one, which is distinguished by analyzing its constancy, violent and brief changes —Darwinian—, or its inconstancy, modulated and slow modifications —Lamarckian—³. And a psychological and social approach where transformations describe an initial stage of ignorance, a second of access to certain information, a third of understanding the transformation as a logical event and a last one where the appetite for change becomes sufficient motivation for the incorporation and realization of the same⁴. Although change is a symptom of the good health of a society, the speed and impetuosity of change almost always has the opposite effect. In the desire to configure a new way of thinking about the forced parenthesis that the last year demanded of us, the inertia of time is conceived as the main antagonist in this story. Rethinking the *state of things*, although early in some senses and too cliché in others, becomes, if not the only, the most pertinent way to begin to internalize and capitalize on change. Landscape, a revolutionary idea, agglutinating disciplines and victim of enormous transformations, resolves, in this section, the integration between our cities, the singularities of time and change. (Fig. 01)

In general, people feel part of a landscape “[...] with which they establish deep complications. This feeling is legitimate and universal and, although the tension between the local and the global affects places, we continue to act as a territorialized culture. Landscape plays an important social and cultural role”⁵. In agreement with the European Landscape Convention⁶, we believe that this notion, which

· 1
Expresión del inglés para referirse a la acción de moverse o caminar en círculos, a menudo alrededor de algo.

· 2
Carles Muro i Soler, *Conversaciones con Enric Miralles*. (Barcelona: Gustavo Gili, 2016): 24.

· 3
Gilles Clément, *Manifiesto del Tercer paisaje*. (Barcelona: Gustavo Gili, 2007): 51.

· 4
Matilde Jiménez e Itziar Rosado, *Manual de campañas para la transformación social. Movilización e incidencia política*. (Madrid: ONGAWA, 2018).

· 5
Joan Nogué, “El retorno al paisaje”, *Revista Enrahonar* 45, 123-136 (2010): 125.

· 6
Se refiere tanto a los paisajes que puedan considerarse excepcionales como a los paisajes cotidianos o degradados. El presente Convenio tiene por objetivo promover la protección, gestión y ordenación de los paisajes, así como organizar la cooperación europea en ese campo.

· 1
English expression referring to the action of moving or walking in circles, often around something.

· 2
Carles Muro i Soler, *Conversations with Enric Miralles*. (Barcelona: Gustavo Gili, 2016): 24.

· 3
Gilles Clément, *Third Landscape Manifesto*. (Barcelona: Gustavo Gili, 2007): 51.

· 4
Matilde Jiménez e Itziar Rosado, *Manual of campaigns for social transformation. Mobilization and advocacy*. (Madrid: ONGAWA, 2018).

· 5
Joan Nogué, “The return to the landscape”, *Magazine Enrahonar* 45, 123-136 (2010): 125.

· 6
It concerns both landscapes that may be considered exceptional and everyday or degraded landscapes. The purpose of this Convention is to promote the protection, management and planning of landscapes and to organize European cooperation in this field.

› Fig. 1. Sombreros en Garment District, Nueva York, 1930.
©Margaret Bourke-White
Fig. 1. Hats in Garment District, New York, 1930.
©Margaret Bourke-White



› Fig. 2. Vacío en Garment District, Nueva York, 1930.
Montaje de elaboración propia sobre la fotografía de Margaret Bourke-White.
Fig. 2. Vacuum in Garment District, New York, 1930.
Montage of own elaboration on Margaret Bourke-White's photograph.



noción, que nace de la geografía y es aprehendida desde la arquitectura, “es un elemento importante de la calidad de vida de las poblaciones en medios urbanos y rurales, en zonas degradadas y de gran calidad, en espacios de reconocida belleza excepcional y en los más cotidianos”⁷. Cuando entendemos que el urbano también es paisaje y nos despegamos de la concepción romántica que rodea a la acepción en las esferas artísticas, nos es relativamente sencillo identificar algunas constantes en él. Si asumimos a la percepción como vehículo mediante el cual una realidad física se hace paisaje y desprende de ella la multiplicidad de impresiones que el término convoca, la ciudad y la arquitectura hacen las veces de escenario y los seres vivos se comportan, cada día, como los actores que hacen uso del mismo. Unos edificios que se conciben para trascender y, a través de esa idea, dan estabilidad al medio. Y unas criaturas

⁷ Nogué, “El retorno al paisaje”, 135.

stems from geography and is apprehended from architecture, “is an important element of the quality of life of populations in urban and rural environments, in degraded and high quality areas, in spaces of recognized exceptional beauty and in the most everyday”⁷. When we understand that the urban is also landscape and we detach ourselves from the romantic conception that surrounds the meaning in the artistic spheres, it is relatively easy to identify some constants in it. If we assume perception as the vehicle through which a physical reality becomes landscape and gives off from it the multiplicity of impressions that the term summons, the city and architecture act as a stage and living beings behave, every day, as the actors that make use of it. Buildings that are conceived to transcend and, through this idea, give stability to the environment. And creatures

⁷ Nogué, “The return to the landscape”, 135.

› Fig. 3. Otra vez, sombreros en Garment District, Nueva York, 1930. ©Margaret Bourke-White
 Fig. 3. Again, hats in Garment District, New York, 1930. ©Margaret Bourke-White



que, no solamente cambian, sino que son propiamente el cambio. Si cambiar es sano, el papel de estos seres vivos es imprescindible. El contagio entre la dinámica de unos y la estaticidad de los otros se declara crucial. La particularidad de nuestros tiempos ha alterado el paisaje urbano. La levedad con la que hemos reaccionado ante dicha transformación nos invita a reflexionar sobre ello. Hoy, en Barcelona, el *Mendizábal* tiene las mismas colas de siempre a la espera de sus bocadillos, la vegetación de la Gran Vía ha vuelto a ser ribeteada para darle lugar al automóvil, los jabalíes de Collserola ya no cruzan la Carretera de les Aigües y los Mossos d'Esquadra tienen que continuar diluyendo las aglomeraciones en la Plaza del Sol y en los búnkers del Carmel. Si la arquitectura (el paisaje) es reflejo de un momento, las palabras de Mies van der Rohe tienen cabida en este asunto. Los nuevos tiempos son un hecho: existen, indiferentes a nuestro *sí* o *no*. Debemos aceptar como un hecho el cambio de condiciones. Lo decisivo será la manera en que nos enfrentemos nosotros mismos a las nuevas circunstancias. La pregunta no es *qué* sino *cómo*⁸. Las singularidades de nuestros días son, incuestionablemente, hondas y abundantes, pero las decisiones que hoy seguimos tomando pecan de semejantes. La pregunta que debemos responder tiene que ver con cómo entender y reaccionar ante este cambio. (Fig. 02)

En esta congregación textual que nos invita a reflexionar, desde el *estado de las cosas*, acerca de un sinfín de asuntos que de cualquier manera serían atinados en este intrincado instante de la historia, el de repensar unas nociones referidas al cambio y al paisaje, resulta conveniente. Más conveniente aún se vuelve entenderse parte de una conversación amplia y compleja. En la que se cree pertinente el aporte, pero se pretende,

· 8
 Ludwig Mies van der Rohe, *Escritos, diálogos y discursos*. (Murcia: Fundación Caja Murcia, 1992).

that not only change but are themselves the change. If change is healthy, the role of these living beings is essential. The influence between the dynamics of the one and the staticity of the other is crucial. The particularity of our times has altered the urban landscape. The levity with which we have reacted to this transformation invites us to reflect on it. Today, in Barcelona, the *Mendizábal* has the same queues as always waiting for their sandwiches, the vegetation of the Gran Vía has once again been edged to make room for the automobile, the wild boars of Collserola no longer cross the Carretera de les Aigües and the Mossos d'Esquadra have to continue thinning the crowds in the Plaza del Sol and in the bunkers of Carmel. If architecture (landscape) is a reflection of a moment, the words of Mies van der Rohe have a place in this matter. The new times are a fact: they exist, indifferent to our *yes* or *no*. We must accept the change of conditions as a fact. What will be decisive will be how we ourselves deal with the new circumstances. The question is not *what* but *how*⁸. The singularities of our times are, unquestionably, deep and abundant, but the decisions we continue to make today are similar. The question we must answer has to do with how to understand and react to this change. (Fig. 02)

In this textual congregation that invites us to reflect, from *the state of things*, on a myriad of issues that in any way would be appropriate in this intricate moment of history, it is convenient to rethink some notions related to change and landscape. It is even more convenient to understand oneself as part of a broad and complex conversation. In which the contribution is believed to be pertinent, but in any case, it is intended to advance towards the construction

· 8
 Ludwig Mies van der Rohe, *Writings, dialogues and speeches*. (Murcia: Fundación Caja Murcia, 1992).

en cualquier caso, avanzar hacia la construcción de un razonamiento contemporáneo y colectivo mediante la sinérgica fundición de cada pensamiento de autor y de lector. Una sociedad que no conoce su historia está condenada a repetirla. En la celeridad de estos acontecimientos corremos el riesgo de no apreciar la mutación que el paisaje nos reclama. Rauda, pero rotundamente. No ver implica no actuar consecuentemente. Siendo el paisaje soporte del cambio, recalcamos, luego de afinar la visión de los domésticos sucesos diarios, el hecho de que el *estado de las cosas* persiste, inquebrantablemente, siendo el mismo. *Hemos estado dando vueltas en círculos*. Coqueteando, apenas superficialmente, con la utopía del cambio. Un cambio que exige un compromiso profundo y sensible desde todos los personajes que definen al paisaje. Escenario y actores. Arquitectura y seres vivos. ¿Sabemos realmente cuál es el cambio necesario? Si, después de todo, conseguimos generar una mínima conciencia ecológica, quizás sea tiempo de añadirle a ella una conciencia del paisaje. Que interiorice el cambio y logre redireccionarlo hacia definiciones de la realidad. (Fig. 03)

of a contemporary and collective reasoning through the synergic fusion of each author's and reader's thoughts. A society that does not know its history is condemned to repeat it. In the speed of these events, we run the risk of not appreciating the mutation that the landscape demands of us. Quickly, but emphatically. Not seeing implies not acting accordingly. Being the landscape the support of change, we emphasize, after refining the vision of the domestic daily events, the fact that the state of things persists, unwaveringly, being the same. *We have been going around in circles*. Flirting, just superficially, with the utopia of change. A change that demands a deep and sensitive commitment from all the characters that define the landscape. Scenery and actors. Architecture and living beings. Do we really know what the necessary change is? If, after all, we manage to generate a minimum ecological conscience, perhaps it is time to add to it a landscape conscience. That internalizes the change and manages to redirect it towards definitions of reality. (Fig. 03)

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A Biología dos Peixes e a Arquitectura das Conservas no Litoral Português

Moving Seascapes: The Architecture and Biology of Fishing and Canning on the Portuguese Coast

André Tavares
Diego Inglez de Souza

Resumen

Através da pesca, os humanos participam activamente na dinâmica dos ecossistemas marinhos e a arquitectura está envolvida nesse processo. O nosso objectivo é desenvolver o conceito de *Fishing Architecture* como uma noção útil para descrever a interligação entre a arquitectura e os ecossistemas marinhos. Ao analisar os resultados arquitectónicos e ecológicos da pesca e da indústria das conservas, tentaremos avaliar a relação complexa entre as actividades humanas e as transformações ambientais. Como podemos representar a relação intrincada entre o mar e a costa? Este texto procura enunciar esta hipótese e incorporar a informação ecológica na análise do desenvolvimento da indústria de conservas de sardinha em Matosinhos. Com base no conhecimento da ecologia marinha, esperamos encontrar uma perspectiva original a partir da qual seja possível visualizar e avaliar os desenvolvimentos urbanos e os seus impactos ambientais.

Palabras clave: arquitetura da pesca, biologia marinha, arquitetura industrial, marinhas, ecologia

Abstract

When they fish, humans play an active part in the dynamics of marine ecosystems, and architecture is subsequently involved in the processing of their catch. Our goal is to develop the idea of *Fishing Architecture* as a useful concept for understanding the interconnected relationship between architecture and fishing. By analysing the architectural and ecological outcomes of fisheries and canning industry, we will try to assess the complex relationship between human activities and environmental transformations. How can we represent the intricate relationship between the sea and the coast? This text seeks to state this hypothesis and incorporate ecological information into the analysis of the development of the sardine canning industry in Matosinhos. Based on the knowledge of marine ecology, we hope to find an original perspective from which to visualize and evaluate urban developments and their environmental impacts.

Keywords: fishing architecture, marine biology, industrial architecture, seascapes, ecology.

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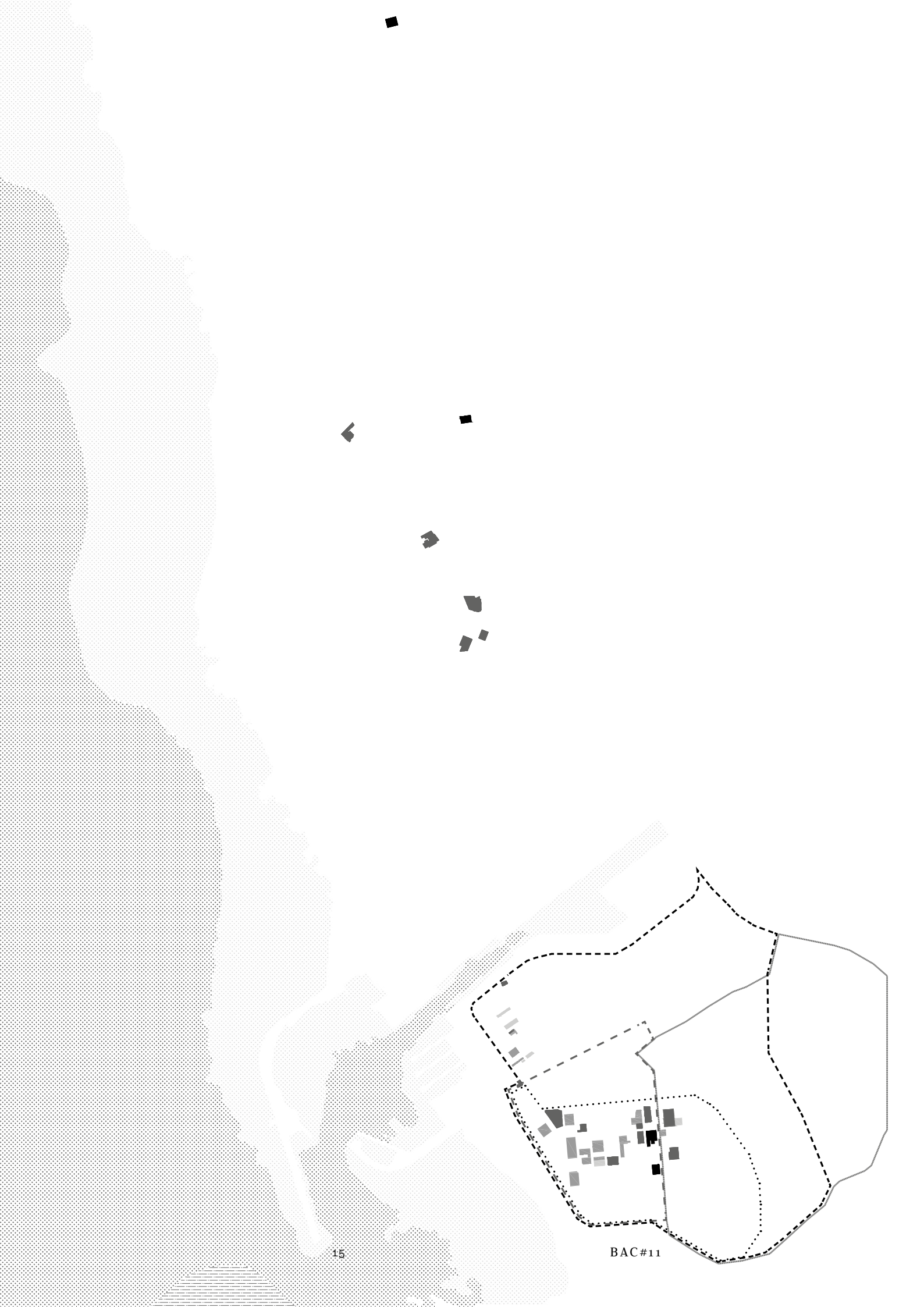
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Cunhámos o termo “arquitetura dos peixes” numa tentativa de construir uma ponte entre a biologia marinha e arquitetura¹. Obviamente, existem obras de referência que abordam a arquitetura da pesca: entre estas destacamos a análise aprofundada que Karl Otto Ellefsen e Tarald Lundevalld fizeram das povoações e da indústria do Norte da Noruega². Há outros trabalhos que abordam a arquitetura vernacular, como a descrição de Robert Mellin das construções terra-novenses na aldeia de Tilting, na Ilha do Fogo³. Estas obras, que descrevem paisagens resultantes da pesca, são cruciais para a formulação da nossa hipótese: qual é o impacto ecológico dessas paisagens? Até agora, estas questões ainda não foram abordadas pela literatura existente. Alguns biólogos marinhos, porém, tentaram reconstruir a história dos ecossistemas e das populações piscícolas, ao mesmo tempo que projectos de investigação ambiciosos, como o History of Marine Animal Populations (HMAP), geraram bases de dados em constante desenvolvimento, como o Ocean Biodiversity Information System (OBIS). Os resultados desta história dos ecossistemas ligam-nos a histórias sociais mais amplas e ajudam a destrinçar os factores ambientais das pressões ecológicas. Um bom exemplo dessa metodologia é o trabalho de Sean Cadigan e Jeffrey Hutchings, que demonstra que, no século XIX, a expansão da pesca da Terra Nova até Labrador não se deveu a mudanças nas condições ambientais, mas simplesmente à sobre-pesca⁴. Apesar de este não ter sido o objectivo original, a investigação que realizaram demonstra que é possível articular as arquiteturas da pesca e os processos de urbanização com a ecologia marinha — uma narrativa tantas vezes negligenciada na história da arquitetura.

A arquitetura dos peixes visa oferecer um retrato diferente da arquitetura e da paisagem

¹ A expressão original em inglês, Fishing Architecture, é propositalmente mais ambígua do que uma possível tradução para português. O conceito tem origem em dois projectos de investigação financiados pela FCT dedicados à arquitetura do bacalhau e da sardinha, conduzidos por André Tavares no Lab2PT — Laboratório de Paisagens, Património e Território — na Escola de Arquitectura da Universidade do Minho. Este trabalho tem o apoio financeiro do projecto *The Sea and the Shore, Architecture and Marine Biology: The Impact of Sea Life on the Built Environment* (PTDC/ART-DAQ/29537/2017), financiado pela FCT/MCTES através de fundos nacionais (PIDDAC) e co-financiado pelo Fundo Europeu de Desenvolvimento Regional (FEDER) POCI-01-0145-FEDER-029537 como parte do novo acordo de parceria PT2020 através da COMPETE 2020 — Programa Operacional Competitividade e Internacionalização (POCI).

² Karl Otto Ellefsen e Tarald Lundevalld, *North Atlantic Coast: A Monography of Place* (Oslo: Pax Forlag, 2019).

³ Robert Mellin, *Tilting: House Launching, Slide Hauling, Potato Trenching, and Other Tales from a Newfoundland Fishing Village* (Nova Iorque: Princeton Architectural Press, 2003).

⁴ Sean T. Cadigan e Jeffrey A. Hutchings, “Nineteenth-Century Expansion of the Newfoundland Fishery of Atlantic Cod: An Exploration of Underlying Causes,” em *The Exploited Seas: New Directions for Marine Environmental History*, ed. Poul Holm, Tim D. Smith and David J. Starkey, (Liverpool: Liverpool University Press, 2001).

Regardless of how difficult it is to represent animals and their behaviour in terms of architectural standards, the interconnections between the various scales of observation —both in space and time— can provide clues for understanding the functioning of the ecosystem in connection with architecture and its changing landscape. Our paper seeks to reveal and describe the relationship between physical constructions and their biological counterparts. How can we represent this intricate relationship between the sea and the shore? How large is the school of fish that one factory processes in one day? How does the size of one relate to the size of the other? And what about their spatial relationship?

We coined the term Fishing Architecture in an attempt to build a bridge between marine biology and architecture¹. Of course, there are reference works addressing the architecture of fisheries: of these, we would highlight Karl Otto Ellefsen and Tarald Lundevalld’s thorough analysis of Northern Norwegian settlements and industry². Other research exists in the form of architectural surveys of vernacular architecture, such as Robert Mellin’s description of Newfoundland buildings in the Fogo Island village of Tilting³. These works, which describe landscapes produced by fisheries, are key to the formulation of our hypothesis: What is the ecological impact of such landscapes? So far, these matters have not been covered by the existing literature. There are, however, tentative moves from scholars of marine biology to reconstruct the history of ecosystems and fish populations, while ambitious research projects like the History of Marine Animal Populations (HMAP) have generated burgeoning databases such as the Ocean Biodiversity Information System (OBIS). Results drawing on this history of ecosystems tie them into broader social histories and help disentangle envi-

¹ The concept derives from two research projects funded by FCT devoted to Codfish Architecture and Sardines at the Lab2PT, Landscape, Heritage and Territory Laboratory, at the University of Minho School of Architecture. This work has the financial support of the project *The Sea and the Shore, Architecture and Marine Biology: The Impact of Sea Life on the Built Environment* (PTDC/ART-DAQ/29537/2017) with support from FCT/MCTES via national funds (PIDDAC) and co-financing from the European Regional Development Fund (FEDER) POCI-01-0145-FEDER-029537, as part of the new partnership agreement PT2020 through COMPETE 2020—Competitiveness and Internationalization Operational Program (POCI).

² Karl Otto Ellefsen and Tarald Lundevalld, *North Atlantic Coast: A Monography of Place* (Oslo: Pax Forlag, 2019).

³ Robert Mellin, *Tilting: House Launching, Slide Hauling, Potato Trenching, and Other Tales from a Newfoundland Fishing Village* (New York: Princeton Architectural Press, 2003).

⁴ Sean T. Cadigan and Jeffrey A. Hutchings, “Nineteenth-Century Expansion of the Newfoundland Fishery of Atlantic Cod: An Exploration of Underlying Causes,” in *The Exploited Seas: New Directions for Marine Environmental History*, ed. Poul Holm, Tim D. Smith and David J. Starkey, (Liverpool: Liverpool University Press, 2001).

construída. Em vez de nos focarmos em análises formais, na teoria arquitectónica ou na história social, podemos representar a arquitectura e a sua história em relação a um contexto ecológico mais alargado. Para isso, precisamos de compreender o impacto ecológico subjacente às actividades humanas num espaço pouco conhecido como o oceano. Se, enquanto sociedade, o nosso objectivo é fomentar uma relação mais equilibrada entre os humanos como predadores e outras espécies, enquanto arquitectos podemos contribuir avaliando o impacto ecológico da arquitectura. Esse impacto não se limita à terra, mas estende-se pelo mar. Essa perspectiva é muitas vezes obscurecida pela sensação opaca que temos do mar como mera linha de horizonte. Neste texto, experimentamos um método para começar a criar esse género de perspectiva. Recorremos a fontes tão díspares como vestígios urbanos de fábricas de conservas e construções portuárias (arquitectura *per se*), relatórios governamentais (que oferecem números sobre o desembarque de pescado e as estratégias políticas), arquivos municipais (com cartografia e projectos arquitectónicos), revistas especializadas (que cobrem as práticas de pesca), literatura e fotografia (que representem a arquitectura) e estudos académicos (sobre biologia marinha), e olhámos para a pesca da sardinha como um modo de observar as práticas piscatórias actuais. A investigação usa instrumentos da arquitectura —representação— e análises críticas das fontes para chegar a um resultado. Esperamos que a arquitectura dos peixes realce as ligações intrincadas entre os vários territórios planetários e a natureza.

Matosinhos

O nosso caso de estudo centra-se em Matosinhos, na costa do Norte de Portugal. No final do século XIX, o lugar sofreu uma expansão industrial em larga escala quando o porto da cidade do Porto foi deslocalizado das margens do rio Douro para a foz do rio Leça, por razões de segurança de navegação. A infra-estrutura de caminhos-de-ferro veio pouco depois, à qual se seguiu a construção de um complexo industrial completamente operacional. Estas transformações não se ficaram a dever à pesca: os principais negócios que operavam no porto envolviam o trânsito de passageiros e mercadorias associados ao aglomerado urbano da cidade do Porto e à sua actividade industrial metropolitana. Contudo, não demorou muito para que a pesca e o processamento de alimentos tomassem conta de uma grande área conhecida como o Areal do Prado, entre o antigo núcleo da vila e a Estrada da Circunvalação. Essas várzeas, com pouco valor imobiliário e recursos hídricos abundantes, proporcionaram a localização perfeita para um rápido processo de urbanização, com base num planeamento pragmático formalizado por Licínio Guimarães em 1896, mais tarde aperfeiçoado por David Moreira da Silva e

ronmental factors from ecological pressures. A good example of such methodology is the work by Sean Cadigan and Jeffrey Hutchings demonstrating that the nineteenth-century fishing expansion from Newfoundland to Labrador was not due to changing environmental conditions but simple overfishing⁴. Although this was not their original purpose, their research demonstrates that it is possible to articulate fishing architectures and urbanization processes, with their ecological marine counterpart —a narrative that is so often neglected within architectural history.

Hence, Fishing Architecture aims to provide a different picture of built architecture and landscapes. Instead of focusing on formal analysis, architectural theory, or social history, we can represent architecture and its history in relation to a broader ecological context. This requires us to understand the ecological impact underlying human activities in an unknown space like the ocean. If our aim as a society is to foster a more balanced relation between humans as predators and other species, as architects we can contribute by assessing the ecological impact of architecture. This impact is not limited to the land but extends far out to sea. Our view of this is often obscured by the opaque sense of the sea as a mere horizon. In this paper we experiment with a methodology for creating such a perspective. We draw on sources as disparate as the urban remnants of canning factories and port constructions (architecture *per se*), governmental reports (providing figures on fish landings and political strategies), municipal archives (with holdings on cartography and architectural projects), trade magazines (covering fisheries practices and views), literature and photography (representing architecture), and scholarly research (on marine biology), and look at sardine fisheries as a way of observing today's fishing practices. The research then uses architectural instruments —representation— and critical assessment of the sources to figure out a possible outcome. We expect Fishing Architecture to highlight the intricate connections between the planet's varied territories and nature.

Matosinhos

Our case study focuses on the fishing town of Matosinhos, on the coast of northern Portugal. In the late nineteenth century, the town underwent a large-scale industrial expansion when the port of Porto was relocated from the banks of the River Douro to Leça, for the purposes of navigational safety. The railway infrastructure came next, soon followed by the construction of a fully operational industrial complex. These transformations were not led by fisheries: the major business concerns

Maria José Marques da Silva em 1944⁵. Foi dentro desses princípios de planeamento urbanístico que muitas fábricas de conservas foram construídas, primeiro na década de 1900, mais tarde, em muito maior número, na década de 1930.

Porém, a localização das fábricas de conservas e o desenvolvimento do porto de pesca em Matosinhos não foram orientados pelo processo de planeamento formal. Em vez disso, defendemos que na base estiveram factores ambientais. A costa portuguesa é propícia a fortes afloramentos (*upwelling*), um fenómeno natural que traz nutrientes do fundo do mar até à superfície. O afloramento favorece o desenvolvimento de peixes na base da cadeia trófica, que se alimentam de plâncton e servem de alimento a outras espécies. É o caso da sardinha, um peixe pelágico abundante na região. Desde o início da revolução industrial, a pesca da sardinha era feita ao longo da costa arenosa a sul de Matosinhos, fazendo uso da técnica conhecida como arte xávega, em que uma rede de cerco é lançada ao mar e depois arrastada directamente a partir da costa. Por não haver a necessidade de um porto para os barcos de fundo chato usados na arte xávega, várias aldeias piscatórias informais surgiram nas dunas, não muito longe do caminho-de-ferro que ligava o Porto a Lisboa ao longo da costa. Numa dessas localidades, Espinho —onde a ferrovia quase toca a praia—, foi erguida uma fábrica de conservas, que expandiu a produção de salmoura que existia e converteu o lugar num ponto modernizado de produção alimentar. No Sul de Portugal, especialmente no Algarve e em Setúbal, foram desenvolvidos outros centros industriais de sardinhas. Contudo, o afloramento na costa norte tornou a população de sardinhas dessa zona costeira mais gordas e com melhores propriedades químicas. Além de não ter um porto, Espinho sofreu erosão costeira e, numa ocasião, a fábrica de conservas foi literalmente arrasada pelo mar. Por isso, assim que Leixões ofereceu um porto seguro para grandes embarcações e uma infra-estrutura para apoiar a indústria, tornou-se rapidamente o foco das actividades piscatórias e de processamento alimentar.

Podemos afirmar que a indústria da sardinha em Matosinhos é o resultado de políticas urbanas e investimentos infra-estruturais, conjugados com condições naturais pré-existentes, como a geomorfologia da costa e os ecossistemas marinhos sustentados pelo afloramento. Podemos também inferir que por trás do aparecimento desta indústria local estão desenvolvimentos sociais e tecnológicos —como iniciativas políticas e a produção de conservas—, mas o facto é que a biologia das sardinhas do Norte tinha vantagens comerciais intrínsecas. Visto que os ácidos gordos das sardinhas se deterioram relativamente

operating in the port involved the transit of passengers and commodities associated with Porto's urban clustering and its metropolitan industrial activity. Nonetheless, it was not long before fisheries and food processing took hold of a large area of marshland between the ancient nucleus of the village and the peripheral artery of Porto. These empty lowlands, with low real-estate value and abundant water supplies, provided the perfect setting for a quick process of urbanization, on the basis of a somewhat tacit planning programme formalized by Licínio Guimarães in 1896, and then fine-tuned by David Moreira da Silva and Maria José Marques da Silva in 1944⁵. It was within the context of these urban planning guidelines that many canning factories were built, first in the 1900s and then, in greater numbers, in the 1930s.

However, the location of canning factories and the development of the fishing port in Matosinhos was not conducted by the formal planning process. Instead, we argue that environmental factors were paramount. The Portuguese coast is subject to powerful upwelling, a natural phenomenon that brings nutrients from the seabed up to the surface of the water. Upwelling favours the development of pelagic fish, such as sardines: hence their prevalence in the region. From the early industrial revolution onwards, sardines were fished along the sandy shores to the south of Matosinhos using the technique known as *arte xávega*, whereby a purse-seine net is cast into the sea and then dragged directly from the shore. Because no harbour was necessary for the flat-bottomed boats operating *arte xávega*, various informal fishing villages sprang up on the dunes, not too far away from the coastal railway line connecting Porto and Lisbon. One of these locations, Espinho —where the railway tracks almost touch the shore— developed an important canning factory, expanding the existing brine production into a modern food supply. Other sardine industrial centres developed in the south of Portugal, especially in Algarve and Setúbal, near Lisbon. However, upwelling made the sardines fatter and improved the chemical qualities and weight of their northern stocks. Without a harbour, Espinho was plagued by coastal erosion, and on one occasion the canning factory was literally washed away. Hence, once Leixões provided a safe harbour for larger boats and infrastructure to support industry, it soon became the focus of most of the fishing and food processing activities.

One can argue that the sardine industry in Matosinhos is the product of urban policies and infrastructure investments, but they would not

⁵ Este tópico foi desenvolvido num artigo anterior: Diego Inglez de Souza and Ivo Pereira de Oliveira, "Infrastructure, Canning and Architecture: The Case of Matosinhos," SPOOL 8, nº.1 (April 2021), <https://doi.org/10.7480/spool.2021.1.5901>.

⁵ This topic was developed in a previous article: Diego Inglez de Souza and Ivo Pereira de Oliveira, "Infrastructure, Canning and Architecture: The Case of Matosinhos," SPOOL 8, no.1 (April 2021): 99-112, <https://doi.org/10.7480/spool.2021.1.5901>.

› Fig. 1. Fotografia aérea de Matosinhos Sul de 1939 em que se observam fábricas de conserva, a linha do comboio, depósitos de combustível e redes a secar na praia.
 Fig. 1. Aerial photograph of Matosinhos Sul from 1939 showing canning factories, railways, fuel tanks and nets drying on the beach.



rápido, um factor importante que determinava a qualidade do produto final era o tempo que um peixe demorava a ser enlatado depois de ser pescado. Daí que a simples composição química das sardinhas fosse um factor preponderante no desenvolvimento urbano de Matosinhos.

A arquitectura das conservas

A pesca implica uma variedade de estruturas: do porto e das suas instalações —que vão das docas à lota, armazéns e abrigos para barcos— à indústria de processamento alimentar, onde as fábricas de conservas têm um impacto urbano significativo. Em Matosinhos, as fábricas começaram a ser construídas no final do século XIX⁶, e esses edifícios eram semelhantes as outras instalações industriais. Grandes asnas de madeira apoiadas em paredes de alvenaria dispostas segundo esquemas racionais pragmáticos. A qualidade arquitectónica que definia esses edifícios era a sua composição, da organização dos espaços funcionais à distribuição regular de janelas clássicas, aos torreões, aos frontões de entrada e a outros elementos dignificantes.

⁶ Um exemplo é o do projecto para a fábrica Lopes Coelho Dias & Co., localizada entre a Rua Brito Capello e a Rua Roberto Ivens. Câmara Municipal de Matosinhos / Arquivo Histórico (doravante CMM/AH), proc. 31/899, desenho.

suffice if there were not pre-existing natural conditions, resulting both from the geomorphology of the coastline and the marine ecosystems supported by upwelling. We can extrapolate the reasons behind the local industry further into social and technological developments—such as canning and political initiatives—but the simple fact is that the biology of northern sardines had intrinsic commercial advantages. Since sardine fatty acids deteriorate relatively quickly, a major factor determining the quality of the final product was the speed with which the fish would go from the sea to the can. Hence, the simple chemical composition of the sardine was a major factor in Matosinhos's urban development.

Canning architecture

Fisheries imply a variety of structures: from the harbour and its facilities —ranging from docks to auction areas, warehouses, and boat sheds—to the food-processing industry, where canning factories have a significant urban impact. In Matosinhos, factories started to be built from the late nineteenth century⁶, and these built

⁶ A good example would be the 1899 design for the Lopes Coelho Dias & Co. factory, located between Rua Brito Capello and Rua Roberto Ivens. Câmara Municipal de Matosinhos / Arquivo Histórico (henceforth CMM/AH), proc. 31/899, drawing.

Fig. 2. Mais de 50 fábricas de conservas e 40 salgas estiveram a laborar em Matosinhos entre o século XIX e os dias atuais. Hoje as quatro conserveiras ainda ativas produzem volumes equivalentes aos máximos de produção dos anos 1940. Fig. 2. Over 50 canneries and 40 brineries were operating in Matosinhos between the 19th century and our days. The four canneries still in operation today produces as much as more than 50 canneries active in the 1940s.

O espaço que resultava dessa composição era como muitos outros, uma grande oficina onde eram desempenhadas várias funções relacionadas com a conserva de sardinhas.

Para enlatar uma sardinha era necessária uma sequência de etapas depois de o peixe ser pescado e comprado na lota. O peixe tinha de ser transportado até à fábrica, descarregado, lavado e seleccionado, eviscerado e disposto em grelhas, cozinhado e inserido em latas juntamente com outros ingredientes (as latas e os ingredientes também tinham de ser preparados ou cozinhados dentro da fábrica); depois as latas eram fechadas, esterilizadas e embaladas para serem exportadas. Este processo de produção não é visível na arquitectura das primeiras fábricas de conservas de Matosinhos. Em 1948, num discurso realizado no primeiro Congresso de Nacional de Arquitectura, o arquitecto Arménio Losa (1908-1988) descreveu o modo como a arquitectura industrial deveria obedecer ao sequenciamento envolvido na preparação dos seus produtos.⁷ Mais tarde, Losa viria a dirigir o planeamento urbano de Matosinhos, fazendo parte de uma geração de arquitectos modernos que construíram várias fábricas e transformaram a paisagem local. Alinhado com a sua época, Losa defendeu uma arquitectura moderna funcional e lamentou o tempo e a energia perdidos com a arquitectura ineficiente das primeiras fábricas. Na sua opinião, os arquitectos tinham conhecimentos técnicos para melhorarem as instalações laborais e impulsionarem economias estagnadas. O seu manifesto era retroactivo: vários arquitectos da sua geração formados na cidade do Porto —como Januário Godinho (1910-1990), António Varela (1902-1962) e o gabinete de arquitectura Ars⁸— eram muito activos a desenhar instalações completamente novas ou a renovar edifícios existentes em Matosinhos desde o início da década de 1930.

Como seria de esperar da formação de matriz *beaux-arts* desta geração, as fábricas construídas em Matosinhos na década de 1930 eram bem diferentes daquelas que as precederam, caracterizando-se por serem edifícios com cunhais expressivos, formas simplificadas e linhas a sublinhar a força horizontal das fachadas — que reforçavam a sua dinâmica moderna —, motivos subtis de *Art Déco* para realçar a atmosfera urbana e platibandas para ocultar as caleiras e telhados inclinados, criando a ilusão de uma moderna cobertura plana em betão armado. Por trás da

dings were just like other industrial facilities. Large wooden trusses supported on masonry walls arranged according to simple rational schemes. Composition would be their defining architectural quality, from the schematics of the plan to the regular distribution of classical window frames, corner turrets, entrance pediments, and other dignifying elements. The resulting space was like many others, a large shed where the various functions of sardine canning were performed.

Canning a sardine requires a sequence of steps after the fish is caught and sold in the harbour auction. The fish has to be transported to the factory, unloaded, washed and selected, gutted and laid in trays, cooked, and inserted inside the cans along with other ingredients (the cans and ingredients also have to be prepared or cooked inside the factory); then the cans have to be sealed, sterilized, and packed for shipping. This manufacturing procedure is not visible in the architecture of early Matosinhos canning factories. In 1948, speaking in the first congress of Portuguese architects, the architect Arménio Losa (1908–1988) depict how industrial architecture should comply with the sequencing involved in preparing its products⁷. Losa would later direct the urban planning of Matosinhos, and he was part of a generation of modern architects who built various factories and transformed the local landscape. In keeping with his time, Losa advocated a functional modern architecture and decried the time and energy lost to ineffective early modern architecture. In his view, architects had the technical expertise to improve working facilities and boost a stagnant economy. His was a retroactive manifesto: various Porto-trained architects of his generation —such as Januário Godinho (1910-1990), António Varela (1902-1962), and the architectural office Ars⁸— had been very active designing completely new facilities and improving existing buildings in Matosinhos and abroad from the early 1930s on.

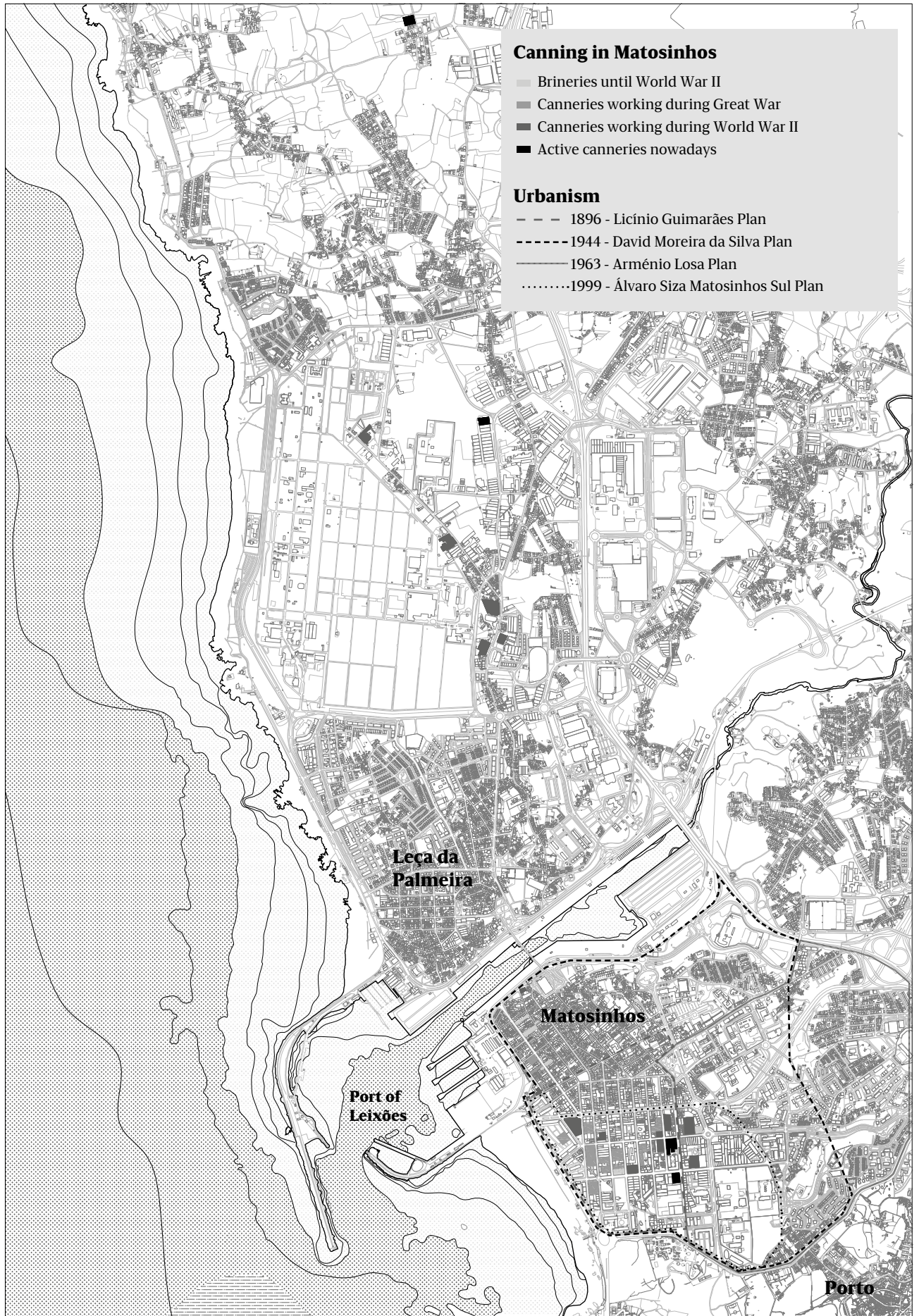
As was to be expected from the *beaux-arts* training of this generation, the Matosinhos 1930s factories looked quite different from their predecessors, featuring streamlined rounded buildings, horizontal lines through the façades —which reinforced their modern dynamic— subtle art-deco motives to punc-

⁷ Arménio Losa, "A arquitectura e as novas fábricas," in 1.º Congresso Nacional de Arquitectura: Relatório da Comissão Executiva, Teses, Conclusões e Votos do Congresso, 127-135 (Lisbon: Sindicato Nacional dos Arquitectos, 1948).

⁸ António Fortunato Cabral (1903-1978), Mário Morais Soares (1908-1975), e Fernando da Cunha Leão (1909-1990). On Ars, see Duarte Morais Soares, "Ars arquitectos" (tese de doutoramento, Porto, Escola Superior Artística do Porto, 2004). See also João Paulo Fialho de Almeida Pereira Delgado, "Uma concepção totalitária: "Ars Arquitectos": cultura, ideologia e tecnologia construtiva na década de 1930 em Portugal" (tese de doutoramento, ISCTE-IUL, 2015), <https://repositorio.iscte-iul.pt/handle/10071/9993>.

⁷ Arménio Losa, "A arquitectura e as novas fábricas," in 1.º Congresso Nacional de Arquitectura: Relatório da Comissão Executiva, Teses, Conclusões e Votos do Congresso, 127-135 (Lisbon: Sindicato Nacional dos Arquitectos, 1948).

⁸ António Fortunato Cabral (1903-1978), Mário Morais Soares (1908-1975), and Fernando da Cunha Leão (1909-1990). On Ars, see Duarte Morais Soares, "Ars arquitectos," (PhD diss, Porto, Escola Superior Artística do Porto, 2004). See also João Paulo Fialho de Almeida Pereira Delgado, "Uma concepção totalitária: "Ars Arquitectos": cultura, ideologia e tecnologia construtiva na década de 1930 em Portugal," (PhD diss., ISCTE-IUL, 2015), <https://repositorio.iscte-iul.pt/handle/10071/9993>.



linguagem renovada, e a despeito da continuidade tecnológica das práticas de construção, as fábricas integravam as suas várias funções num conjunto coerente: os escritórios enfatizavam as esquinas com curvas expressivas, vários edifícios independentes marcavam as diferentes funções internas e formas específicas respondiam a necessidades de produção específicas⁹. A mudança mais relevante nesta geração de construções parece ter sido no fornecimento de energia industrial da década de 1940, com o carvão a ser progressivamente substituído pela electricidade, que tanto era fornecida por centrais privadas como pelo ainda ineficiente serviço eléctrico nacional¹⁰.

A energia eléctrica de Matosinhos tornou-se mais limpa e potente, enquanto a economia estatal introduzida pela ditadura no final da década de 1920 se centrou nas sardinhas como principal produto da pesca exportado pelo país (simultaneamente, o Estado apostou na pesca do bacalhau de longa distância para dar resposta à procura nacional). O apoio político à pesca da sardinha, e a procura que se seguiu pouco depois da Guerra Civil Espanhola e da subsequente Segunda Guerra Mundial, proporcionou muito trabalho a esta jovem geração de arquitectos. Houve um aumento significativo de novas construções, a ponto de, em 1944, a Comissão Portuguesa de Pescarias ter lamentado a forma negligente como as autoridades autorizaram a construção de tantas fábricas de conservas em Matosinhos. Na opinião da Comissão, foi essa abundância de produtores que conduziu à “crise da sardinha” de 1944¹¹.

A “Crise da Sardinha” de 1944

Em Junho de 1944, o Grémio dos Armadores de Pesca da Sardinha enviou uma petição ao governo requerendo medidas activas para proteger a indústria.¹² O relatório resume vários aspectos do negócio e retrata o contexto económico em que as fábricas de conservas estavam a funcionar. Em suma, o negócio dos pescadores era vender sardinhas à indústria das conservas,

⁹ Estas características podem ser identificadas numa das primeiras fábricas construídas, em 1903, pela empresa Brandão Gomes, que incluía um ramal ferroviário exclusivo. CMM/ AH, proc. 13/03.

¹⁰ O Estado só investiu de uma forma consistente na produção de energia —principalmente na hidroeléctrica— depois da Segunda Guerra Mundial: arquitectos como Januário Godinho também tiveram um papel importante na concepção e construção do complexo de produção de energia eléctrica. Ver Fernando Faria, *Eletrificação do concelho de Matosinhos (1928-1950)*, Fundação EDP, 2008. Em Matosinhos, a energia eléctrica era fornecida por empresas privadas desde 1928. Para as fábricas de conservas, a Casebre & Cia. instalou uma central eléctrica em 1928, o Instituto Português de Conservas de Peixe funcionou de 1937 a 1938, a Algarve Exportador instalou geradores em 1940 e a Adão Polónia & Cia., em 1942.

¹¹ A Comissão Portuguesa de Pescarias era um conselho consultivo do governo, que tentou articular e moderar a sobreposição entre as políticas e os interesses da pesca. No caso, fazemos referência às actas da reunião de 15 de Novembro de 1944. DGRM CCP 01-09, 1944-46.

¹² Grémio dos Armadores de Pesca da Sardinha, 4 de Junho de 1944, in DGRM GAPS 05-02, correspondência Supico, 1944-1956.

tuare the urban atmosphere, and high walls to conceal eaves and pitched roofs, creating the illusion of modern concrete flat roofing. Beyond the renovated language, and despite the technological continuity of construction practices, the factories integrated their various functions within a coherent whole: offices emphasizing corners, different volumes for different internal functions, and specific designs responding to specific production needs⁹. The most relevant change in this generation of constructions seems to have been in the 1940s the supply of industrial energy, with coal being progressively replaced by electricity provided by both private companies and the still inefficient national electric service¹⁰.

Matosinhos’s energy became cleaner and stronger while the state-directed economy introduced in the late 1920s by the dictatorship focused on sardines as the country’s main fishing export product (in parallel, the state settled on long-distance cod fishing to meet national demand). The political support for sardine fisheries, and the demand generated soon thereafter by the Spanish Civil War followed by World War II, provided plenty of work for this young generation of architects. There was a significant boom in new construction, to the extent that in 1944 the National Council for Fisheries lamented the lax way in which the authorities had granted permission for so many canning factories to be erected in Matosinhos. In their opinion, it was this abundance of producers that led to the “sardine crisis” of 1944¹¹.

The “sardine crisis” of 1944

In June 1944 the sardine fishermen’s guild addressed a forty-one-page plea to the government advocating active measures to protect the industry.¹² The report summarizes various aspects of the business and depicts the economic context in which the canning facto-

⁹ These characteristics can be identified in an early 1903 factory put up by the Brandão Gomes company, which included a dedicated railway branch service. CMM/ AH, proc. 13/03.

¹⁰ Only after World War II did the state consistently invest in energy production, mainly hydroelectric: architects like Januário Godinho also played a significant role in the construction and design of the electrical production complex. See also Fernando Faria, *Eletrificação do concelho de Matosinhos (1928-1950)*, Fundação EDP, 2008. Private companies were operating with electric power in Matosinhos from 1928 onwards. For the canneries, Casebre & Co. installed a central in 1928, Instituto Português de Conservas de Peixe operated from 1937 to 1938, and Algarve Exportador installed generators in 1940 and Adão Polónia & Co. in 1942.

¹¹ Comissão Portuguesa de Pescarias was a governmental consultancy board that attempted to articulate and moderate the overlapping national fishing policies and interests. The reference here is to the proceedings of the 15 November 1944 meeting. DGRM CCP 01-09, 1944-46.

¹² Grémio dos Armadores de Pesca da Sardinha, 4 June 1944, in DGRM GAPS 05-02, correspondence Supico, 1944-1956.

que era a única forma economicamente viável para o seu trabalho. O peixe não vendido era distribuído localmente para consumo imediato ou preservado com sal, um método antigo que estava a cair em desuso entre os consumidores e produtores¹³. O peixe remanescente era usado como fertilizante agrícola. O problema é que a indústria tinha uma quota fixa tanto de produção diária como de produção anual, e os pescadores eram incapazes de prever as capturas diárias¹⁴. Disso resultava que em tempos de abundância os preços baixavam, dado que a maioria do pescado era descartado, enquanto em tempos de escassez o peixe era vendido de acordo com os preços regulados pela indústria.

A pesca não é uma actividade estável —depende da existência e da localização do peixe. Se olharmos para as estatísticas do número de sardinhas desembarcadas, facilmente compreendemos a crise¹⁵. Enquanto a média de capturas na década de 1930 andava perto das 40 mil toneladas —com excepção dos “anos bons”, como os de 1933 a 1935 e 1938, com uma média de 60 mil toneladas—, em 1941 só houve 26 mil toneladas de peixe capturado, a que se seguiu 85 mil e 88 mil em 1943 e 1944 respectivamente. A crescente procura que conduziu à média de 40 mil toneladas impulsionou o aumento da frota pesqueira, que de 249 barcos em 1939 cresceu para 383 em 1943.

Na Comissão Central de Pescarias, o relatório foi estudado por Alfredo Magalhães Ramalho (1894-1959), um reconhecido oceanógrafo português, que tinha realizado uma extensa investigação sobre as sardinhas¹⁶. Apesar de Ramalho ter mencionado sucintamente que pôde ler no relatório os “sintomas da sobrepesca”¹⁷, ele recapitula o problema em termos económicos: o desequilíbrio na média de capturas resultou em preços abaixo dos custos operacionais, o que significou a diminuição das capturas médias por unidade. Na actual gíria da pesca, CPUE significa

ries were operating. In sum, the business of fishermen was to sell sardines to the canning industry, which was their only economically viable form of labour. Unsold fish were distributed for immediate local consumption or preserved in brine, an old-fashioned method that was being abandoned by both consumers and producers.¹³ The remaining fish were discarded as agriculture fertilizer. The problem was that industry had a fixed share of both daily production and annual output,¹⁴ and fishermen were not capable of predicting daily catches. The result was that in times of abundance prices went down, as most of the catch would be discarded, whereas when scarcity prevailed, fish were sold according to the industry-regulated prices.

Fishing is not a stable activity —it depends on the existence and location of fish. Looking at the statistics of sardine landings, it is easy to understand the crisis.¹⁵ Whereas the 1930s average of catches was close to 40,000 tons, excepting “good years” like 1933-35 and 1938, which averaged 60,000 tons, in 1941 there were only 26,000 tons of catches, followed by 85,000 and 88,000 in 1943 and 1944 respectively. The growing demand that led to the 40,000-ton average propelled the growth of the fishing fleet, from 249 boats in 1939 to 383 in 1943.

Within the fisheries advisory board, the report was studied by Alfredo Magalhães Ramalho (1894-1959), a renowned Portuguese oceanographer who had conducted extensive research on sardines.¹⁶ Although Ramalho briefly mentions that he can read in the report the “symptoms of overfishing”¹⁷, he recapitulates the problem in economic terms: the imbalance of average catches resulted in prices that were below operational costs, meaning the decrease of average catches per unit. In today’s fisheries lingo, CPUE means Catch-Per-Unit-Effort and relates the average cost and effort associated with the average income of a target species, an indirect method of assessing the overexploitation of resources.

· 13

Preço médio da indústria em escudos: 3\$10 a 3\$60; preço máximo de consumo: 2\$50. Os pescadores apreciavam o sector da salmoura porque o peixe processado era menos sensível ao tempo, podendo, por isso, absorver o peixe capturado em excesso que não era aproveitado pela indústria das conservas e pelos consumidores directos.

· 14

O peixe enlatado era principalmente exportado, com quotas estabelecidas no início de cada época de pesca.

· 15

Aqui centramo-nos nos números do Norte de Portugal. Ver Hugo Mendes e Maria de Fátima Borges, «A Sardinha no Século XX: Capturas e Esforço de Pesca», in *Relatórios Científicos e Técnicos*, n.º 32, IPIMAR, edição online, 2006.

· 16

Alfredo Sobral Mendes de Magalhães Ramalho, “Crise da pesca da sardinha,” anexo a *Boletim da Pesca*, n.º 5 (1947). Sobre a sua investigação anterior, ver Alfredo Sobral Mendes de Magalhães Ramalho, *A Sardinha em Portugal: Notas Biológicas* (Lisboa: Imprensa da Armada, 1927); Alfredo Sobral Mendes de Magalhães Ramalho, “Contribution à l’étude des races de la Sardine (Sardina pilchardus Walb.) au Portugal, à Madeira et aux Açores”, anexo a *Conseil Permanent International pour l’Exploration de la Mer* (1929).

· 17

No ano anterior, Ramalho tinha traduzido *Some Theoretical Considerations on the “Overfishing” Problem*, obra de Edward Russell (1887-1954) originalmente publicada em 1931: Edward Russell, *O problema da sobrepesca*, trad. A. M. de Ramalho, Estação de Biologia Marítima, Lisboa, 1943.

· 13

Average industry prices in Portuguese escudos: 3\$10 to 3\$60; maximum consumption price: 2\$50. Fishermen appreciated the brine sector because processed fish was less time-sensitive, and it could thus absorb the extra catches that neither canning nor direct consumers were able to cope with.

· 14

Canned fish was mainly for export, with quotas established at the beginning of each fishing season.

· 15

Here we focus on the numbers in Portugal’s northern region. See Mendes and Borges, 2006

· 16

Alfredo Sobral Mendes de Magalhães Ramalho, “Crise da pesca da sardinha,” anexo a *Boletim da Pesca*, n.º 5 (1947). On his previous research, see Alfredo Sobral Mendes de Magalhães Ramalho, *A Sardinha em Portugal: Notas Biológicas* (Lisboa: Imprensa da Armada, 1927); Alfredo Sobral Mendes de Magalhães Ramalho, “Contribution à l’étude des races de la Sardine (Sardina pilchardus Walb.) au Portugal, à Madeira et aux Açores”, anexo a *Conseil Permanent International pour l’Exploration de la Mer* (1929).

· 17

In the previous year, Ramalho had translated Edward Russell’s (1887-1954) work *Some Theoretical Considerations on the “Overfishing” Problem*, originally published in 1931.

› Fig. 3. Anúncio publicado em 1940 na Revista *Conservas de Peixe*, editada pelo Instituto Português de Conservas de Peixe.
Fig. 3. Advertisement published in 1940 in the *Conservas de Peixe Magazine*, edited by the Portuguese Institute for Canned Fish.

Catch per Unit Effort (Esforço de Captura por Unidade) e está relacionado com o custo e o esforço médio associado ao rendimento médio de uma espécie alvo, um método indirecto de avaliar a sobreexploração de recursos.

Nem os pescadores nem o governo consideraram que a sobrepesca fosse a razão para a “crise da sardinha” de 1944. O comentário sucinto de Ramalho estava de acordo com a recomendação do grémio de que um período de defeso sazonal fosse aplicado. Ao longo da costa portuguesa, as sardinhas têm um alto teor de gordura e óleo de Maio a Outubro. Passado esse período, desovam e perdem a maioria das suas qualidades nutricionais¹⁸. Os períodos de defeso foram introduzidos pelo governo em 1948¹⁹, e acabaram por ser úteis para proteger a desova das sardinhas e garantir capturas de 50 a 60 mil toneladas até ao final da década de 1950²⁰. Em retrospectiva, a despeito dos interesses específicos dos pescadores, da indústria e do governo na análise sobre a «crise da sardinha», e apesar de termos de limitar a nossa avaliação ao factor indirecto CPUE fornecido pelo relatório do grémio, podemos determinar a existência de sobrepesca como resultado dos processos de urbanização em Matosinhos na década de 1930.

O exemplo Pinhais

O relatório do grémio oferece-nos um retrato vivo da pressão ecológica exercida pela arquitectura moderna na biomassa de sardinhas ao longo da costa portuguesa. Não obstante o facto de em 1944 todos terem concordado que a relação dinâmica entre a indústria das conservas, os recursos naturais e o trabalho dos pescadores não era equilibrada, isso não impediu a construção de mais instalações industriais. Em 1945, o município de Matosinhos aprovou um projecto de ampliação significativa da fábrica Pinhais²¹. Dois novos edifícios quase duplicaram a área de produção existente e incluíram novas cantinas, armazéns,

Neither fishermen nor the government considered overfishing to be the reason for the 1944 “sardine crisis”. Magalhães’s brief commentary was in line with the guild’s recommendation that a seasonal defensive period be enforced. In fact, along the Portuguese shore, sardines have high rates of fat and oil from May until October, after which they spawn and lose most of their nutritional qualities¹⁸. Defensive periods were introduced by the government in 1948¹⁹, and these were ultimately useful in protecting the spawning of sardines and guaranteeing catches of between 50 and 60,000 tons until the late 1950s²⁰. Despite the specific interests of fishermen, industry, and government in the analysis of the “sardine crisis”, in retrospect, although we need to limit our assessment to the indirect CPUE factor provided by the guild’s report, we can determine the existence of overfishing as the result of the urbanization processes in Matosinhos in the 1930s.

The Pinhais example

The guild report provides us with a vivid picture of the ecological pressure exerted by modern architecture on sardine biomass along the Portuguese coast. Despite the fact that in 1944 everyone agreed that the dynamic relationship between the canning industry, natural resources, and the work of fishermen was out of balance, this did not impede the ongoing construction of new industrial facilities. In 1945, the Matosinhos municipality approved a significant extension to the Pinhais factory²¹. Two new volumes almost doubled the existing production area and included new canteens, warehouses, kitchens, packing areas, administration areas, etc. Statistical data from the period 1944 to 1946 reveals that there were forty-seven active canneries in Matosinhos²²,

· 18
Esta qualidade sazonal da captura tinha já sido reconhecida em publicações portuguesas na década de 1940. Ver Lucília de Lima Brito, “A química ao serviço da indústria de Conservas de Peixe,” *Revista Conservas de Peixe* 1 (1946): 7-8.

· 19
O período de defeso foi aprovado pelo governo em 26 de Novembro de 1948. Inicialmente, compreendia o período entre 15 de Janeiro e 15 de Abril, durante o qual os pescadores tinham de parar por duas semanas e trabalhar não mais do que sessenta ou noventa dias, dependendo do tamanho e da capacidade dos barcos. Em 1951, o período de defeso foi aumentado e adoptado pelos pescadores em diferentes períodos do ano segundo as suas regiões. Os conselhos governamentais tinham dúvidas, porque o período de defeso não era tão conveniente para a indústria das conservas como era para os pescadores. Sobre esta questão, ver o relatório de José Supico, «Pesca da Sardinha: Paragem Anual Obrigatória», 30 de Junho de 1953, DGRM GAPS 05-02, correspondência Supico, 1944-56.

· 20
Depois desse período, as capturas aumentaram, atingindo 90 a 100 mil toneladas durante a década de 1960, antes de caírem para 40 mil entre as décadas de 1970 e 1990. Presentemente, estão à beira do colapso.

· 21
Projecto para Ampliação e Remodelação da Fábrica de Conservas Pinhais & Cia. Lda., Avenida Meneres, 700, Matosinhos, 22 de Outubro de 1945, Augusto Carvalho, aprovado em 5 de Novembro de 1945.

· 18
This seasonal quality of the catches was already acknowledged in Portuguese publications of the 1940s. See Lucília de Lima Brito, “A química ao serviço da indústria de Conservas de Peixe,” *Revista Conservas de Peixe* 1 (1946): 7-8.

· 19
The defensive period was approved by the government on 26 November 1948. Initially it comprised the period between 15 January and 15 April, during which time fishermen had to stop for two weeks and work no more than sixty or ninety days depending on the size and capacity of the boats. In 1951 the defensive period was extended and adopted by fishermen at different times of year according to their regions. The government boards were sceptical because the defensive period was not as convenient for the canning industry as it was for fisherman. On the discussion, see the report by José Supico, “Pesca da Sardinha: Paragem Anual Obrigatória,” 30 June 1953, DGRM GAPS 05-02, correspondence Supico, 1944-56.

· 20
After this time, catches increased from 90,000 up to 100,000 tons during the 1960s, before dropping back to 40,000 tons between the 1970s and 1990s: currently they are on the verge of collapse.

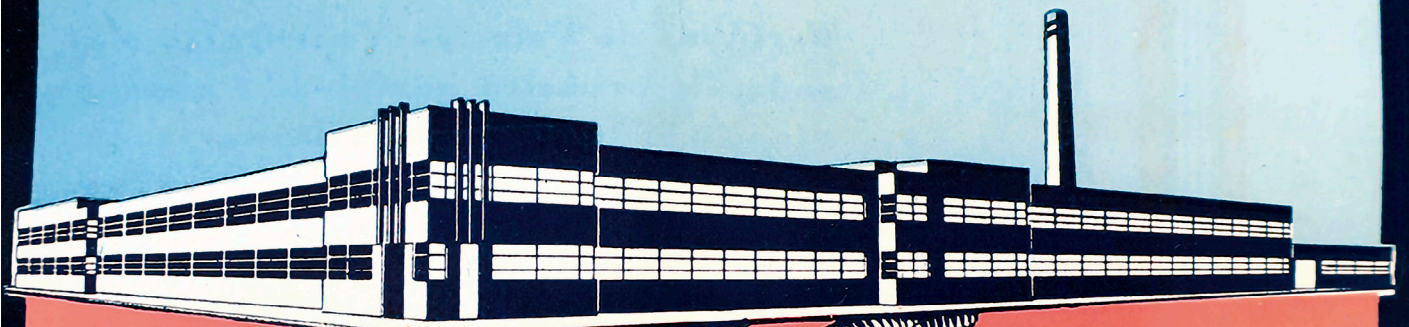
· 21
Projecto para Ampliação e Remodelação da Fábrica de Conservas Pinhais & Cia. Lda., Avenida Meneres, 700, Matosinhos, 22 October 1945, Augusto Carvalho, approved 5 November 1945. CMM/AH, proc.09/23.

ACTIVA

FABRICA DE CONSERVAS J. SERRANO JUNIOR

MARCAS = ACTIVA — BORITH — LALITA — LEIXÕES — TULLIA — BAYADERA

AVENIDA MENÉRES, 314 - RUA MOUSINHO DE ALBUQUERQUE, 307
MATOZINHOS (Portugal)



IMPÕE-SE PELA
QUALIDADE
DO SEU FABRICO

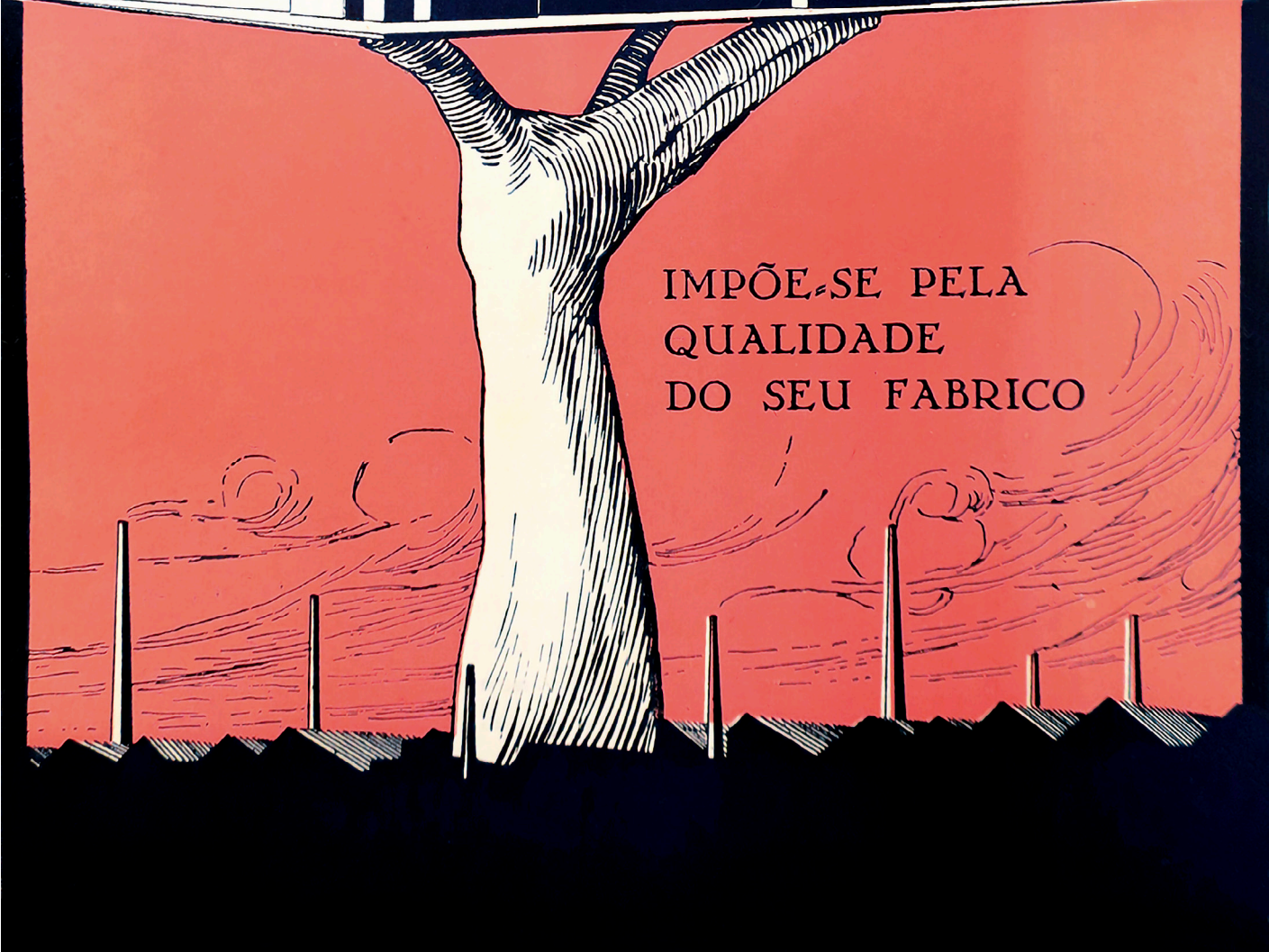


Fig. 4. Fábrica de Conservas Activa, construída nos anos 1930 no gaveto das Avenida Menéres com a rua Mousinho de Albuquerque, em Matosinhos.

Fig. 4. Activa Cannery, built in the 1930s in the corner of Avenida Menéres and Rua Mousinho de Albuquerque, in Matosinhos.



cozinhas, áreas de embalagem, áreas administrativas etc. Dados estatísticos do período entre 1944 e 1946 mostram que havia quarenta e sete fábricas de conservas activas em Matosinhos²², com uma redução da produção de 823 mil caixas em 1944 para 625 mil caixas em 1946. Apesar das pequenas variações anuais, a Adão Polónia, a Algarve Exportadora e a Manuel Pereira Júnior eram as maiores fábricas de conservas²³, cada uma delas representando entre 4,3 e 5 por cento do total da produção. Pese embora a diminuição da produção em 24 por cento durante esses três anos e o surgimento de dez produtores nesse mesmo período, em 1946 os três principais produtores continuaram a representar 10 por cento da produção total, aos quais se juntaram mais três grandes produtores, que entre si cobriam quase 12 por cento da produção: por outras palavras, seis dos quarenta e sete produtores correspondiam a 20 por cento da produção. A produção da Pinhais representava entre 2,79 e 2,99 por cento do total e aparecia na lista de maiores produtores algures entre a décima segunda e a nona posição.

Entre 1944 e 1946, a Pinhais produziu cerca de 22 mil caixas de sardinhas enlatadas por ano²⁴. Por enquanto, não temos informação de quanto valia uma caixa em 1944 ou de quantas latas cabiam dentro de uma caixa. Não obstante, temos acesso

with production dropping from 823,000 boxes in 1944 to 625,000 in 1946. Despite the minor annual variations, Adão Polónia, Algarve Exportadora, and Manuel Pereira Júnior were the larger canneries²³, each representing between 4.3 and 5 per cent of the total production. Although the total decreased by 24 per cent over these three years, with ten more producers in total, in 1946 the top three producers continued to represent 10 per cent of total production and were joined by three more large producers, who between them covered almost 12 per cent: in other words, six of the forty-seven producers accounted for 20 per cent of the production. Pinhais production represented between 2.79 and 2.99 per cent of the total and featured in the ranking somewhere between the twelfth and ninth producers.

Between 1944 and 1946 Pinhais produced about 22,000 boxes of canned sardines per year²⁴. So far, we do not have information about how much a box was worth in 1944 or how many cans would fit inside the box. Nonetheless, we do have contemporary figures, and we do know that in 2020 Pinhais is producing an average of 20,000 cans per day²⁵. Depending on the size of the sardines, each

²² Arquivo «Produção individual de conservas de peixe nos anos de 1944, 1945 e 1946 e respectivas capacidades de produção», in DGRM IPCP (Instituto Português de Conservas de Peixe) 08 25-02 Estatísticas Diversas, 1934-1981.

²³ Apesar de estar estatisticamente atribuída a Matosinhos, a fábrica Manuel Pereira Júnior estava localizada na Afurada, na foz do rio Douro. O seu arquitecto foi António Varela, que tinha sido o autor da grande fábrica Algarve Exportadora em Matosinhos.

²⁴ A Pinhais produziu 22 988 caixas em 1944, 22 620 em 1945 e 17 836 em 1946. DGRM IPCP 08 25-02 Estatísticas Diversas, 1934-1981.

²² File "Produção individual de conservas de peixe nos anos de 1944, 1945 e 1946 e respectivas capacidades de produção", in DGRM IPCP (Instituto Português de Conservas de Peixe) 08 25-02 Estatísticas Diversas, 1934-81.

²³ Although statistically assigned to Matosinhos, the Manuel Pereira Júnior factory was located in Afurada, at the mouth of the River Douro. Its architect was António Varela, who had authored the larger Algarve Exportadora in Matosinhos.

²⁴ Pinhais produced 22,988 boxes in 1944, 22,620 in 1945, and 17,836 in 1946. DGRM IPCP 08 25-02 Estatísticas Diversas, 1934-81.

a números actuais e sabemos que em 2020 a Pinhais produziu em média 20 mil latas por dia²⁵. Dependendo do tamanho das sardinhas, cada lata pode conter três a cinco peixes. Portanto, a fábrica, que continua a funcionar de uma maneira não muito diferente da maneira como funcionava em 1944 —que se orienta para o mercado *gourmet* e produz segundo métodos tradicionais—, processa cerca de 60 a 100 mil sardinhas por dia. Essa quantidade não anda longe da estimativa de um cardume de sardinhas de tamanho médio²⁶, apesar de as medições científicas usarem diferentes métodos para calcular a biomassa da unidade populacional por região²⁷. Um cardume de sardinhas cabe aproximadamente numa grande rede de cerco, a técnica mais comum de pesca da sardinha. Uma rede de cerco tem um perímetro de cerca de 900 metros, atingindo uma profundidade de 90 metros, e é lançada por uma traineira com a ajuda de um barco de menores dimensões, a chalandra. Portanto, apesar destes números e relações ainda serem provisórios, existe de algum modo uma relação de correspondência entre o tamanho de um cardume de sardinhas na costa portuguesa e as dimensões de uma fábrica que processa, aproximadamente, um cardume de sardinhas por dia. É claro que as dimensões da fábrica eram determinadas pelo tamanho do terreno, que nada tinha que ver com nenhum tipo de considerações sobre o tamanho de um cardume, mas a relação proporcional entre a fábrica e o cardume é intrigante.

Considerações finais

Este texto não oferece conclusões nem resultados definitivos. Em vez disso, visa salientar a possibilidade de ler a arquitectura e o urbanismo a partir da sua relação com vários níveis de dados biológicos. Ao fazê-lo, podemos identificar as relações

can host three to five specimens. Hence, the factory, which is still operating pretty much as it did in 1944 —it is a gourmet oddity cashing in on hand production and traditional methods—processes about 60–100,000 sardines per day. That quantity is not far from an estimate of a medium-size²⁶ sardine school, although scientific measurements are made using different methods for calculating stock biomass per region²⁷. A sardine school fits approximately into a large purse seine net, the most common sardine fishing technique. A purse seine has a perimeter of about 900 metres, reaching as deep as 90 metres, and it is launched by a seiner with the assistance of a smaller boat. Hence, despite these numbers and relations still being provisional, there is somehow a matching relationship between the size of a sardine school off the Portuguese shore and the dimensions of a factory designed to process approximately one entire sardine school per day. Of course, the factory dimensions were determined by the plot size, which had nothing to do with any considerations about the size of a school, but the proportional relationship between the factory and the school is intriguing.

Final remarks

This paper does not provide any definitive conclusions. Instead, it aims to highlight the possibility of reading architecture and urbanism in relation to various levels of biological data. In doing so, we can trace the connections between building practices and marine biology and build a more informed assessment of architecture's socio-ecological impact. The "sardine crisis" in Matosinhos is just one example of how, in specific moments,

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Apesar das semelhanças na produção, actualmente existe uma relação muito menos directa entre a captura e a fábrica, dado que os peixes processados provêm de descargas feitas em lugares tão longínquos como França e Marrocos, ou mesmo mais longe.

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Juan Zwolinski et al., "Diel variation in the vertical distribution and schooling behaviour of sardine (*Sardina pilchardus*) off Portugal", *ICES Journal of Marine Science* 64, n.º. 5 (Julho 2007); Ole Arve Misund et al., "Schooling behaviour of sardine *Sardinops sagax* in False Bay, South Africa", *African Journal of Marine Science* 25, n.º. 1 (Janeiro 2010).

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Segundo pesquisas oceanográficas em *Diel variation*, os cardumes da costa do Norte de Portugal ocupavam, durante o dia, áreas que chegavam aos 1.441 metros quadrados. Se cruzarmos essa informação com a contagem da média de sardinhas por metro quadrado em *Schooling behavior* —ainda que nos estejamos a referir a uma diferente espécie de sardinha—, podemos estimar que o tamanho máximo de um cardume de sardinhas na costa do Norte de Portugal no início da primeira década de 2000 era de 150 mil unidades. O tamanho e o peso dos cardumes de sardinhas varia ao longo do ano e até do dia para a noite, e mesmo as suas extremidades são difusas e dispersas. Também existem grandes variações com base nas espécies e nas regiões — por exemplo, ao largo da costa da África do Sul há um fenómeno anual de ajuntamento de sardinhas chamado "corrida às sardinhas", podendo os cardumes ocupar áreas tão grandes como 7 por 2 quilómetros, apesar de ser a maior migração de peixes do planeta.

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Despite the production similarities, there is a much less direct relationship today between catches and factory, as the fish being processed come from landings as far away as France and Morocco, if not further afield.

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Juan Zwolinski et al., "Diel variation in the vertical distribution and schooling behaviour of sardine (*Sardina pilchardus*) off Portugal", *ICES Journal of Marine Science* 64, no. 5 (July 2007); Ole Arve Misund et al., "Schooling behaviour of sardine *Sardinops sagax* in False Bay, South Africa", *African Journal of Marine Science* 25, no. 1 (January 2010).

· 27

According to oceanographic surveys in *Diel variation*, northern Portuguese schools (*Sardina pilchardus*) occupied, in the daytime, areas of up to 1,441 square metres. If we cross this information with average sardine counts per square metre in *Schooling behavior*—even though we are referring to a different sardine species—we can estimate that the maximum size of a northern Portuguese sardine school in the early 2000s was 150,000 units. The size and weight of sardine schools vary over the course of the year and even from day to night, and their outer edges are diffuse and dispersed. There are also large variations based on species and region—for instance, off the South African coast there is an annual phenomenon of sardine gathering called the "sardine run", where schools can occupy areas as large as 7 by 2 kilometres, although this is the planet's largest fish migration.

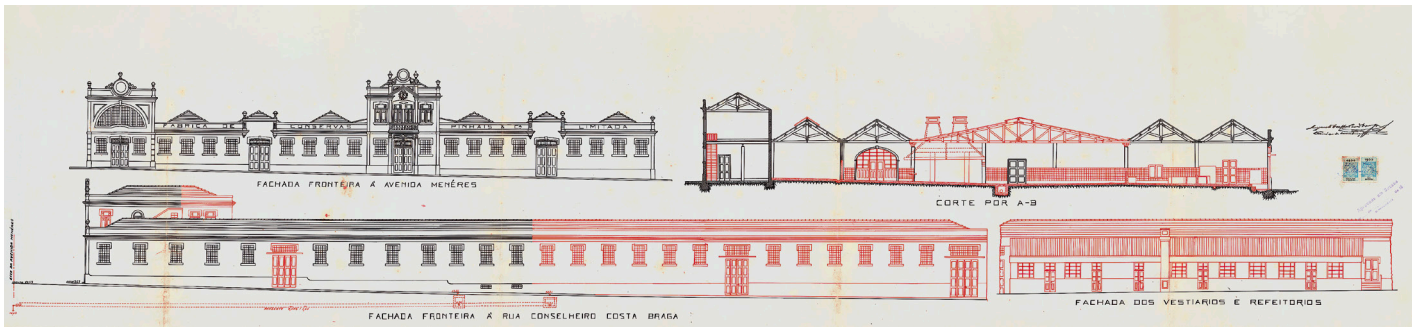


Fig. 5. Projeto de ampliação da Fábrica de Conservas Pinhais em 1945.
Fig. 5. Project for the expansion of the Pinhais Conserves Factory in 1945.

entre práticas de construção e biologia marinha e elaborar uma análise mais informada sobre o impacto socioecológico da arquitectura. A “crise da sardinha” em Matosinhos é apenas um exemplo de como, em momentos específicos, a economia e a sociologia se centraram em dados existentes, ao mesmo tempo que negligenciaram os contextos ecológicos que causaram um desequilíbrio da produção. Existem três explicações correntes que o nosso método pretende pôr em causa.

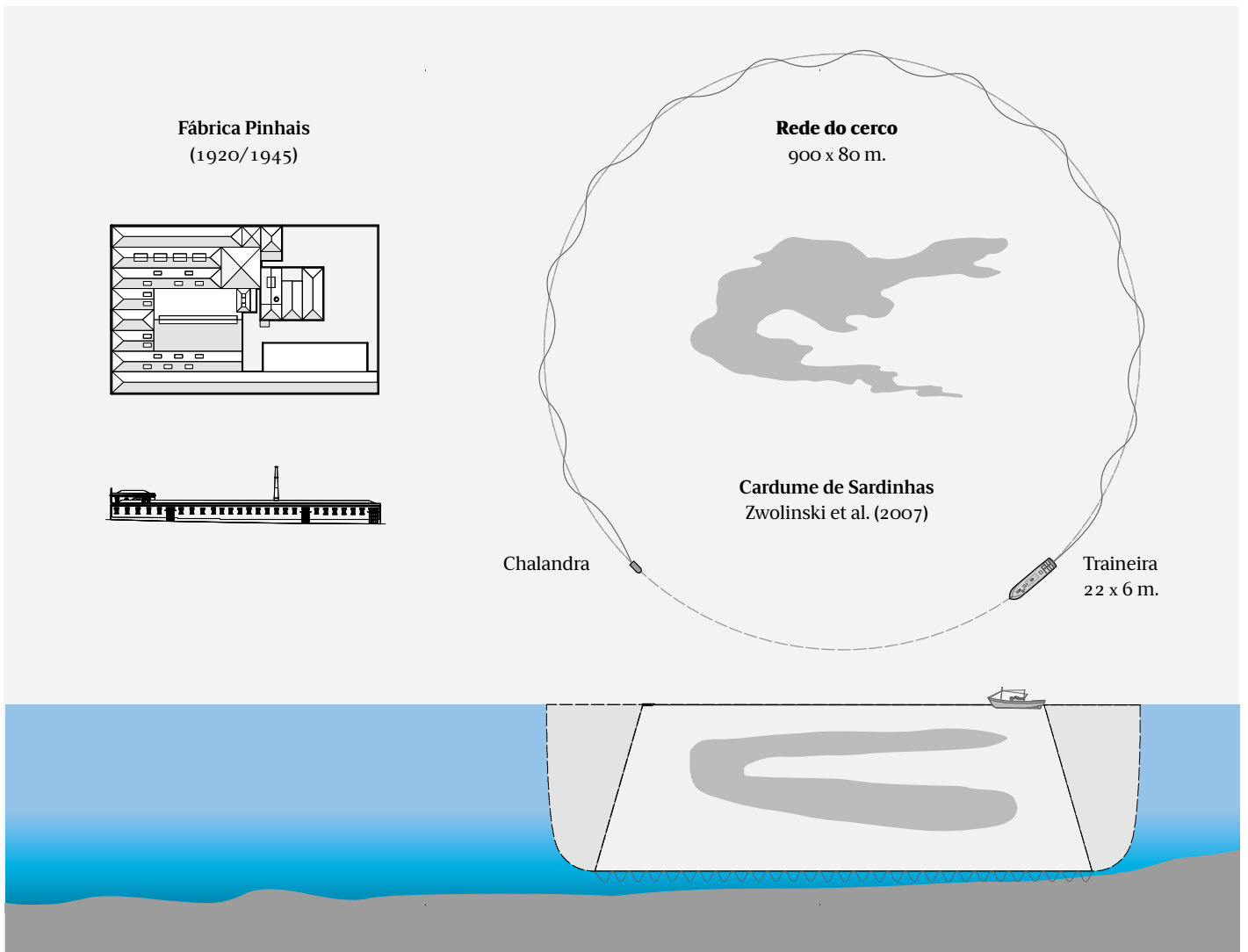
A primeira hipótese é que o crescimento da indústria de conservas de sardinha se ficou a dever à economia de guerra e foi fomentado por desenvolvimentos tecnológicos relacionados com o porto de Matosinhos. Se a economia de guerra e o apoio político foram fundamentais para o florescimento da indústria em Matosinhos, também é evidente que esse crescimento só foi possível por causa das condições ambientais decorrentes do afloramento na costa do Norte de Portugal. Reconhecer a sobrepesca do final da década de 1930 e do princípio da década de 1940 significa que, em vez de ajudar a fomentar a economia local e a expansão industrial, a pressão ecológica sobre os recursos haliéuticos produzidos pela economia de guerra fez com que a indústria de conservas de sardinha ficasse à beira do colapso. Isso foi evitado, mas a produção arquitectónica sofreu um retrocesso e cada vez menos fábricas foram construídas no pós-guerra. Essa diminuição na pressão de construção resultou das limitações ecológicas das populações de sardinha e não da falta de apoio político ou de procura do produto.

A segunda hipótese é que a dimensão das unidades de processamento de peixe está relacionada com factores económicos e ajustada à força de trabalho, ao investimento e à procura do produto. Se esses factores fazem verdadeiramente parte da lógica da tomada de decisões, da concepção e das práticas de construção, eles ocultam a existência de uma relação proporcional entre as conservas produzidas numa unidade de produção e as pressões ecológicas associadas a essa produção. Há uma relação mais ou menos directa entre as dimensões de um cardume e o tamanho de uma fábrica. Em meados do século xx, as limitações de produção exigiam que houvesse uma proximidade física entre o cardume e a fábrica—entre ecossistemas marinhos e os seus equivalentes arquitectónicos. Contudo, o desenvolvimento de técnicas de “ultracongelamento” no

economics and sociology focused on existing data, while neglecting the ecological contexts that were causing an imbalance in production. There are three standard explanations that our method aims to challenge.

The first assumption is that the growth of sardine canning was due to the economics of war and was fostered by technological developments in relation to Matosinhos harbour. If the war economy and political support were key to enabling the industry to flourish in Matosinhos, it is also evident that its growth was only possible because of the environmental conditions of northern upwelling. Recognizing the overfishing that happened in the late 1930s and early 1940s means that instead of helping foster the local economy and industrial expansion, the ecological pressure on fish stocks produced by the war economy brought the sardine canning industry to the verge of collapse. This was avoided, but architectural production receded and fewer and fewer factories were built in the post-war period. This diminution in urban pressure resulted from the ecological limitations of sardine stocks, not from a lack of political support or product demand.

The second assertion is that the size and dimensions of fish processing units are related to economic factors and calibrated to the workforce, investment, and product demand. If such factors are indeed part of the rationale of decision-making, design, and building practices, they conceal the existence of a proportional relationship between the canned output of a production unit and its related ecological pressure. There is a more or less appropriate relationship between the size of a fish school and the size of a canning factory. Up to the middle of the twentieth century, production limitations required there to be physical proximity between the school and the factory—between marine ecosystems and their architectural counterparts. However, the development of “super-freezing” techniques in the post-war period allowed the factory to disconnect from its supply of marine resources. Nonetheless, the proportional relationship between the size of the factory and the ecological pressure it exerted remained—this ultimately has more impact than the econo-



> Fig. 6. Comparação das dimensões de um cardume de sardinhas, a Fábrica de Conservas Pinhais e uma rede do cerco operada por uma traineira e uma chalandra.
 Fig. 6. Comparison of the dimensions of a sardine school, the Pinhais Cannery and a purse seine net operated by a seiner and a smaller boat.

pós-guerra permitiram que a fábrica se desconectasse das fontes locais de recursos marinhos que a abasteciam. No entanto, a relação proporcional entre o tamanho da fábrica e a pressão ecológica que esta exercia manteve-se—isso acabou por ter mais impacto do que os contextos económico e financeiro normalmente analisados. As metodologias para avaliar essas relações requerem ajustes.

A terceira e última hipótese é a de que o equipamento e as tecnologias de pesca têm uma importância fundamental na determinação ecológica dos recursos haliéuticos. A “crise da sardinha” de 1944 demonstra que—mais importante do que o aperfeiçoamento das técnicas de pesca, da arte xávega à pesca do cerco—o aumento dos volumes de captura decorreu do aumento antecipado da procura, que resultou na construção de mais fábricas de conservas. O planeamento urbano olhou de modo abstracto para as qualidades ambientais e para os recursos naturais que fomentaram o crescimento das fábricas de conservas em Matosinhos. A subavaliação da pressão ecológica dos processos urbanos acabou por levar à “crise da sardinha” e à estagnação do crescimento

mic or financial contexts that are usually considered in analyses. The methodologies for assessing such relationships require further improvement.

The third and final assumption is that fishing equipment and technologies are of paramount importance in determining the ecological pressure upon fish stocks. The “sardine crisis” of 1944 demonstrates that—more important than the progressive upscaling of fishing techniques, from xávega to purse-seining—the increase in catch volumes was predicated on an anticipated growth in demand, with more canneries being built as a result. Urban planning looked in abstract terms at the environmental qualities and natural resources that fostered the growth of the Matosinhos canneries. The undervaluation of the ecological pressure of urban processes ultimately led to the “sardine crisis” and the stalling of expected industrial growth. Although fishing equipment was improved, the CPUE increased, and fish prices and the relationship between catch and demand went out of

industrial esperado. Apesar de o equipamento de pesca ter sido melhorado, o CPUE aumentou e houve um desfasamento entre o preço do peixe e a relação entre o acesso aos recursos naturais e a procura, provocando a desordem na indústria. O desequilíbrio na situação não se deveu apenas a mudanças nas técnicas de pesca, mas também às expectativas económicas de receita causadas pela expansão da indústria. Nesta equação complicada, a ecologia foi ignorada, ainda que tenha tido um papel fundamental na frustração das expectativas económicas que acompanharam a introdução de novas técnicas de processamento de alimentos. O equipamento de pesca era simplesmente o elemento que ligava as técnicas de processamento de alimentos e os recursos marinhos—não foi a causa nem o efeito da sobrepesca.

Estas três hipóteses lançam uma nova luz sobre o processo de avaliação da transformação urbana de Matosinhos e permitem-nos considerar o papel da arquitectura como elemento de pressão sobre os ambientes marinhos. Por conseguinte, a arquitectura dos peixes poderá ajudar-nos a desenvolver ferramentas úteis para abordarmos as implicações ecológicas da arquitectura e avaliarmos a relação entre as práticas de construção em terra e os recursos marinhos.

Procedencia de las imágenes

Fig. 1. Arquivo Municipal do Porto-Casa do Infante
Fig. 2. Fishing Architecture
Fig. 3. Biblioteca Municipal de Coimbra
Fig. 4. PT-CPF-ALV-028969-Fundo Alvão/
Centro Português de Fotografia
Fig. 5. Arquivo Histórico Municipal da Câmara de Matosinhos
Fig. 6. Fishing Architecture

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kilter, causing the industry to fall into disarray. The unbalanced situation was not only due to changes in fishing techniques but was also related to social expectations of revenue propelled by the growth of industrial construction. In this complicated equation, ecology was neglected, yet it played a key role in thwarting the economic expectations that accompanied the introduction of new food processing techniques. The fishing equipment was merely the connective element between food-processing techniques and the marine resources—it was neither the cause nor the effect of overfishing.

These three hypotheses shine new light on the process of assessing the urban transformation of Matosinhos and allow us to consider the role of architecture as an element of pressure upon marine environments. Hence, Fishing Architecture might allow us to develop useful tools for addressing the ecological implications of architecture and assessing the complex relationship between inland building practices and marine resources.

Source of illustrations

Fig. 1. Municipal Archive of Oporto-Casa do Infante
Fig. 2. Fishing Architecture
Fig. 3. Coimbra Municipal Library
Fig. 4. PT-CPF-ALV-028969 - Alvão Collection/
Portuguese Photography Centre
Fig. 5. Matosinhos Municipality Historical Archive
Fig. 6. Fishing Architecture

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Lo construido: ¿Siempre hay que hacer? Acción con lo extraordinario vs. Percepción de lo genérico What is already built: Must we always add more? Actions with the extraordinary vs. perceptions of what is generic

José Manuel López Ujaque
Iván Capdevila Castellanos

Resumen

Cualquier proyecto que trabaja sobre preexistencias construidas conlleva un acto de diseño que, como toda obra, se puede afrontar de maneras muy diversas. Por lo general, la historia de la intervención arquitectónica nos ha encaminado a entenderlo como un proceso de puesta en valor de lo extraordinario y casi siempre tendente hacia un hacer intelectual y material mayúsculo. A través de varios casos de estudio, asociados principalmente a dos exposiciones comisariadas por OMA y por el pabellón alemán en sendas Bienales de Arquitectura de Venecia (2010 y 2012), el artículo plantea abrir preguntas sobre una alternativa de hacer sobre lo preexistente: ¿Se puede entender también ese hacer desde un punto de vista contemplativo? ¿Se puede reconocer valor también en lo genérico y no solo en lo extraordinario?

Palabras clave: preexistencias, reducir, lo genérico, acción vs. percepción, preservación, intervención

Abstract

Any project that works on pre-existing buildings involves an act of design that, like any other work, can be approached in very different ways. Generally, the history of architectural intervention has led us to understand it as a process of enhancement of the extraordinary and almost always leading to a major intellectual and material effort. Through several case studies, mainly associated with two exhibitions curated by OMA and the German pavilion at the Venice Biennale of Architecture (2010 and 2012), this article raises questions regarding an alternative way of dealing with the pre-existing: can such a process also be understood from a contemplative point of view? Is it also possible to recognize value in the generic and in the extraordinary?

Keywords: pre-existing architecture, reducing, generic, action VS. perception, preservation, intervention

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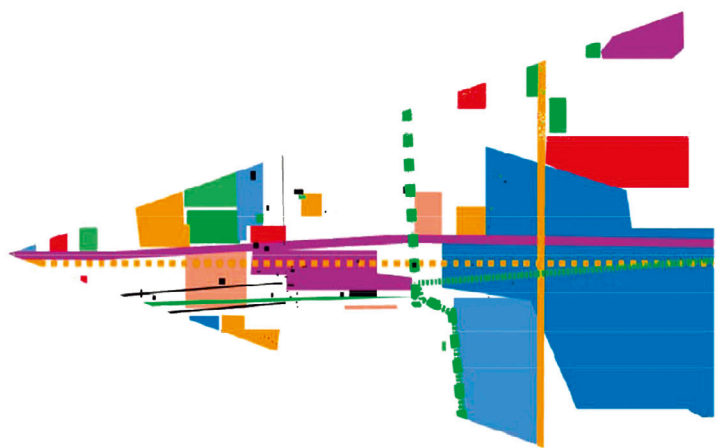
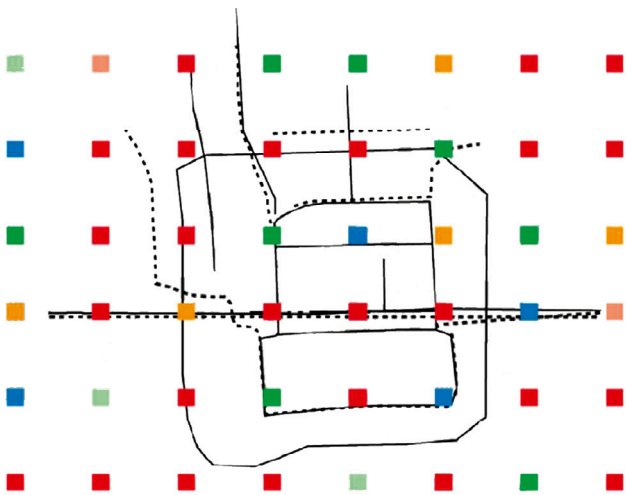
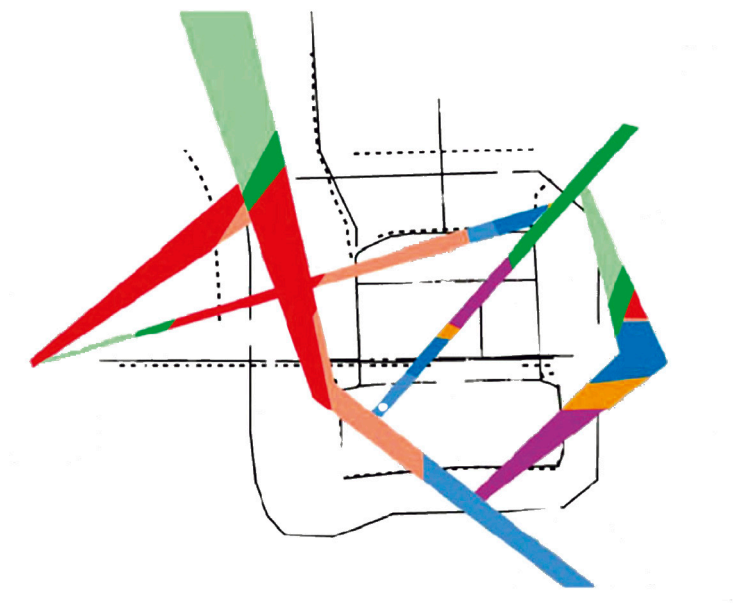
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En la Bienal de Arquitectura de Venecia de 2012¹, el pabellón alemán acogía una exposición titulada *Reduce/Reuse/Recycle: Architecture as Resource* (Reducir/Reutilizar/Reciclar: Arquitectura como Recurso) cuyo comisario era el arquitecto Muck Petzet. El lema era claro y meridiano sobre lo que podíamos encontrar en ella, 16 ejemplos de arquitectos alemanes sobre uno de los “temas candentes del momento”², que hoy en día lo sigue siendo.

“Reducir/Reutilizar/Reciclar aboga por un cambio exitoso del valor de los residuos, convirtiéndolos en materiales reutilizables. Las tres erres encierran una jerarquía sobre lo residual en la que la abstinencia ocupa el primer lugar, seguida del uso directo y, en tercer lugar, el reciclaje modificando las propiedades del material. La misma lógica puede ser aplicada para establecer un nuevo sistema de valores que trate con los edificios existentes: cuantos menos cambios sean hechos y menos energía se use, mejor será el proceso”³.

Los 16⁴ ejemplos alemanes de la Bienal se organizaban desde “la menos a la más elaborada intervención”⁵, según decía su comisario. En un orden creciente de esfuerzo material, los proyectos quedaban clasificados en 8 familias que llevaban por nombre: Percepción, Mantenimiento, Transformación, Adición, Relleno, Rediseño, Sustracción y Reciclaje.

1. Percepción (1 ejemplo): Suponía observar y detectar que algo genérico era ya valioso, no siendo necesaria una gran intervención del arquitecto.
2. Mantenimiento (1 ejemplo): Suponía realizar operaciones inaplazables para prolongar, de forma efectiva, la vida del edificio.

· 1
Comisariada por David Chipperfield bajo el lema *Common Ground*.

· 2
Muck Petzet y Florian Heilmeyer, *Reduce, Reuse, Recycle: Architecture as Resource* (Berlín: Hatje Cantz, 2012), 10. Traducción propia.

· 3
Petzet y Heilmeyer, *Reduce, Reuse, Recycle*, 10.

· 4
Títulos de los ejemplos, según el catálogo de la exposición: (1) The Flower Shop in Oberbarmen: The Wuppertal Studio and Seminar, Urs Füssler + Jörg Leeser, 2008-2009. (2) College Buildings I and II, Universität Stuttgart, Heinle, Wischer und Partner, 2000-2009. (3) Antivilla, Krampnitz, Brandlhuber, 2012. (4) Urban Renewal Europarei, Uithoorn, Atelier Kempe Thill Architects and Planners, 2004-2010. (5) Galerie Giti Nourbakhsh, Berlin, RobertneunTM, 2006. (6) Cultural Center Alvéole 14, Saint-Nazaire, LIN Architects Urbanists, 2005-2007. (7) Lecture Hall, Universität Erlangen-Nürnberg, Schulz & Schulz, 2010-2011. (8) Brunnenstrasse, Berlin, Brandlhuber + ERA, 2007-2010. (9) High-Rise Student Housing, Munich, knerer und lang Architekten, 2010-2012. (10) Tower Building C10, Hochschule Darmstadt, Staab Architekten, 2009-2011. (11) Dornbusch Church, Frankfurt am Main, Meixner Schlüter Wendt Architekten, 2003-2005. (12) Schreiber Residence, Aachen, AMUNT Architekten + Martenson und Nagel Theissen, 2010-2011. (13) Building Recycling, Status Quo, 2012. (14) Residential Complex, Klostersgarten Lehel Munich, Hild und K Architekten, 2007-2009. (15) Fichtelberg Mountain Hut, Tellerhäuser/Erzgebirge, AFF Architekten, 2009-2010. (16) East Wing of the Museum of Natural History Berlin, Diener & Diener Architekten, 2008-2010.

· 5
Petzet y Heilmeyer, *Reduce, Reuse, Recycle*, 10. Traducción propia.

At the 2012¹ Venice Architecture Biennale, the German pavilion hosted an exhibition under the title *Reduce/ Reuse / Recycle: Architecture as Resource*, curated by architect Muck Petzet. The theme was crystal clear about what was on display: 16 examples by German architects on one of the “burning issues of the day”², which continues to be so today.

“Reduce/Reuse/Recycle stands for a successful shift in value from waste to reusable material. The three Rs form a waste hierarchy in which avoidance comes first followed by direct use and, in third place, recycling which changes the properties of the material. The same logic may be applied in setting up a new value system to address existing buildings: the fewer changes that are made and the less energy used, the better the process”³.

The 16⁴ German examples at the Biennale ranged from “the least to the most elaborate intervention”, according to its curator⁵. Ordered by increasing material effort, the projects were classified into eight categories: Perception, Maintenance, Transformation, Addition, Filling, Redesign, Subtraction and Recycling.

1. Perception (1 example): It involved observing and realizing that something generic was already valuable, without the need for significant intervention by the architect.
2. Maintenance (1 example): It entailed undertaking undelayable operations to effectively extend the life of the building.

· 1
Curated by David Chipperfield under the theme *Common Ground*.

· 2
Muck Petzet and Florian Heilmeyer, *Reduce, Reuse, Recycle: Architecture as Resource* (Berlín: Hatje Cantz, 2012), 10.

· 3
Gilles Clément, *Third Landscape Manifesto*. (Barcelona: Gustavo Gili, 2007): 51.

· 4
Titles of the examples, according to the exhibition catalog: (1) The Flower Shop in Oberbarmen: The Wuppertal Studio and Seminar, Urs Füssler + Jörg Leeser, 2008-2009. (2) College Buildings I and II, Universität Stuttgart, Heinle, Wischer und Partner, 2000-2009. (3) Antivilla, Krampnitz, Brandlhuber, 2012. (4) Urban Renewal Europarei, Uithoorn, Atelier Kempe Thill Architects and Planners, 2004-2010. (5) Galerie Giti Nourbakhsh, Berlin, RobertneunTM, 2006. (6) Cultural Center Alvéole 14, Saint-Nazaire, LIN Architects Urbanists, 2005-2007. (7) Lecture Hall, Universität Erlangen-Nürnberg, Schulz & Schulz, 2010-2011. (8) Brunnenstrasse, Berlin, Brandlhuber + ERA, 2007-2010. (9) High-Rise Student Housing, Munich, knerer und lang Architekten, 2010-2012. (10) Tower Building C10, Hochschule Darmstadt, Staab Architekten, 2009-2011. (11) Dornbusch Church, Frankfurt am Main, Meixner Schlüter Wendt Architekten, 2003-2005. (12) Schreiber Residence, Aachen, AMUNT Architekten + Martenson und Nagel Theissen, 2010-2011. (13) Building Recycling, Status Quo, 2012. (14) Residential Complex, Klostersgarten Lehel Munich, Hild und K Architekten, 2007-2009. (15) Fichtelberg Mountain Hut, Tellerhäuser/Erzgebirge, AFF Architekten, 2009-2010. (16) East Wing of the Museum of Natural History Berlin, Diener & Diener Architekten, 2008-2010.

· 5
Petzet and Heilmeyer, *Reduce, Reuse, Recycle*, 10.

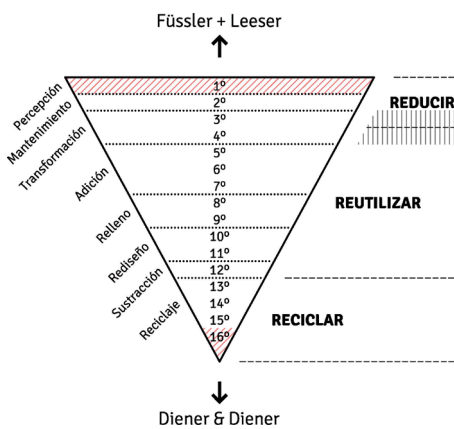


Fig. 1. Pirámide invertida de las 3 erres en *Reduce/Reuse/Recycle: Architecture as Resource*.

Fig. 1. Inverted pyramid of the 3 R's in *Reduce/Reuse/Recycle: Architecture as Resource*.

3. Transformación (2 ejemplos): Suponía la reutilización total de lo construido, actualizado mediante operaciones arquitectónicas de bajo rango diluidas en el valor total de lo preexistente.
4. Adición (3 ejemplos): Suponía yuxtaponer nuevas partes sobre arquitecturas preexistentes, para conseguir actualizarlas mediante relaciones simbióticas cercanas al 50%-50%.
5. Relleno (2 ejemplos): Suponía el paso de un vínculo simbiótico a uno de fagocitación, donde lo nuevo engulle a lo viejo.
6. Rediseño (2 ejemplos): Suponía un rediseño completo de alguna parte del edificio preexistente, sobre todo sus fachadas.
7. Sustracción (1 ejemplo): Suponía la supresión de partes del edificio, como respuesta para asegurar su supervivencia.
8. Reciclaje (4 ejemplos): Suponía el reciclaje formal del edificio preexistente, recuperando partes desaparecidas para volver a colocarlas donde estuvieron en origen.

Del repertorio de ejemplos del pabellón alemán se podían extraer dos conclusiones iniciales. Una respecto al significado de los nombres de cada una de las familias, y otra respecto a la cantidad de ejemplos en cada una de ellas.

Respecto al significado de los nombres. *Percepción y mantenimiento*, las dos primeras familias, son sustantivos que relacionamos con actitudes reflexivas. Si los convirtiéramos en verbos (percibir y mantener) diríamos que implican cierta inacción material. Este hecho entronca con el valor de la primera de las tres erres: "reducir", convirtiendo la competencia del arquitecto en una labor cercana a la contemplación y la actividad mínima.

Salvo *transformación*, el resto de las familias nos remiten a posiciones muy enérgicas, a verbos que implican acción en mayor o menor medida (adherir, rellenar, rediseñar, sustraer y reciclar) y que derivan en un entendimiento más intervencionista en las dos erres restantes: "reutilizar" y "reciclar". *Transformación* funciona como una zona de nadie entre "reducir" y el conglomerado de "reutilizar" y "reciclar", un lugar intermedio donde los proyectos se podían decantar tanto a un lado como a otro.

Respecto a la cantidad de ejemplos, es muy diferente a cada lado de la frontera establecida por el conjunto *transformación*: 2 ejemplos a un lado y 12 al otro (Fig. 01). De aquí podríamos extraer que, como tendencia general, la mayor parte de esos proyectos sobre lo construido se inclinaban por responder y comportarse con acciones más activas que contemplativas.

En cuanto a las dos conclusiones expuestas, respecto al significado y la cantidad, podríamos considerarlas como parciales al ser fruto de la observación y estudio de un solo país. Para ampliar el rango, pocos años más tarde, en 2016 y también en una Bienal de Arquitectura de Venecia⁶, el

This involved the complete reutilization of what was built, updated through low-range architectural operations that were diluted in the total value of what already existed.

It implied juxtaposing new parts on to preexisting architectural structures, in order to update them through symbiotic relations approaching 50%-50%.

This involved moving from a symbiotic bond to one of phagocytizing, where the new engulfs the old.

This involved a complete redesign of some parts of the pre-existing building, especially its facades.

This involved the removal of parts of the building, as a response to ensure its survival.

This involved the formal recycling of the pre-existing building, recovering missing parts to put them back where they were originally.

Two initial conclusions could be drawn from the examples found in the German pavilion. One regarding the meaning of the names of each of the categories, and the other regarding the number of examples in each of them.

Regarding the meaning of their names. Perception and maintenance, the first two categories, are nouns that we relate to reflexive attitudes. If we were to convert them into verbs (perceive and maintain) we would say that they imply a certain material inaction. This fact connects with the value of the first of the three R's: "reduce", transforming the architect's work into a task akin to contemplation and minimal activity.

Except for transformation, the rest of the families refer us to very energetic positions, to verbs that imply action to a greater or lesser extent (add, fill, redesign, subtract and recycle) and that derive in a more interventionist understanding in the remaining two R's: "reuse" and "recycle." Transformation acts as a grey area between "reduce" and the "reuse" and "recycle" conglomerate, an intermediate area where projects could fall on one side or the other.

Regarding the number of examples, it is very different on each side of the border established by the transformation group: 2 examples on one side and 12 on the other (Fig. 01). It could be drawn from this that, in general, most of these projects on what has been built were inclined to respond and behave in a more active than contemplative manner.

As for the two above conclusions, regarding meaning and quantity, we could consider them as partial as they are the result of the observation and study of a single country. To widen the range, a few years later, in 2016 and also at an Architecture Biennale in Venice⁶,

6 Comisariada por Alejandro Aravena bajo el lema *Reporting from the front*.

6 Curated by Alejandro Aravena under the theme *Reporting from the front*.



› Fig. 2. Tienda de flores en Wuppertal.
Fig. 2. Wuppertal flower shop.

pellón español realizó una exposición similar bajo el título *Unfinished*. En ella afluían 55 proyectos que trabajaban desde lo inacabado, por lo tanto, desde las preexistencias. En ella también se establecían familias (consolidación, reapropiación, adaptabilidad, inserciones, reasignaciones, desnudez, posarse y pavimentos) que, con su significado y cantidad, volvían a poner de manifiesto la predominancia de la acción frente a la contemplación. Basta hacer un recorrido por dichos ejemplos para confirmarlo, siendo solo 4 ejemplos bajo el título "consolidar" los que nos remiten a intervenciones mínimas.

La tienda de flores de Wuppertal y el Museo de Historia Natural de Berlín

Volviendo a la Bienal de 2012, el siguiente paso de este artículo será examinar los extremos (el primer y el decimosexto ejemplo) del rango de la retrospectiva alemana; remitiéndonos a dos posiciones alejadas pese a pertenecer ambas a la misma pirámide invertida de las 3 erres⁷ (Fig. 01). En la parte superior, una experiencia académica llevada a cabo en 2008 por los arquitectos alemanes Urs Füssler y Jörg Leoser, junto a sus estudiantes de arquitectura de la Universidad de Wuppertal (Alemania). En la parte inferior, el reciclaje/reconstrucción del ala este del Museo de Historia Natural de Berlín, realizado en 2008 por los arquitectos alemanes Diener & Diener.

Urs Füssler y Jörg Leoser impartieron dos cursos para estudiantes de Grado y Máster de la

· 7
En la base superior se encuentra reducir, la acción que menos esfuerzo requiere. Después reutilizar. Finalmente, ocupando el pico inferior y el mayor esfuerzo, reciclar.

the Spanish pavilion held a similar exhibition under the title *Unfinished*. Fifty-five projects surfaced in it whose work started on unfinished pieces, therefore, from pre-existing buildings. It also established categories (consolidation, reappropriation, adaptability, insertions, reassignments, nudity, perching and pavements) which, with their meaning and quantity, once again highlighted the supremacy of action as opposed to contemplation. These examples are enough to confirm this, with only four examples under the heading "consolidate" that refer us to minimal interventions.

The Wuppertal flower shop and the Berlin Museum of Natural History

Looking back to the 2012 Biennial, this article will now examine the extremes (the first and the sixteenth example) of the range of the German retrospective; this will refer us to two distant positions despite both belonging to the same inverted pyramid of the 3Rs⁷ (Fig. 01). At the top, an academic experience carried out in 2008 by German architects Urs Füssler and Jörg Leoser, along with their architecture students at the Wuppertal University (Germany). At the bottom, the recycling/reconstruction of the east wing of the Natural History Museum in Berlin, carried out in 2008 by German architects Diener & Diener.

Urs Füssler and Jörg Leoser taught two courses to bachelor's and master's students

· 7
At the top base is reduce, the action that requires less effort. Then reuse. Finally, occupying the lower peak and the greatest effort, recycle.

Universidad de Wuppertal. Titulados *Findlinge*⁸ y *Dramatyp*⁹, su principal interés era acercarse de una forma desprejuiciada a lo construido en la propia Wuppertal. Fruto de un reconocimiento atento e interesado de la realidad, cada estudiante debía elegir un edificio anónimo que percibiera como interesante. Después debía proponer unos clientes, nuevos usos y aplicar sus particulares transformaciones sobre lo preexistente. El resultado llevado a cabo por la mayor parte de los estudiantes convertía supermercados en casas para personas sin hogar, complejos industriales en escuelas de horticultura o almacenes en centros comunitarios.

Sin embargo, la estudiante Saskia Boachie, encontró una tienda de flores (Fig. 02) que le hizo interrumpir su hacer. Este extraño edificio, cercano a la estación de tren, según palabras de Leeser “ilustra como diferentes fuerzas pueden concurrir para acomodarse a tipos edificatorios existentes. Tienes la típica *Bergisches Haus* con dos plantas, cubierta con pizarra del Rin. Pero con el paso del tiempo y a través de un proceso de urbanización, la arquitectura moderna de los 70 encontró un lugar en el edificio añadiendo balcones con petos de vidrios tintados, grandes carpinterías de madera, elementos de fachada con reminiscencias de Egon Eiermann¹⁰, y *BLUMEN*¹¹ deletreado en cubos. [...] Lo viejo y lo nuevo fueron combinados virtuosamente”¹².

Mientras que el resto de los compañeros de Boachie intervenían con acciones decididas y enérgicas, ella entendió que su proyecto acababa en la percepción, poco más había que hacer, nada que “reutilizar” y “reciclar”. Boachie reconoció que “reducir” su acción era la situación más valiosa. ¿Podría haber buscado lo extraordinario de su ejemplo y transformarlo, deshaciéndose del resto de añadidos genéricos? Probablemente sí, de manera análoga a lo que hacían sus compañeros, pero su pasión hacia el edificio se canalizó de otra forma más pausada y menos notoria.

Esa misma pasión es la que sintió el director teatral Peter Brook¹³ cuando en 1974 descubrió el teatro de *Les Bouffes du Nord* de París: “Un día, hace casi treinta años, Micheline Rozan sugirió que fuéramos a ver un teatro abandonado detrás de la Gare du Nord. Llegamos a la Place de la Chapelle, pero no había absolutamente ninguna evidencia del edificio, solo una típica fachada

at Wuppertal University. Called *Findlinge*⁸ and *Dramatyp*⁹, their main focus was to approach without prejudice what had been built at Wuppertal itself. As a result of an attentive and interested examination of reality, each student had to choose an anonymous building that he or she perceived as interesting. They then had to propose clients, new uses and apply their own particular transformations to the pre-existing building. The results achieved by most of the students turned supermarkets into homes for the homeless, industrial complexes into horticultural schools or warehouses into community centers.

Student Saskia Boachie, however, found a flower shop (Fig. 02) that made her interrupt her work. This strange building, near the train station, in Leeser’s words “illustrates just how different forces can lead to a softening of building types and the creation of bastards. You have the typical *Bergisches Haus* with two floors, clad on the exterior with Rhine slate. But over the course of time and through the process of urbanization, the modern architecture of the 1970s found a place for itself in the building adding tinted-glass balcony balustrades, large stained-wood windows, façade elements reminiscent of Egon Eiermann¹⁰, and *BLUMEN*¹¹ spelled out on back-lit cubes. [...] The old and the new were virtuously combined”¹².

While the rest of Boachie’s peers intervened with decisive and energetic actions, she felt that her project concluded with its perception, there was little more to be done, nothing to “reuse” and “recycle”. Boachie found that “scaling down” her action was the more valuable approach. Could she have sought out the extraordinary in her example and transformed it by stripping it of generic add-ons? Probably so, similarly to what her peers were doing, but her passion for the building was channeled in another, more leisurely and less conspicuous way.

That same passion is what theater director Peter Brook¹³ felt when in 1974 he discovered the *Les Bouffes du Nord* theater in Paris: “One day, nearly thirty years ago Micheline Rozan suggested that we go and look at an abandoned theatre behind the Gare du Nord. We arrived at the Place de la Chapelle, but there was absolutely no evidence of the building: just

· 8

Refiriéndose al término geológico usado para definir a una roca que difiere de otras rocas nativas existentes en la misma zona.

· 9

Refiriéndose a la respuesta de un organismo frente a una situación excepcional.

· 10

Egon Eiermann (1904-1970) Arquitecto alemán de mitad del siglo XX cuyas estructuras y detalles metálicos destacaban por su delicadeza.

· 11

En alemán significa flores.

· 12

Jörg Leeser and Urs Füssler, “The Flower Shop in Oberbarmen: The Wuppertal Studio and Seminar,” *Candide. Journal for Architectural Knowledge*, no. 04 (2011): 57. Traducción propia.

· 13

Peter Brook (1925-) Reconocido director teatral cuyas puestas en escena han sido revolucionarias e innovadoras.

· 8

Referring to the geological term used to define a rock that differs from other native rocks existing in the same area.

· 9

Referring to an organism’s response to an exceptional situation.

· 10

Egon Eiermann (1904-1970) German architect of the mid-twentieth century whose structures and metal details stood out because of their delicacy.

· 11

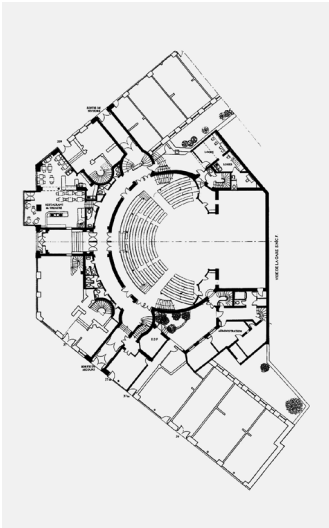
“Flowers” in German

· 12

Jörg Leeser and Urs Füssler, “The Flower Shop in Oberbarmen: The Wuppertal Studio and Seminar,” *Candide. Journal for Architectural Knowledge*, no. 04 (2011): 57.

· 13

Peter Brook (1925-) Renowned theater director whose productions have been revolutionary and groundbreaking.



^ Fig. 3. Planta de Les Bouffes du Nord
Fig. 3. Les Bouffes du Nord floor plan

> Fig. 4. Estado actual de Les Bouffes du Nord
Fig. 4. Current condition of Les Bouffes du Nord.

parisina del siglo XIX en el chaflán del boulevard. Investigamos más: había una tabla suelta cubriendo un agujero en el muro, la apartamos y entramos en un oscuro túnel. Había escombros por todas partes y, todavía, ninguna señal del espacio prometido. De repente una puerta se abrió y estaba allí el Bouffes —un volumen majestuoso con luz que pasaba a través de la cúpula [...] a nivel del suelo, un lugar bombardeado. Había una pila de desechos en el centro del espacio, con cables colgando por todas partes, evidenciando la destrucción en marcha”¹⁴.

Les Bouffes du Nord fue construido en 1876 por el arquitecto francés Louis-Marie Émile Leménil. Pocos años después, en 1914, tuvo que clausurarse tras una cadena de infortunios y mala gestión por parte de sus sucesivos directores. En 1952, como consecuencia de su total abandono, sufrió un incendio que acabó por desterrarlo de la memoria colectiva del barrio y la ciudad. Quedaba oculto y anónimo dentro de otra manzana parisina más (Fig. 03).

El interés de Brook no cesó en su hallazgo, sino que, buscando desde tiempo atrás un lugar para establecer su compañía teatral, *Les Bouffes du Nord* le pareció el sitio más idóneo. Fascinado por su descubrimiento, lo asumió tal cual y le dio una segunda oportunidad como teatro. “Nuestra primera decisión: dejar el teatro exactamente como estaba, no borrar nada”¹⁵. Ponerlo en funcionamiento de nuevo implicaba intervenir muy poco, solo limpiarlo, huir de cualquier tipo de operación mayúscula e intrusiva que acabara eliminando “cualquier huella de los cien años de historia que han pasado por él”¹⁶.

Las únicas acciones que se hicieron fueron operaciones inaplazables relativas a la seguridad estructural del edificio. El resto quedó tal cual

a typical nineteenth-century Parisian façade turning the corner of the boulevard. We investigated further: there was some loose boarding covering a hole in the wall which we wrenched aside and then crawled into a dark tunnel. There was debris all around, and still no sign of the promised space. Suddenly a door opened and there was the Bouffes —a majestic volume with light streaming down through the dome [...] at ground level, like a bomb site. There was heap of rubble in the middle of the space with wires hanging everywhere, evidence of destruction in progress”¹⁴.

Les Bouffes du Nord was built in 1876 by the French architect Louis-Marie Émile Leménil. A few years later, in 1914, it had to be closed after a series of setbacks and mismanagement by its successive directors. In 1952, as a consequence of its total abandonment, there was a fire that finally banished it from the neighborhood’s and the city’s collective memory. It remained hidden and anonymous within just another Parisian block (Fig. 03).

Brook’s interest did not end with his discovery, but, having searched for some time for a place to establish his theater company, *Les Bouffes du Nord* seemed to him the most suitable location. Fascinated by his discovery, he took it as it was and gave it a second chance as a theater. “Our first decision was to leave the theatre exactly as it was”¹⁵. Putting it back into operation meant intervening very little, just cleaning it up, fleeing from any kind of major and intrusive operation that would end up eliminating “any trace etched in by a hundred of years’ living”¹⁶.

The only actions taken were unavoidable operations related to the structural safety of

· 14
Peter Brook, *The Shifting Point: Theatre, Film, Opera 1946-1987* (New York: Harper & Row, 1989), 151. Traducción propia.

· 15
Brook, *The Shifting Point*, 152.

· 16
Brook, *The Shifting Point*, 152.

· 14
Peter Brook, *The Shifting Point: Theatre, Film, Opera 1946-1987* (New York: Harper & Row, 1989), 151.

· 15
Brook, *The Shifting Point*, 152.

· 16
Brook, *The Shifting Point*, 152.



^ Fig. 5. Estado previo del Museo de Historia Natural de Berlín
Fig. 5. Previous state of the Berlin Natural History Museum.

v Fig. 6. Panel prefabricado de fachada del Museo de Historia Natural de Berlín
Fig. 6. Precast façade panel of the Berlin Natural History Museum.



(Fig. 04), porque se interpretaba listo para acoger espectáculos teatrales: “Dejamos los viejos asientos de madera de los palcos. Durante los primeros espectáculos algunas personas se quedaron literalmente clavadas a sus asientos y tuvimos que indemnizarlas porque la tela de sus faldas y pantalones quedó desgarrada. Afortunadamente, en general, hubo grandes aplausos que literalmente ‘echaron la casa abajo’ porque trozos considerables de molduras se desprendieron y cayeron debido a las fuertes vibraciones”¹⁷.

El teatro descubierto por Brook encarnaba una forma distinta de ver y hacer representaciones teatrales, uno de los anhelos que el director británico ha perseguido durante toda su carrera profesional. Aunque los estándares de confort fueran muy distintos de los convencionales, su éxito fue y es manifiesto; siendo desde entonces uno de los teatros parisinos con más afluencia.

Situación arquitectónica opuesta a las dos anteriores es la del Museo de Historia Natural de Berlín, de los arquitectos Diener & Diener. El ala este del museo, destruida parcialmente durante la II Guerra Mundial, permanecía impassible al paso del tiempo (Fig. 05) hasta que, en el año 2008, se volvió a incorporar al edificio. El proyecto de

the building. The rest was left as it was (Fig. 04), because it was deemed ready to host theatrical performances: “We had kept the old wooden seats on the balcony. During the first performances some people were literally stuck to their seats and we had to reimburse a few very cross ladies who had left a piece of their skirt on the seat. Fortunately there was a great deal of applause, but it literally brought the house down because large sections of plaster moulding broke off due to of the vibrations”¹⁷.

The theater Brook discovered embodied a different way of seeing and staging theatrical performances, one of the yearnings that the British director has pursued throughout his professional career. Although the standards of comfort were very different from conventional ones, its success was and is evident; being since then one of the most crowded Parisian theaters.

The opposite architectural situation to the two previous ones is that of the Berlin Natural History Museum by the architects Diener & Diener. The east wing of the museum, partially destroyed during World War II, remained untouched by the passage of time (Fig. 05) until it was integrated back into the building in

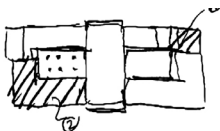
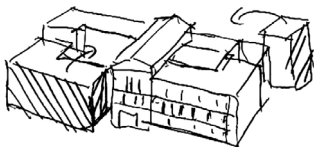
¹⁷ Brook, *The Shifting Point*, 153.

¹⁷ Brook, *The Shifting Point*, 153.



Fig. 7. Panel prefabricado de fachada del Museo de Historia Natural de Berlín
Fig. 7. Precast façade panel of the Berlin Natural History Museum.

Fig. 8. Croquis del Neues Museum
Fig. 8. Neues Museum sketch.



RE-ESTABLECIMIENTO DE FORMAS + FIGURAS

Diener & Diener apostó por reconstruir las partes perdidas en fachada, cubierta y forjados. Para sus elementos verticales crearon una serie de precisos y laboriosos paneles prefabricados de cemento (Fig. 06) que, como réplicas agregadas, acabaron por introducirse y completar la fachada que algún día existió (Fig. 07). El plano resultante, aunque análogo formalmente, era ciego por requerimientos de temperatura y humedad constante de las colecciones interiores.

Diener & Diener intervinieron de igual forma que David Chipperfield en el *Neues Museum* de Berlín. El edificio original fue construido entre 1841 y 1859 por el arquitecto alemán August Stüler y, al igual que el Museo de Historia Natural, sufrió graves contratiempos que lo transportaron a un estado diferente al original. Durante la II Guerra Mundial, el *Neues Museum* fue objeto de severos bombardeos que dañaron algunas de sus partes y destruyeron otras y, pese a que después hubo intentos de repararlo, sus restos quedaron expuestos y abandonados. Finalmente, en 1997 Chipperfield resultó ganador del concurso para su recuperación proponiendo, como indicaba en uno de sus croquis, el “restablecimiento de formas + figuras” (Fig. 08).

“La restauración y reparación de los elementos existentes del edificio fue guiada por la idea de que el contexto espacial y la materialidad de la estructura original debían enfatizarse —lo contemporáneo reflexiona sobre lo perdido, pero sin imitarlo”¹⁸. Aunque su reconstrucción huye de mimetismos estilísticos, la vuelta formal al

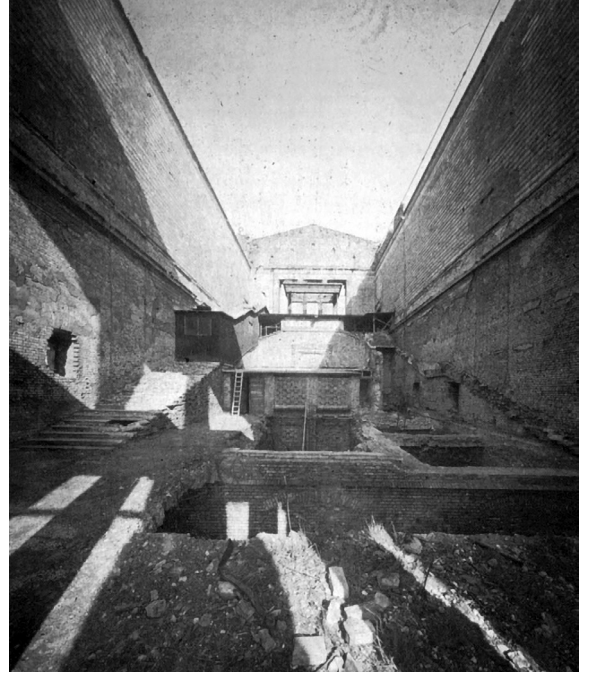
2008. Diener & Diener’s project was based on reconstructing the lost parts of the facade, roof, and slabs. For its vertical elements they created a series of precise and painstakingly crafted precast concrete panels (Fig. 06) which, like aggregate replicas, were eventually inserted and completed the façade that once existed (Fig. 07). The resulting plan, although formally analogous, was blind due to the constant temperature and humidity requirements of the interior collections.

Diener & Diener worked in the same way as David Chipperfield on the *Neues Museum* in Berlin. The original building was built between 1841 and 1859 by the German architect August Stüler and, like the Natural History Museum, suffered serious setbacks that brought it to a state different from its original one. During World War II, the *Neues Museum* was subjected to severe bombing that damaged some of its parts and destroyed others, and although there were later attempts to repair it, its remains were left exposed and abandoned. Finally, in 1997 Chipperfield won the competition for its restoration, proposing, as he indicated in one of his sketches, the “reestablishment of forms + figures” (Fig. 08).

“The restoration and repair of the existing elements of the building was guided by the idea that the spatial context and the materiality of the original structure should be emphasized - the contemporary reflects on what was lost, but without imitating it”¹⁸. Although his

18 Fernando Márquez Cecilia e Richard Levene, eds., “David Chipperfield 2006-2010”, *El Croquis*, no. 150 (2010).

18 Fernando Márquez Cecilia e Richard Levene, eds., “David Chipperfield 2006-2010”, *El Croquis*, no. 150 (2010).



^ Fig. 9. Antes, durante y después de la intervención de Chipperfield en el *Neues Museum*
 Fig. 9. Before, during and after Chipperfield's intervention at the *Neues Museum*.

pasado es tan evidente como el esfuerzo técnico necesario para llevarla a cabo. Uno de los ejemplos más notable de ese esfuerzo es la recuperación de una de las escaleras principales (Fig. 09) que, aunque interpretada desde la contemporaneidad, manifiesta una necesidad de recuperar aquello extraordinario que se había perdido.

¿Cómo habría reaccionado la estudiante del curso de Füssler y Leeser ante situaciones como las de los dos museos de Berlín? ¿Habría respondido igual que con la tienda de flores? ¿Habría podido encontrar valor en la simple percepción de la quebrada ala este del Museo de Historia Natural? ¿Habría podido encontrar valor en la escalera *as found*, utilizando el término de los Smithson, del *Neues Museum*? ¿El hacer sobre esos edificios requería de una regresión al pasado? ¿O de la asunción y contemplación de las distintas vicisitudes fruto del devenir de sus historias?

Es posible aventurarse a responder que, en el caso de Boachie, probablemente su entorno académico no la encorsetó y forzó a dar una respuesta activa sobre una preexistencia. Por el contrario, Diener & Diener o Chipperfield, puede que no encontraran un terreno tan propicio para formular una alternativa a un hacer y un intervenir restitutivo. Ellos reconocieron valor en lo extraordinario de los edificios originales que ya no existían y, por lo tanto, los recuperaron. Boachie reconoció valor en lo genérico de la tienda de flores y, por lo tanto, se mostró contemplativa. También Brooks en su teatro.

Un comportamiento alternativo sobre lo construido

Pensar sobre lo construido nos traslada a un ámbito donde tienen cabida palabras tan diversas, y a simple vista intercambiables, como: restaurar, preservar, conservar, etc. No resulta sencillo establecer, de manera precisa, las diferencias y fronteras de acción de cada una. ¿Es lo mismo restaurar que preservar? ¿Conservar es una consecuencia de restaurar? ¿Preservar implica conservar?.

Para clarificar esa ambigüedad, el arquitecto español Ignasi de Solà-Morales introduce el término "intervención". Según sus palabras "[...] cuando hablamos de intervención, debería entenderse cualquier tipo de actuación que se puede hacer en un edificio o en una arquitectura. Las actuaciones que sean de restauración, de defensa, de preservación, de conservación, de reutilización, etc., todas ellas podrían ser designadas con un término máximamente general que sería justamente el de "intervención"¹⁹.

Por lo tanto, intervención es una palabra baúl capaz de englobar un amplio espectro de soluciones posibles. Soluciones que, sobre un mismo proyecto preexistente, no son únicas.

¹⁹ Ignasi de Solà-Morales, "Teorías de la intervención arquitectónica", en *Intervenciones* (Barcelona: Gustavo Gili, 2006), 15

reconstruction avoids stylistic mimicry, the formal return to the past is as evident as the technical effort required to carry it out. One of the most notable examples of this effort is the recovery of one of the main staircases (Fig. 09) which, although interpreted from a contemporary perspective, manifests a need to recover that extraordinary element that had been lost.

How would the student in Füssler and Leeser's course have reacted to situations like those in the two Berlin museums? Would she have responded in the same way as with the flower shop? Would she have found value in the simple perception of the broken east wing of the Natural History Museum? Would she have found value in the *as found* staircase, to use the Smithsons' term, of the *Neues Museum*? Did doing about these buildings require a regression into the past? Or the assumption and contemplation of the various vicissitudes resulting from the evolution of their histories?

It is possible to venture to answer that, in Boachie's case, she was probably not constrained by her academic environment and forced to give an active response to a pre-existing building. Diener & Diener or Chipperfield, on the other hand, may not have found the terrain so auspicious to formulate an alternative to a restitutive intervention. They found value in the uniqueness of the original buildings that no longer existed and, therefore, they recovered them. Boachie recognized value in the generic qualities of the flower store and was therefore contemplative. So did Brooks in his theater.

An alternative approach to what has been built

Thinking about what has been built takes us to a sphere where there is room for words as diverse and, at first sight, interchangeable as restore, preserve, conserve, etc. It is not easy to establish, in a precise way, the differences and boundaries between them. Is restoring the same as preserving? Is conserving a consequence of restoring? Does preserving imply conserving?

To clarify this ambiguity, the Spanish architect Ignasi de Solà-Morales introduces the term "intervention". In his words "[...] when we speak of intervention, we should understand any type of action that can be done to a building or architectural structure. Actions of restoration, defense, preservation, conservation, reuse, etc., all of them could be referred to with a broad general term, which would be precisely that of 'intervention'¹⁹.

Therefore, intervention is a term capable of encompassing a wide range of possible solutions. Solutions that, on the same pre-existing project, are not unique. Each intervention is, in itself, a subjective world,

¹⁹ Ignasi de Solà-Morales, "Teorías de la intervención arquitectónica", in *Intervenciones* (Barcelona: Gustavo Gili, 2006), 15

Cada intervención es, en sí misma, un mundo subjetivo, resultado de la aplicación de un determinado pensamiento sobre la realidad construida.

Cronológicamente ordenados, "unificar", "restaurar", "preservar" y "conservar" son los cuatro grandes cuerpos teóricos que Solà-Morales detecta en el devenir histórico. Incidiendo en su significado, ¿qué diferentes esquemas críticos de "intervención" se esconden tras "unificar", "restaurar", "preservar" o "conservar"?

A modo introductorio:

Unificar implica la eliminación de la diversidad, bajo el amparo de un proyecto arquitectónico global.

Restaurar es el resultado, aparentemente neutro, de una operación lógica de escucha y observación de lo construido, obteniendo una respuesta externa de cómo debería ser el proyecto.

Preservar pasa por asumir lo construido tal y como es, sin modificarlo ni mejorarlo.

Conservar surge del acuerdo entre restaurar y preservar y es la base de la gran mayoría de teorías contemporáneas de intervención. Aboga por un entendimiento de mínimos; hay que seguir escuchando, pero solo modificando lo esencial.

Sobre conservar versaba la exposición *Cronocaos*²⁰ que OMA realizó en la Bienal de Arquitectura de Venecia de 2010²¹. En ella reclamaba volver a poner la conservación en el primer plano de la arquitectura: "Los arquitectos —nosotros que cambiamos el mundo— hemos sido ajenos u hostiles hacia las manifestaciones de la conservación. Desde 1981, en la *Presencia del Pasado* de Portoghesi, casi no se ha prestado atención a la conservación en las sucesivas Bienales"²².

Con *Cronocaos*, Koolhaas realizaba el "primer discurso teórico sobre conservación del patrimonio arquitectónico enunciado por un arquitecto no especializado"²³. Una disertación de la que se apropiaría, dos años después, la ya citada *Reduce/Reuse/Recycle: Architecture as Resource*.

Según Koolhaas, la conservación, la intervención sobre algo construido, siempre había sido una de las inquietudes latentes en OMA. Al principio, decía, sólo se manifestaba de forma implícita y *Cronocaos* fue la oportunidad de exponerla como un refugio: "Conservación es, para nosotros, un refugio donde evadimos de la *Starchitecture*"²⁴. Su idea era y es provocadora a

the result of the application of a certain way of thinking about the built reality.

In chronological order, "unifying", "restoring", "preserving" and "conserving" are the four major theoretical bodies that Solà-Morales detects in the course of history. Incidentally, what different critical schemes of 'intervention' are hidden behind the words "unifying", "restoring", "preserving" and "conserving"?

By way of introduction:

Unification implies the elimination of diversity, under the cover of a global architectural project.

Restoring is the apparently neutral result of a logical process of listening and observing what has been built, obtaining an external response to what the project should be like.

To preserve is to assume what is built as it is, without modifying or improving it.

Conserving arises from the compromise between restoring and preserving and is the basis of the great majority of contemporary intervention theories. It advocates a minimal understanding; we must continue listening, but only modifying what is essential.

Preservation was the main theme of OMA's *Chronocaos*²⁰ exhibition at the 2010 Venice Architecture Biennale²¹. It urged a return of preservation to the forefront of architecture: "Architects —we who change the world— have been oblivious or hostile to the manifestations of preservation. Since 1981, in Portoghesi's *Presence of the Past*, there has been almost no attention paid to preservation in successive Biennales"²².

With *Cronocaos*, Koolhaas made the "first theoretical discourse on architectural heritage preservation by a non-specialist architect"²³. A dissertation that would be appropriated, two years later, in the aforementioned *Reduce/Reuse/Recycle: Architecture as Resource*.

According to Koolhaas, preservation, the intervention on something built, had always been one of OMA's underlying concerns. At first, he said, it was only implicitly manifested and *Cronocaos* was the opportunity to expose it as a refuge: "Preservation is, for us, a refuge where we can escape from the *Starchitecture*"²⁴. His idea was and is provocative as well as contradictory, as are

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Un año después, en 2011, el New Museum de Nueva York también acogió la exposición.

· 21

Comisariada por Kazuyo Sejima, bajo el lema *People meet in Architecture*.

· 22

Rem Koolhaas, "Cronocaos", *Log*, no. 21 (2011): 119. Traducción propia.

· 23

Fernando Casqueiro Barreiro et al., "Arquitectura y transformación", en *Criterios de intervención en el patrimonio arquitectónico del siglo XX: Conferencia Internacional CAH20thC*, Madrid, 14, 15 y 16 de junio de 2011 = Intervention Approaches in the 20th Century Architectural Heritage: International Conference CAH20thC, coord. María Domingo y Iolanda Muña (Madrid: Ministerio de Cultura, 2011).

· 20

A year later, in 2011, the New Museum of New York would also host the exposition.

· 21

Curated by Kazuyo Sejima, under the theme *People meet in Architecture*.

· 22

Rem Koolhaas, "Cronocaos", *Log*, no. 21 (2011): 119.

· 23

Fernando Casqueiro Barreiro et al., "Arquitectura y transformación", in *Criterios de intervención en el patrimonio arquitectónico del siglo XX: Conferencia Internacional CAH20thC*, Madrid, 14, 15 y 16 de junio de 2011 = Intervention Approaches in the 20th Century Architectural Heritage: International Conference CAH20thC, coord. María Domingo y Iolanda Muña (Madrid: Ministerio de Cultura, 2011).

Fig. 10. Panel de *Cronocaos*
Fig. 10. Cronocaos panel.



la par que contradictoria, al igual que los paneles teorizantes utilizados en la exposición. Como afirma el arquitecto Jorge Otero-Pailos, interesado en estudiar nuevas experiencias relacionadas con la *conservación*, “Las gráficas y los paneles de la exposición, si bien resultan persuasivos, tienden lamentablemente con demasiada rapidez a la hipérbole y llegan a conclusiones basadas en datos sin diferenciar, por lo que contribuyen más a ocultar que a revelar los cambios contemporáneos en la naturaleza de la relación entre arquitectura y conservación”²⁵. Los paneles manipulaban a su favor datos²⁶ y obviaban a personajes tan relevantes como Camilo Boito, limitándose a reflejar la suculenta y mediática polémica entre Ruskin y Viollet-le-Duc²⁷ (Fig. 10).

Existía en la exposición un segundo ámbito dedicado a 26 proyectos del estudio. Todos ellos compartían, en distintos niveles de éxito, su pertenencia a la *conservación* no especializada. Un muro lleno de postales (Fig. 11), que los visitantes podían recolectar y coleccionar, desgranaba sus distintos posicionamientos.

Cribando ese rompecabezas era posible extraer estrategias y posiciones “que aportan una inusual luz a la asfixiante presión que las

the theoretical panels used in the exhibition. As architect Jorge Otero-Pailos, interested in studying new experiences related to preservation, states, “The graphics and panels in the exhibition, while persuasive, unfortunately tend too swiftly towards hyperbole and reach conclusions based on undifferentiated data, thus doing more to obscure than reveal contemporary changes in the nature of the relationship between architecture and preservation”²⁵. The panels manipulated data to their advantage²⁶ and overlooked figures as relevant as Camillo Boito, limiting themselves to reflecting the succulent and mediatic controversy between Ruskin and Viollet-le-Duc²⁷ (Fig. 10).

A second part of the exhibition was dedicated to 26 of the studio’s projects. All of them belonged, with varying degrees of success, to non-specialized preservation. A wall full of postcards (Fig. 11), which visitors could collect and pick up, displayed their different approaches.

By sifting through that puzzle it was possible to extract strategies and positions “that shed unusual light on the stifling pressure

· 24
Koolhaas, “Cronocaos”, *Log*, no. 21 (2011): 22.

· 25
Jorge Otero-Pailos, “Suplement al Manifest d’OMA per la preservació = Suplemento al manifiesto de preservación de OMA,” *Quaderns*, no. 263 (2011): 45.

· 26
“Por ejemplo, «Cronocaos» formula la reivindicación hiperbólica de que, grosso modo, un 12% del mundo ha sido declarado inmutable por la conservación. La cifra agrupa todos los edificios y paisajes bajo esa designación, pero no diferencia entre la conservación de la naturaleza y la preservación arquitectónica, niveles legales de protección, ni tampoco reconoce que esa designación es a menudo honorífica y no implica restricciones legales en cuanto a transformaciones o incluso demoliciones de los activos establecidos.” Otero-Pailos, “Suplement al Manifest d’OMA”, 45.

· 27
Otros proyectos anteriores de Koolhaas ya se debatían entre esa dualidad. Es el caso del IIT McCormick Tribune Campus Center, donde la preexistencia del Commons Hall de Mies Van der Rohe supuso preguntarse cómo conservarlo: ¿Dejándolo de lado o asumiéndolo? La astuta respuesta hacía ambas cosas, contentando a todas las partes implicadas (técnicos del IIT y arquitecto).

· 24
Koolhaas, “Cronocaos”, *Log*, no. 21 (2011): 22.

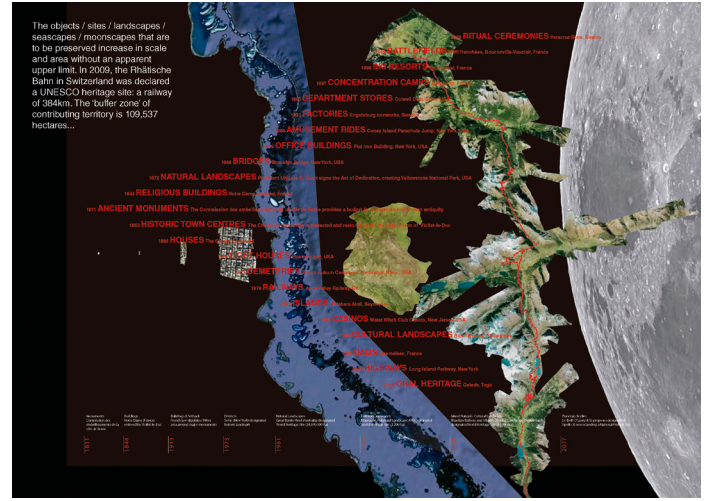
· 25
Jorge Otero-Pailos, “Suplement al Manifest d’OMA per la preservació = Suplemento al manifiesto de preservación de OMA,” *Quaderns*, no. 263 (2011): 45.

· 26
“For example, “Cronocaos” makes the hyperbolic claim that, roughly speaking, 12% of the world has been declared immutable by preservation. The figure bundles all buildings and landscapes under that label, but does not distinguish between preservation of nature and architectural preservation, legal levels of protection, nor does it recognize that such designation is often honorary and does not imply legal restrictions on transformations or even demolitions of established assets.” Otero-Pailos, “Suplement al Manifest d’OMA”, 45.

· 27
Other prior Koolhaas projects already struggled with this duality. This is the case of the IIT McCormick Tribune Campus Center, where the pre-existence of Mies Van der Rohe’s Commons Hall meant wondering how to preserve it: by leaving it aside or taking it on? The astute answer did both, satisfying all parties involved (IIT technicians and architect).



^ Fig. 11. Muro de postales de *Cronocaos*
Fig. 11. Cronocaos postcard wall.
> Fig. 12. Panel de *Cronocaos*
Fig. 12. Cronocaos panel.



condiciones culturales y económicas contemporáneas ejercen sobre la arquitectura, y nos ayudan a comprender algunas de las razones del giro de Koolhaas hacia la conservación”²⁸.

El primer hecho significativo incide en la no discriminación entre qué es susceptible de ser conservado y qué no. La diversidad²⁹ de los 26 proyectos de OMA demuestra que el valor de lo extraordinario, algo de vital importancia durante la historia de la conservación arquitectónica, ha desaparecido. “El énfasis continuo de la *conservación* sobre lo excepcional—lo que merece ser conservado— crea su propia distorsión. Lo excepcional se convierte en lo normal. No hay ideas para conservar lo mediocre, lo genérico”³⁰.

Al hecho de que todo sea conservable se une otra característica: su tamaño creciente. Primero solo monumentos, luego edificios, después edificios y su entorno, más tarde barrios enteros, paisajes culturales o paisajes histórico-culturales. (Fig. 12).

El interés por lo genérico es algo que comparten *Cronocaos* y *Reduce/Reuse/Recycle: Architecture as Resource*, pero la visión de Koolhaas, además de precoz, va mucho más allá e incide en otra idea capital: la desespecialización.

El segundo hecho relevante extraído de *Cronocaos* es que Koolhaas, desde su reducto exterior, irrumpen en un campo reticente a foráneos desespecializados. OMA tantea nuevas formas menos invasivas de tratar con lo preexistente y, sobre todo, se pregunta si intervenir/hacer es o no necesario.

De entre los 26 proyectos de la muestra, uno es particularmente interesante por su forma de lidiar con esta idea y por su carácter experimental: *Beijing Preservation* (La conservación en Pekín). Su

that contemporary cultural and economic conditions exert on architecture, and help us understand some of the reasons for Koolhaas’s turn to preservation”²⁸.

The first significant fact is that there is no discrimination between what can be conserved and what cannot. The diversity²⁹ of OMA’s 26 projects shows that the value of the extraordinary, something of vital importance during the history of architectural preservation, has disappeared. “Preservation’s continued emphasis on the exceptional—what is worthy of preservation—creates its own distortion. The exceptional becomes the normal. There are no thoughts of preserving the mediocre, the generic”³⁰.

The fact that everything can be preserved is linked to another feature: its increasing size. First just monuments, then buildings, then buildings and their surroundings, then entire neighborhoods, cultural landscapes or historical-cultural landscapes (Fig. 12).

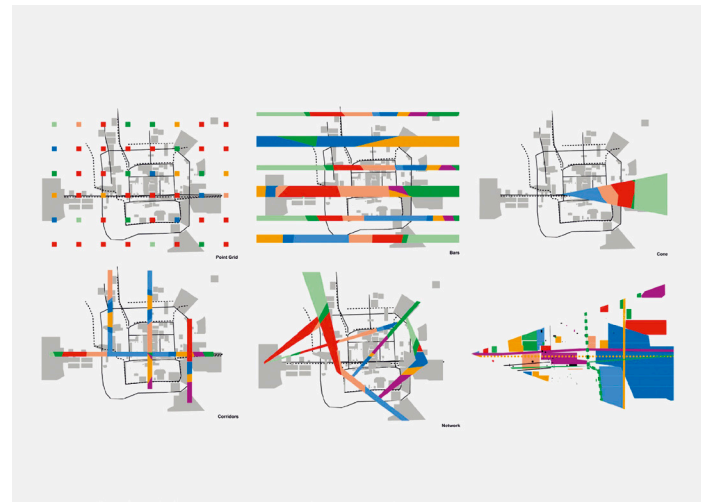
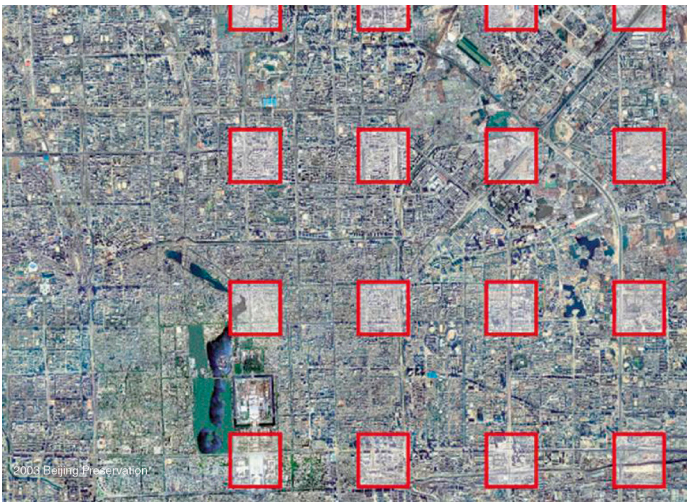
Interest in the generic is something shared by *Cronocaos* and *Reduce / Reuse / Recycle: Architecture as Resource*, but Koolhaas’ vision, in addition to being precocious, goes much further and touches on another key idea: de-specialization.

The second relevant fact extracted from *Cronocaos* is that Koolhaas, from his outer stronghold, breaks into a field that is reticent towards unspecialized outsiders. OMA is testing new, less invasive ways of dealing with the pre-existing and, above all, asks whether or not it is necessary to intervene/do so.

Among the 26 projects in the exhibition, one is particularly interesting because of

· 28
Otero-Pailos, “Suplement al Manifest d’OMA”, 45.
· 29
Los ejemplos alcanzan desde edificios y paisajes reconocidos desde un punto de vista cultural, hasta ejemplos mucho más anónimos y silenciosos.
· 30
Rem Koolhaas, “Cronocaos”, 122. Traducción propia.

· 28
Otero-Pailos, “Suplement al Manifest d’OMA”, 45.
· 29
Examples range from culturally recognized buildings and landscapes to much more anonymous and silent examples.
· 30
Rem Koolhaas, “Cronocaos”, 122.



~ Fig. 13. *Beijing Preservation*: Postal de Cronocaos
Fig. 13. *Beijing Preservation*: Cronocaos postcard.

▷ Fig. 14. Patrones de *Beijing Preservation*
Fig. 14. *Beijing Preservation* patterns.

postal asociada mostraba una imagen del tejido urbano de la capital china, al que se le superponía una perfecta y enigmática cuadrícula (Fig. 13).

En 2004, Koolhaas iniciaba su conferencia *Preservation is overtaking us*³¹ (La conservación nos está adelantando) con las siguientes palabras referidas al proyecto: “En 2002 fuimos afortunados al recibir un encargo de las autoridades públicas de Pekín que nos permitió investigar y definir una forma específica de conservación para China. Este es uno de esos momentos únicos en que nos acercamos, y debo decir que puede que este proyecto sea en el que más cerca he estado, a uno de mis sueños utópicos que consiste en encontrar una arquitectura que no hace nada. Siempre me ha horrorizado el hecho de que la abstinencia nunca sea considerada como una de las partes del repertorio arquitectónico. Tal vez en la arquitectura, una profesión de la que fundamentalmente se espera la modificación de las cosas que encuentra (normalmente antes de reflexionar), debería haber una parte igualmente importante preocupada por no hacer nada”³².

Puestos a imaginar cómo intervenir sobre Pekín como una preexistencia, Koolhaas rechaza un estudio concienzudo que determine los puntos excepcionales o extraordinarios a poner en valor o recuperar. Por el contrario, ensaya una serie de patrones genéricos (cuadrícula, barras, cono, bandas y mallas) que se superponen automáticamente a la ciudad³³ y delimitan qué debe valorarse y qué no (Fig. 14).

“Empezamos a concebir e imaginar que podíamos superponer sobre el centro de Pekín una especie de código de barras y declarar que las bandas de ese código podían tanto ser conservadas como sistemáticamente arrasadas. De

its way of dealing with this idea and its experimental nature: *Beijing Preservation*. Its associated postcard showed an image of the urban fabric of the Chinese capital, overlaid with a perfect and enigmatic grid (Fig. 13).

In 2004, Koolhaas began his lecture *Preservation is overtaking us*³¹ with the following words about the project: “In 2002 we were fortunate to receive a commission from the Beijing public authorities that allowed us to investigate and define a specific form of preservation for China. This is one of those unique moments when we come close, and I must say that this project may be the closest I have ever come, to one of my utopian dreams of finding an architecture that does nothing. I have always been horrified by the fact that abstinence is never considered as one of the parts of the architectural repertoire. Perhaps in architecture, a profession that fundamentally expects modification of the things it encounters (usually before reflection), there should be an equally important part concerned with doing nothing”³².

In imagining how to intervene on Beijing as a pre-existence, Koolhaas rejects a thorough study that determines the exceptional or extraordinary points to be highlighted or recovered. On the contrary, he rehearses a series of generic patterns (grid, bars, cone, bands and meshes) that are automatically superimposed on the city³³ and delimit what is to be valued and what is not (Fig. 14).

“We began to conceive and imagine that we could superimpose over the center of Beijing a kind of bar code and declare that the bands of that code could both be preserved and systematically obliterated.

· 31
Impartida en la Universidad de Columbia (Nueva York) el 17 de septiembre de 2004.

· 32
Rem Koolhaas, *Preservation is overtaking us* (New York: GSAPP, 2014), 13. Traducción propia.

· 33
Como algunas las obras de Sol Lewitt en las que superponía formas geométricas a planos de ciudades como Florencia, Ámsterdam, Chicago o Nueva York.

· 31
Columbia University (New York) on September 17, 2004.

· 32
Rem Koolhaas, *Preservation is overtaking us* (New York: GSAPP, 2014), 13.

· 33
Like some of Sol Lewitt's works in which he superimposed geometric shapes on plans of cities such as Florence, Amsterdam, Chicago or New York.

esa forma, tendríamos la certeza de que hemos conservado todo de una forma democrática e imparcial—autovías, monumentos, cosas malas, cosas buenas, cosas feas, cosas mediocres—y, por lo tanto, manteniendo realmente una condición auténtica”³⁴. Como consecuencia de esa imparcialidad aflora, a priori³⁵, una tendencia que favorece los automatismos proyectuales. Existe una *zona desmoralizada*³⁶, tal y como la denomina Otero-Pailos, un lugar intelectual ajeno a las decisiones personales, ajeno al *sí hacer* productivo y al *no hacer* nihilista, diferente tanto del extremismo de Viollet-le-Duc como del de Ruskin.

Respuesta vacilante frente a respuesta especializada

“El trabajo del arquitecto no consiste solo en construir. Primero consiste en considerar una pregunta, una situación, y entonces entender la complejidad de la situación. Finalmente dar una respuesta. A veces la respuesta es construir mucho. A veces es construir muy poco. A veces es construir nada, hacer nada”³⁷.

Ha quedado patente que existe otra respuesta alternativa, en la que desaparece lo extraordinario, otra respuesta que desborda a la intervención activa y enérgica sobre cualquier preexistencia.

Como explica Byung-Chul Han en referencia a la *sociedad positiva*, este otro tipo de contestación es vacilante y es un acto contestatario frente a cualquier tendencia activa y de defensa de lo extraordinario: “La pura actividad solo prolonga lo ya existente. Una verdadera vuelta hacia lo otro requiere la negatividad de la interrupción. Tan solo a través de la negatividad propia del detenerse, el sujeto de acción es capaz de atravesar el espacio entero de la contingencia, el cual se sustrae de una mera actividad. Ciertamente, la vacilación no es una acción positiva, pero vacilar es imprescindible para que la acción no decaiga al nivel del trabajo. Hoy en día vivimos en un mundo muy pobre en interrupciones, en entres y entre-tiempos”³⁸.

Lo anterior podría aplicarse al mundo especializado de la *conservación* arquitectónica y establecer una interrupción de cualquier respuesta inmediata y repetitiva. Pasando a instaurar un momento de vacilación en el que contemplar y valorar, con detenimiento, cualquier proyecto preexistente que nos ocupe.

· 34
Koolhaas, *Preservation is overtaking us*, 16-17. Traducción propia.

· 35
La realidad a posteriori sería bien distinta puesto que esas inofensivas líneas divisorias encerrarían múltiples complejidades y puntos de conflicto, despojando a la yuxtaposición de su, a priori, amable democracia e imparcialidad.

· 36
Otero-Pailos, “Suplement al Manifest d'OMA”, 48.

· 37
Anne Lacaton and Jean-Philippe Vassal, *Freedom of use* (Berlin: Sternberg Press, 2015), 57. Traducción propia.

· 38
Byung-Chul Han, *La sociedad del cansancio* (Barcelona: Herder, 2012), 55.

That way, we would be certain that we had preserved everything in a democratic and impartial way —roads, monuments, bad things, good things, ugly things, mediocre things— and, therefore, really maintaining its authentic character”³⁴. As a consequence of this impartiality, a tendency to favor projectual automatisms emerges³⁵. There is a demoralized zone³⁶, as Otero-Pailos calls it, an intellectual place alien to personal decisions, alien to productive doing and nihilistic non-doing, different from both Viollet-le-Duc’s and Ruskin’s extremism.

Hesitant vs. specialized response

“The architect’s job is not just to build. It is first to consider a question, a situation, and then to understand the complexity of the situation. Finally to give an answer. Sometimes the answer is to build a lot. Sometimes it is to build very little. Sometimes it is to build nothing, to do nothing”³⁷.

It has become clear that there is another alternative response, in which the extraordinary disappears, another response that overflows the active and energetic intervention on any pre-existence.

As Byung-Chul Han explains in reference to positive society, this other type of response is hesitant and is an act of resistance to any active tendency to defend the extraordinary: “Pure activity only prolongs what already exists. A true return to the other requires the negativity of interruption. Only through the negativity of stopping, the subject of action is able to cross the entire space of contingency, which is subtracted from mere activity. Certainly, hesitation is not a positive action, but hesitation is indispensable for action not to decline to the level of work. Today we live in a world very poor in interruptions, in between-times and in-between-times”³⁸.

The above could be applied to the specialized world of architectural preservation and establish an interruption of any immediate and repetitive response. We would then establish a moment of hesitation in which to contemplate and evaluate, in detail, any pre-existing project that occupies us.

· 34
Koolhaas, *Preservation is overtaking us*, 16-17.

· 35
The subsequent reality would be quite different since these harmless dividing lines would enclose multiple complexities and points of conflict, stripping the juxtaposition of its, a priori, amiable democracy and impartiality.

· 36
Otero-Pailos, “Suplement al Manifest d'OMA”, 48.

· 37
Anne Lacaton and Jean-Philippe Vassal, *Freedom of use* (Berlin: Sternberg Press, 2015), 57.

· 38
Byung-Chul Han, *La sociedad del cansancio* (Barcelona: Herder, 2012), 55.



Fig. 15. Jean Nouvel. Teatro en Belfort
Fig. 15. Jean Nouvel. Belfort theatre.

Observar lo construido y, eventualmente, decidir hacer muy poco es una posibilidad que cortocircuita ciertos protocolos arquitectónicos prefijados. Como muestra, la valoración que dio el ayuntamiento de Burdeos cuando Lacaton & Vassal propusieron su célebre respuesta vacilante para la plaza Léon Aucoc: “Vale, ¿pero no queréis hacer nada?... No lo entendemos... normalmente a los arquitectos les gusta cambiar, diseñar mobiliario, bancos...”³⁹.

Conclusión

Según lo define el historiador George Kubler, el devenir biológico del tiempo conlleva “[...] duraciones ininterrumpidas de longitud estadísticamente predecible; cada organismo existe desde que nace hasta que muere, según una esperanza de vida ‘supuesta’”⁴⁰. Kubler, para reprobar la existencia de un relato único e ininterrumpido en el mundo del arte, continúa y presenta a los estilos artísticos como organismos que nacen y mueren: “Los estilos se comportan como una planta. Sus primeras hojas son pequeñas y de configuración imprecisa; las de su vida media están plenamente formadas, y sus últimas hojas vuelven a ser pequeñas, pero de formas intrincadas”⁴¹.

Hoy en día, como parte de una etapa más dentro de ese supuesto discurrir biológico del tiempo, ¿en qué estilo nos encontraríamos? El estilo de las intervenciones contemporáneas sobre lo construido podría ser el reciclaje. Prueba de ello, la aparición de múltiples proyectos, publicaciones⁴² y exposiciones que lo han traído hasta el primer plano arquitectónico.

Sin embargo, influido por la positividad e inmediatez del mundo en que vivimos, puede que el reciclaje —como posible estilo ideológico— se haya visto tan contaminado que ahora solo consista en una cuestión estética (Fig. 15). Por desgracia, se puede entender el reciclaje como un simple hecho visual que convierta preexistencias en preexistencias decoradas. “[...] un nuevo barroco surge a través de decoraciones basadas en huellas y cicatrices [...]”⁴³.

Llegado este punto, resultan interesantes las palabras que Iñaki Ábalos pronunciaba, en una charla de Lacaton & Vassal en Harvard, para definir la condición estética del estudio francés y que redundan en el aspecto de las ruinas decoradas: “Dejadme concluir con un comentario

Observing what has been built and, eventually, deciding to do very little is a possibility that short-circuits certain prefixed architectural protocols. As an example, the assessment given by the Bordeaux City Council when Lacaton & Vassal proposed their famous hesitant response for the Place Léon Aucoc: “Okay, but don’t you want to do anything?... We don’t understand... architects usually like to change, to design furniture, benches...”³⁹.

Conclusion

As defined by historian George Kubler, the biological passage of time entails “[...] uninterrupted durations of statistically predictable length; each organism exists from birth to death, according to an ‘assumed’ life expectancy”⁴⁰. Kubler, in order to reprove the existence of a single, uninterrupted narrative in the art world, continues and presents artistic styles as organisms that are born and die: “Styles behave like a plant. Its first leaves are small and of imprecise configuration; those of its middle life are fully formed, and its last leaves are small again, but of intricate forms”⁴¹.

Today, as part of one more stage in this supposed biological flow of time, what style would we find ourselves in? The style of contemporary interventions on the built could be recycling. Proof of this is the appearance of multiple projects, publications⁴² and exhibitions that have brought it to the architectural forefront.

However, influenced by the positivity and immediacy of the world we live in, recycling —as a possible ideological style— may have become so contaminated that it now consists only of an aesthetic issue (Fig. 15). Unfortunately, recycling can be understood as a simple visual fact that turns preexistences into decorated preexistences. “[...] a new baroque emerges through decorations based on traces and scars [...]”⁴³.

At this point, the words that Iñaki Ábalos pronounced in a Lacaton & Vassal lecture at Harvard are useful to define the aesthetic condition of the French studio and relate to the appearance of the decorated ruins: “Let me conclude with a comment about

· 39
Lacaton y Vassal, *Freedom of use*, 57. Traducción propia.
· 40
George Kubler, *La configuración del tiempo* (Madrid: Nerea, 1988), 70.
· 41
Kubler, *La configuración del tiempo*, 65-66.
· 42
Véanse: *Quaderns*, no. 263 (2011) / *ARQ*, no. 88 (2014) / *ON Diseño*, no. 352 (2015) / Etc
· 43
Juan José López de la Cruz, *Proyectos encontrados: arquitecturas de la alteración y el desvelo* (Sevilla: Recolectores Urbanos, 2012), 71

· 39
Lacaton y Vassal, *Freedom of use*, 57.
· 40
George Kubler, *La configuración del tiempo* (Madrid: Nerea, 1988), 70.
· 41
Kubler, *La configuración del tiempo*, 65-66.
· 42
See: *Quaderns*, no. 263 (2011) / *ARQ*, no. 88 (2014) / *ON Diseño*, no. 352 (2015) / Etc
· 43
Juan José López de la Cruz, *Proyectos encontrados: arquitecturas de la alteración y el desvelo* (Sevilla: Recolectores Urbanos, 2012), 71.

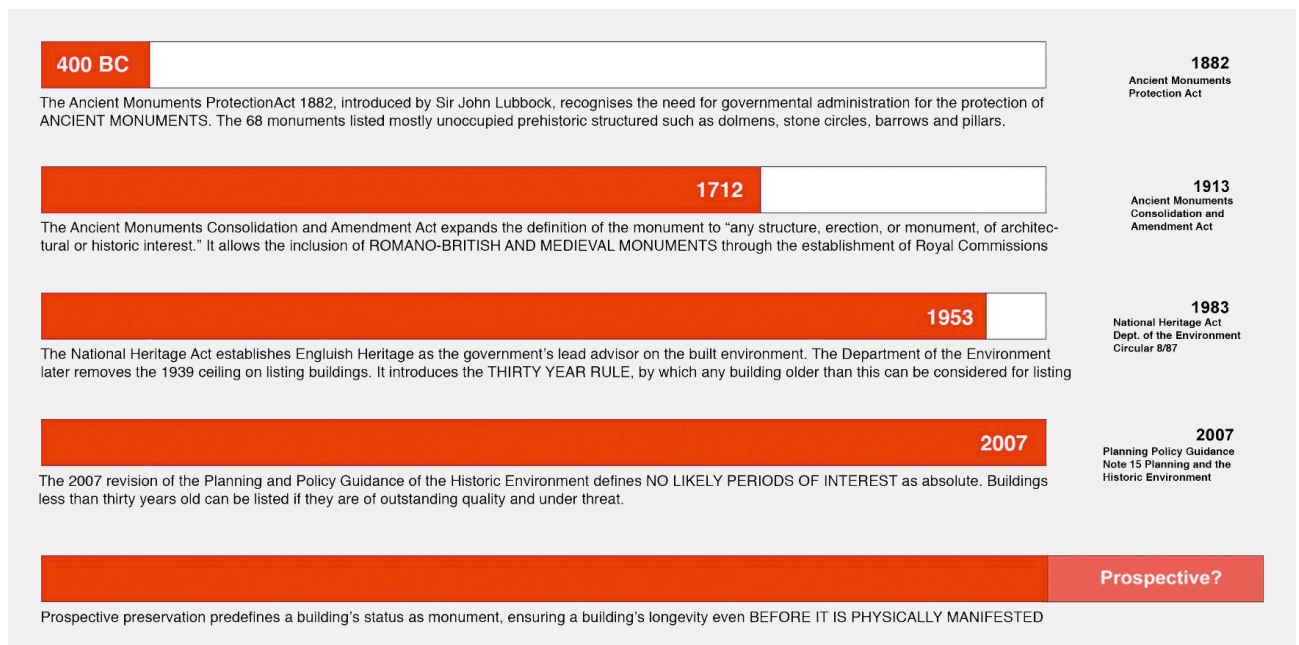


Fig. 16. Esquema de Preservation is overtaking us
Fig. 16. Preservation is overtaking us diagram.

acerca de vuestra estética. Como Jean-Philippe dijo al final, amáis la arquitectura moderna, pero al mismo tiempo, también os gusta una especie de adhocismo⁴⁴ para las cosas que están casi en estado de ruina. Una predisposición por dejarlas no como ruinas decoradas, sino como ruinas sin decorar que funcionan bien⁴⁵.

Superar la mera decoración de lo construido pasa por saltar de una naturaleza retrospectiva a otra prospectiva. Y es que, como Koolhaas detectó en su conferencia 'Preservation is overtaking us', puede que ya no estemos ante una actividad que mire hacia atrás. Cada vez más, se está reduciendo el intervalo entre el presente y lo que se puede conservar: "En 1818, eran 2000 años. En 1900, tan solo 200 años. Y en los años 60 llegó a ser 20 años. Estamos viviendo un momento interesante, pero absurdo, donde la conservación nos está adelantando. Puede que seamos los primeros en experimentar el momento en que la conservación no sea más una actividad retroactiva sino una actividad prospectiva⁴⁶". (Fig. 16).

En este sentido, y también en el de las frases anteriores de Ábalos, lo construido destierra cualquier valor visual y pasa a proyectarse hacia

your aesthetics. As Jean-Philippe said at the end, you love modern architecture, but at the same time, you also like a kind of adhocism⁴⁴ for things that are almost in a state of ruin. A willingness to leave them not as decorated ruins, but as undecorated ruins that work well⁴⁵.

Transcending the mere decoration of what has been built involves leaping from a retrospective nature to a prospective one. And, as Koolhaas detected in his conference 'Preservation is overtaking us', we may no longer be facing an activity that looks to the past. Increasingly, the time between the present and what can be preserved is shrinking: "In 1818, it was 2000 years. In 1900, it was only 200 years. And in the 1960s it was 20 years. We are living in an interesting but absurd moment, where preservation is overtaking us. We may be the first to experience the moment when preservation is no longer a retroactive activity but a prospective activity⁴⁶". (Fig. 16).

In this sense, and also in that of Ábalos's previous statements, what has been built banishes any visual value and projects itself

⁴⁴ Término utilizado por el arquitecto y teórico Charles Jencks para describir el diseño que surge de la combinación de elementos pre-existentes, cuyo resultado es un nuevo producto/objeto.

⁴⁵ Lacaton y Vassal, *Freedom of use*, 60. Traducción propia.

⁴⁶ Koolhaas, *Preservation is overtaking us*, 15-16. Traducción propia

⁴⁷ Anne Lacaton respondió a la reflexión-pregunta de Iñaki Ábalos diciendo: "Todo tiene que ver con la libertad. Queremos libertad".

⁴⁸ Lacaton y Vassal, *Freedom of use*, 63. Traducción propia.

⁴⁹ Jorge Luis Borges, *El jardín de senderos que se bifurcan* (Buenos Aires: Sur, 1941).

⁴⁴ Term used by architect and theorist Charles Jencks to describe design that arises from the combination of pre-existing elements, resulting in a new product/object.

⁴⁵ Lacaton y Vassal, *Freedom of use*, 60.

⁴⁶ Koolhaas, *Preservation is overtaking us*, 15-16.

⁴⁷ Anne Lacaton responded to Iñaki Ábalos' thought-question by saying: "Everything has to do with freedom. We want freedom".

⁴⁸ Lacaton y Vassal, *Freedom of use*, 63.

⁴⁹ Jorge Luis Borges, *El jardín de senderos que se bifurcan* (Buenos Aires: Sur, 1941).

un momento futuro, ajeno a la mirada retrospectiva del tiempo biológico. Ya no hay restitución decorativa del pasado, sino que se proyectan, hacia delante, nuevos grados de libertad⁴⁷. Como apuntaba Anne Lacaton: “La libertad también puede ser un tipo de estética”⁴⁸.

Este otro entendimiento del tiempo recuerda a aquel que Borges relataba en su cuento *El jardín de senderos que se bifurcan*: “A diferencia de Newton y de Schopenhauer, su antepasado no creía en un tiempo uniforme, absoluto. Creía en infinitas series de tiempos, en una red creciente y vertiginosa de tiempos divergentes, convergentes y paralelos. Esa trama de tiempos que se aproximan, se bifurcan, se cortan o que secularmente se ignoran, abarca todas las posibilidades”⁴⁹.

El entendimiento discontinuo del tiempo parece consecuente con la oportunidad, expuesta en este artículo, de enfrentarse de otra forma frente lo construido. Intervenir no pasa por sentirse obligado a establecer, decorativamente, el renacimiento de un estilo o forma del pasado. Intervenir pasa por proyectar posibilidades ramificadas.

Una de esas múltiples posibilidades es una deriva cuyo esfuerzo es de baja intensidad. Una deriva más cercana a la observación que a la actividad.

towards a future moment, outside the retrospective gaze of biological time. There is no longer a decorative restitution of the past, but new degrees of freedom⁴⁷ are projected forward. As Anne Lacaton pointed out: “Freedom can also be a type of aesthetics”⁴⁸.

This other understanding of time is reminiscent of the one Borges recounted in his short story *The Garden of Forking Paths*: “Unlike Newton and Schopenhauer, his ancestor did not believe in a uniform, absolute time. He believed in infinite series of times, in a growing and vertiginous web of diverging, converging and parallel times. That web of times approaching, bifurcating, cutting each other off or secularly ignoring each other, embraces all possibilities”⁴⁹.

The interrupted understanding of time seems to be consistent with the opportunity, presented in this article, to face what has been built in a different way. Intervening does not mean feeling obliged to establish, decoratively, the rebirth of a past style or form. To intervene is to project ramified possibilities.

One of these multiple possibilities is a low intensity drift. A drift closer to observation than to activity.

Procedencia de las imágenes

- Fig. 1. Elaboración propia.
Fig. 2. Leeser, Jörg y Urs Füssler. “The Flower Shop in Oberbarmen: The Wuppertal Studio and Seminar”. *Candide. Journal for Architectural Knowledge*, no. 4 (2011): 37-68.
Fig. 3. Brook, Peter. *The Shifting Point: Theatre, Film, Opera 1946-1987*. Nueva York: Harper & Row, 1989.
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Fig. 5. <http://www.dienerdiener.ch/>
Fig. 6. <http://www.dienerdiener.ch/>
Fig. 7. <http://www.dienerdiener.ch/>
Fig. 8. Chipperfield, David. *Neues Museum Berlin*. Berlin: Walther König, 2009.
Fig. 9. Chipperfield, David. *Neues Museum Berlin*. Berlin: Walther König, 2009.
Fig. 10. <https://oma.eu/>
Fig. 11. <https://oma.eu/>
Fig. 12. <https://oma.eu/>
Fig. 13. <https://oma.eu/>
Fig. 14. <https://oma.eu/>
Fig. 15. Boissiere, Oliver. *Jean Nouvel*. Paris: Terrail, 1996.
Fig. 16. Koolhaas, Rem. *Preservation is overtaking us*. Nueva York: GSAPP, 2014.

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Source of illustrations

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La crisis cultural arquitectónica en el entorno digital: una cuestión pendiente

The architectural cultural crisis in the digital environment: a pending question

Beatriz Villanueva Cajide
Francisco Javier Casas Cobo

Resumen

Desde su aplicación generalizada al diseño arquitectónico en los primeros años 90s, las herramientas digitales le han aportado innegables beneficios, entre los que destacan los derivados de su excelente capacidad gestora de información y su competencia para producir nuevos desarrollos geométricos. Sin embargo, paralelamente a estos avances, han acentuado la crisis cultural que la disciplina viene sufriendo desde la segunda mitad del pasado siglo. La incorporación del conocimiento arquitectónico acumulado en períodos anteriores resulta especialmente difícil en el caso de los diseños arquitectónicos auto-generados, de base algorítmica. El presente artículo propone la utilización del manifiesto, entendido como texto propositivo de clara estructura y corta longitud, como vehículo cultural apropiado para su utilización en proyectos arquitectónicos basados en el cálculo. Para conseguirlo, es necesario comprender y acotar el género, diseccionándolo después, de manera que sus partes elementales enriquezcan la variedad paramétrica que nutre las conexiones algorítmicas del diseño arquitectónico digital.

Palabras clave: manifiesto arquitectónico, parametricismo, herramientas digitales, crisis cultural arquitectura contemporánea, arquitectura digital

Abstract

From their widespread utilisation in architectural design at the beginning of the 90s, digital tools have provide it with undeniable benefits, among which the ones derived from their excellent capacity of managing information and their ability to produce new geometrical developments, stand out. However, concurrently to these improvements, they have emphasised the cultural crisis the discipline is suffering from the second half or the past century. The inclusion of the previously accumulated architecture knowledge is specially complex in the case of algorithm-based, self-generated architectural designs processes.

The aim of the present article is to propose the use of the manifesto, understood as a clearly structured and brief propositional text, as cultural vehicle suitable for calculus based architectural design processes. To achieve that, it is necessary first to understand and narrow down the genre, dissecting it later, so that its elemental parts would enrich the parametric variety that feeds the algorithmic connections of the digital architectural design.

Keywords: architectural manifesto, parametricism, digital tools, contemporary architecture cultural crisis, digital architecture

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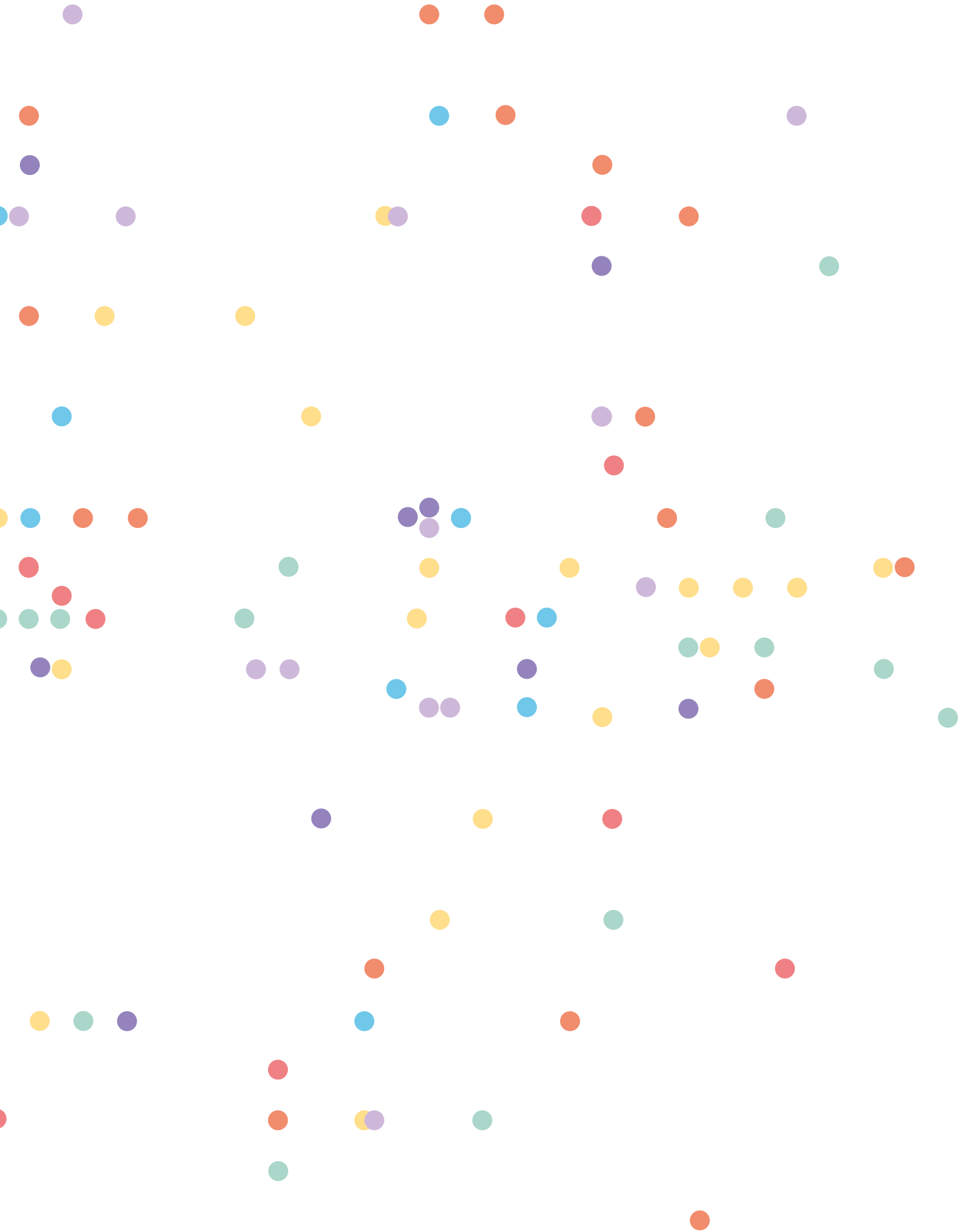
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Introducción: La relevancia del manifiesto en la arquitectura del siglo XXI

Una primera cuestión que se plantea ante la propuesta de recuperar el manifiesto como referencia del pensamiento arquitectónico contemporáneo es la de su relevancia en el momento actual.

“A principios del siglo veintiuno, surge la pregunta: ¿vale la pena revisar la idea del manifiesto en arquitectura, de una forma o declaración que establece objetivos y direcciones para la práctica? Las influencias intermedias del postestructuralismo y el feminismo advierten contra los discursos universales y absolutos de los manifiestos anteriores.”¹

En este sentido, como se deduce de la cita anterior, los principales problemas que se plantean conciernen, específicamente, al tono y a un cierto efluvio extemporáneo que se asocian con el propio formato. Sin embargo, pese a la lógica consecuencia que podría deducirse de las palabras de Tschumi, un estudio recopilatorio de los manifiestos que durante el siglo XX han tratado el tema de la arquitectura², muestra una tendencia creciente hacia el final del siglo, acompañada, además, de una progresiva riqueza temática (Fig. 01).

Martin Puchner encuentra una posible explicación a dicha aparente contradicción en el sentido político que el imaginario popular asocia al manifiesto. En su libro, “Poetry Of The Revolution: Marx, Manifestos and The Avant Gardes”³, Puchner atribuye al “Manifiesto Comunista”⁴ la creación del género, más por la influencia que este texto tuvo desde su publicación a me-

Introduction: the relevance of Manifesto in the architecture of the XX century

A first question that arises before the proposal to recover the manifesto as a reference of the contemporary architectural thought is that of its relevance at the present time.

“At the beginning of the twenty-first century, the question arises: is it worth revisiting the idea of the manifesto in architecture, of a form or declaration that asserts goals and directions for the practice? The intervening influences of poststructuralism and feminism caution against the universal and absolute discourses of earlier manifestos.”¹

In this sense, as it can be deduced from the previous quote, the main problems concern, specifically, the tone and a certain extemporaneous effluvia that belong within the format itself. However, despite the logical consequence that could be deduced from Tschumi's words, a compiling study of the manifestos that have dealt with the subject of architecture² during the 20th century shows a growing trend towards the end of the century, along with a progressive thematic richness (Fig. 01).

Martin Puchner finds a possible explanation for this apparent contradiction in the political sense that the popular imagination associates with the manifesto. In his book, “Poetry Of The Revolution: Marx, Manifestos and The Avant Gardes”³, Puchner attributes the creation of the genre to the “Communist Manifesto”,⁴ more because of the influence that this text had since its publication in the middle of the

1
Bernard Tschumi e Irene Cheng, *The State of Architecture at the Beginning of the 21st Century* (Nueva York: The Monacelli Press, 2003), 8.

“At the beginning of the twenty-first century, the question arises: is it worth revisiting the idea of the manifesto in architecture, of a form or declaration that asserts goals and directions for the practice? The intervening influences of poststructuralism and feminism caution against the universal and absolute discourses of earlier manifestos.”

2
Dicho estudio se ha realizado a partir de un análisis de los textos que aparecen en diversos artículos y libros recopilatorios, destacando principalmente:

· Mary Ann Caws, *Manifesto: A Century of Isms* (Lincoln: University of Nebraska Press, 2001).

· Ulrich Conrads y Michael Bullock, *Programs and Manifestoes on 20th-Century Architecture* (Cambridge, MA: MIT Press, 1975).

· K. Michael Hays, ed., *Architecture Theory Since 1968* (Cambridge, MA: The MIT Press, 2000).

· Charles Jencks y Karl Kropf, *Theories and Manifestoes of Contemporary Architecture* (Chichester: Wiley Academy, 2008).

· Justin McGuirk, ed., “Manifestos”, *Icon Magazine*, n.º 50 (2007). Iconeye.com <https://www.iconeye.com/404/itemlist/category/534-manifestos>.

· Joan Ockman y Edward Eigen, eds., *Architecture Culture, 1943-1968: A Documentary Anthology* (Nueva York: Columbia University Graduate School of Architecture, Planning and Preservation, 1993).

· Bernard Tschumi e Irene Cheng, eds., *The State of Architecture at the Beginning of the 21st Century* (Nueva York: The Monacelli Press, 2003).

· Hans Ulrich Obrist, “Manifestos for the Future”, *E-Flux Journal*, n.º 12 (2010).

<https://www.e-flux.com/journal/manifestos-for-the-future/>.

· Obrist, Hans Ulrich, “Manifiesto marathon”, en *Serpentine Gallery Manifesto Marathon: [18-19 Oktober 2008]* (Londres: König Books, 2009).

1
Bernard Tschumi and Irene Cheng, *The State of Architecture at the Beginning of the 21st Century* (Nueva York: The Monacelli Press, 2003), 8.

“At the beginning of the twenty-first century, the question arises: is it worth revisiting the idea of the manifesto in architecture, of a form or declaration that asserts goals and directions for the practice? The intervening influences of poststructuralism and feminism caution against the universal and absolute discourses of earlier manifestos.”

2
The mentioned study was done from an analysis of the text that are identified as manifestoes in several articles and compiling books, being the most relevant:

· Mary Ann Caws, *Manifesto: A Century of Isms* (Lincoln: University of Nebraska Press, 2001).

· Ulrich Conrads and Michael Bullock, *Programs and Manifestoes on 20th-Century Architecture* (Cambridge, MA: MIT Press, 1975).

· K. Michael Hays, ed., *Architecture Theory Since 1968* (Cambridge, MA: The MIT Press, 2000).

· Charles Jencks and Karl Kropf, *Theories and Manifestoes of Contemporary Architecture* (Chichester: Wiley Academy, 2008).

· Justin McGuirk, ed., “Manifestos”, *Icon Magazine*, n.º 50 (2007). Iconeye.com <https://www.iconeye.com/404/itemlist/category/534-manifestos>.

· Joan Ockman and Edward Eigen, eds., *Architecture Culture, 1943-1968: A Documentary Anthology* (New York: Columbia University Graduate School of Architecture, Planning and Preservation, 1993).

· Bernard Tschumi and Irene Cheng, eds., *The State of Architecture at the Beginning of the 21st Century* (New York: The Monacelli Press, 2003).

· Hans Ulrich Obrist, “Manifestos for the Future”, *E-Flux Journal*, n.º 12 (2010).

<https://www.e-flux.com/journal/manifestos-for-the-future/>.

· Obrist, Hans Ulrich, “Manifiesto marathon”, in *Serpentine Gallery Manifesto Marathon: [18-19 Oktober 2008]* (London: König Books, 2009).

- Grupos temáticos
Thematic groups
- Rev. Modernidad
Revision modernity
- Post-Modernidad
Post-modernity
- Moralistas-Religiosos
Moralistic-Religious
- ID. Políticas
Political ideas
- Lenguaje Arquitectónico
Architectural language
- Arq. Orgánica
Organic architecture
- Vanguardias
Avant-Gardes
- Urbanismo Unitario
Unitary urbanism
- Utopías Tecnológicas
Technological utopias
- Sostenibilidad
Sustainability
- Fenomenología
Phenomenology
- Tradicionalismo
Traditionalism
- Posicionamientos Personales
Personal positions
- Ppos. Mov. Moderno
Principles of modernity

› Fig. 1. Secuencia de fases para la selección de los nueve manifiestos analizados. Los colores de los círculos corresponden a una organización temática general que se describe en el cuadro que aparece bajo la figura. La bibliografía utilizada para la elaboración de los cuadros de manifiestos se detalla en la nota 2. Una lista ampliada de los manifiestos seleccionados se puede encontrar en la leyenda de la Fig. 04.

En los cuadros las líneas verticales representan los años de publicación de los manifiestos y la horizontal la mitad del año, distribuyéndose en la parte superior los escritos en los meses finales y en la inferior en los iniciales de cada año.

Por orden los cuadros representan los siguientes temas:
A. Manifiestos relativos a temas de arquitectura y urbanismo escritos entre 1900 y 2008.

B. Debido a su complejidad se eliminan los manifiestos sobre temas de urbanismo, con lo que el cuadro siguiente muestra los manifiestos relativos a temas de arquitectura escritos entre 1900 y 2008.

Fig. 1. Phase sequence for the selection of the nine analyzed manifestos. The colors of the circles correspond to the general thematic organization described in the table below. The bibliography used for the elaboration of the manifest tables is detailed in note 2. An expanded list of the selected manifestos can be found in the legend of Fig. 04.

In the tables, the vertical lines represent the years of publication of the manifestos and the horizontal lines the half of the year, the written ones being distributed in the upper part in the final months and in the lower part in the initials of each year.

In order the tables represent the following topics:
A. Manifests related to architecture and planning written between 1900 and 2008.

B. Due to their complexity all manifests about urban planning are disregarded. The result is shown in this table.

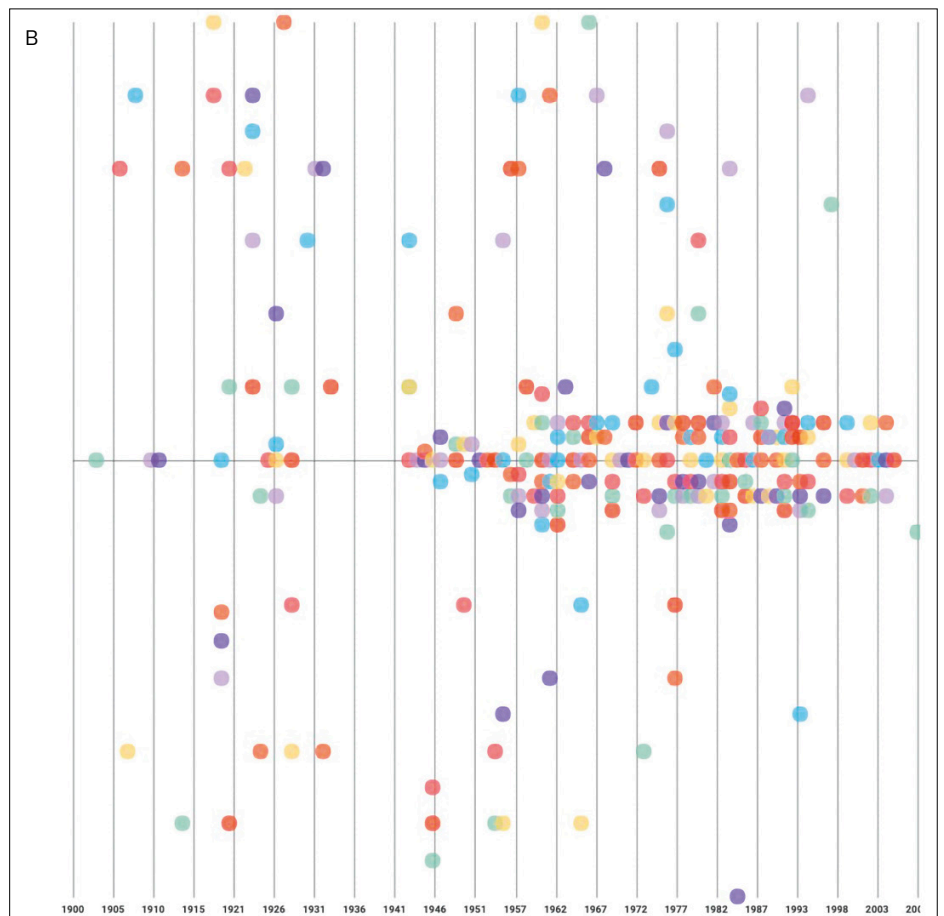
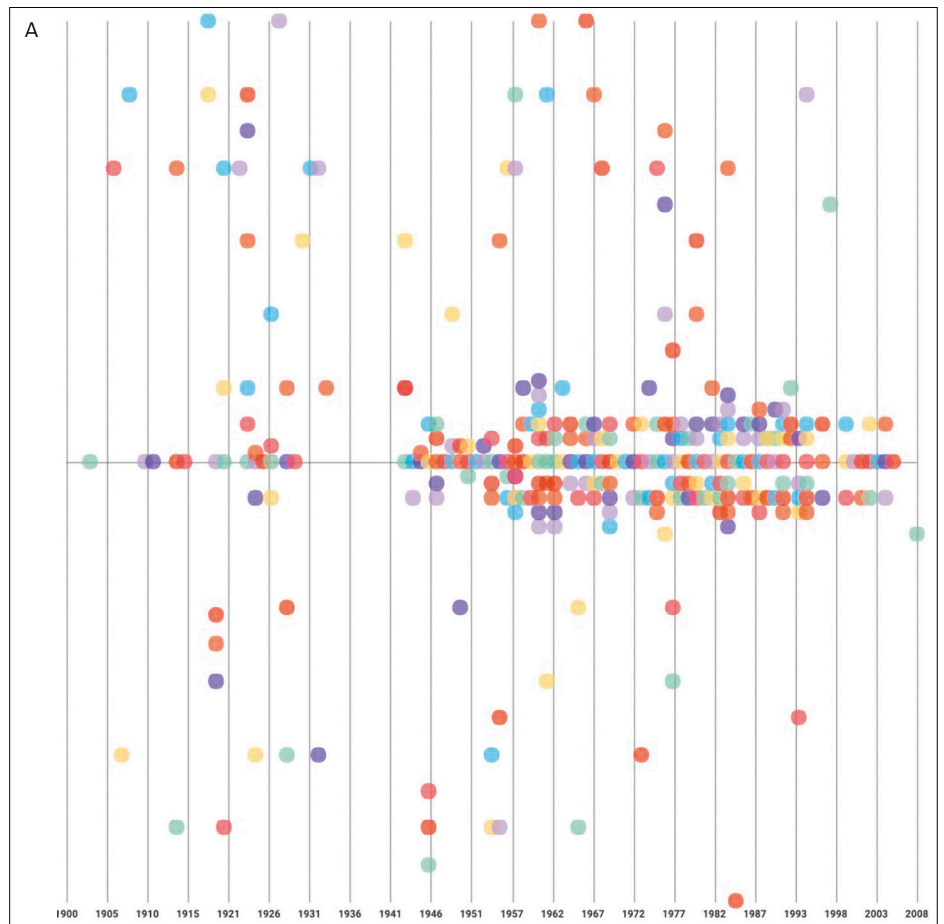
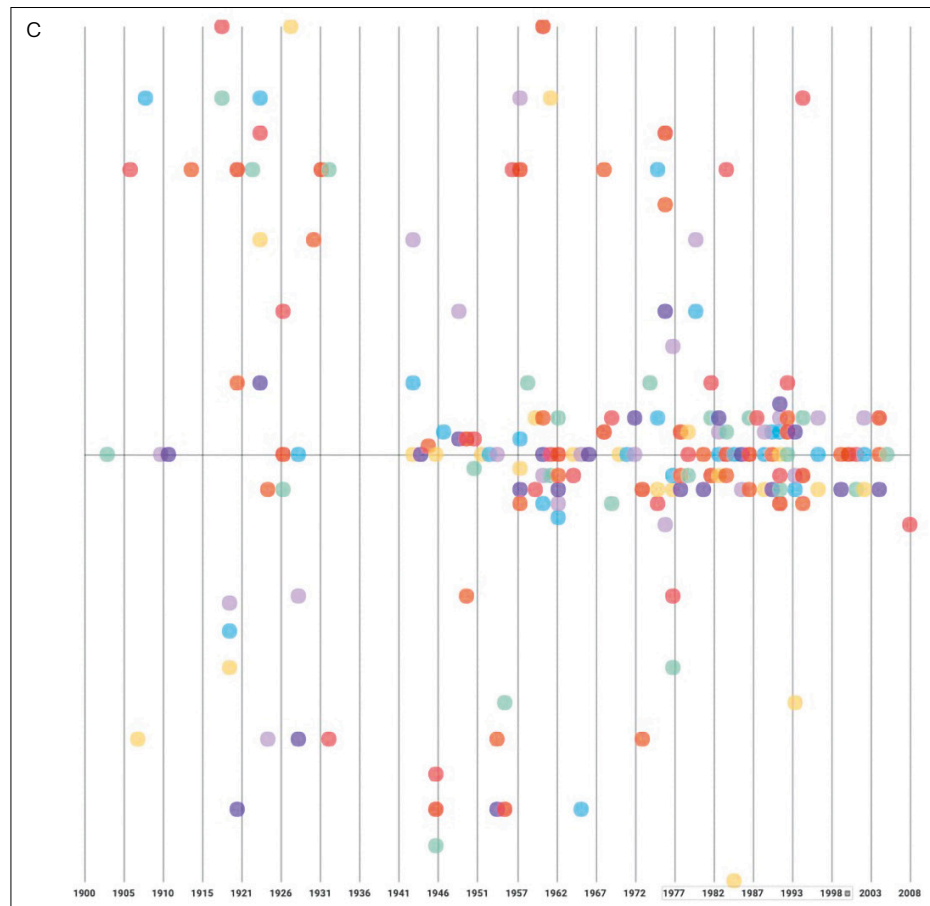


Fig 1. C. El fin del artículo es proponer un sistema que pueda llevarse a cabo en la práctica, por lo que se eliminan todos los manifiestos escritos por arquitectos teóricos. El cuadro muestra, pues, los manifiestos relativos a temas de arquitectura y escritos por arquitectos-constructores. (ver nota 25)

Fig 1. C. The aim of the article is to propose a system that can be put into practice, so the manifests written by theorist are eliminated. The figure shows manifests written by architect-builders (see note 25) between 1900 and 2008.



diados del s. XIX, que porque fuera, ni mucho menos, el primer manifiesto de la historia. La simplificación que conlleva la identificación del género con el texto de Marx y Engels, limita enormemente las posibilidades del formato, al identificarlo con su tono agresivo, su intención rupturista e, incluso, su ideología comunista. Como explica el propio Puchner, el manifiesto ha sido ampliamente utilizado antes y después del “Manifiesto Comunista”, con lo que dicha simplificación, aunque muy común, no es en absoluto precisa. Su influencia podría, además, no deberse tanto a su carácter político o revolucionario, si no a su claridad estructural y comunicativa. Dichas cualidades van a seducir a los artistas de las vanguardias, que comienzan a utilizar masivamente el manifiesto como texto fundacional de los movimientos que proponen.

“El manifiesto fue, desde el principio, y así ha seguido siendo, una manipulación deliberada de la opinión pública. Estableciendo los términos de la fe hacia la que el público oyente debe ser influido, es un documento ideológico, diseñado para convencer y convertir.

s. XIX, that because it was, far from it, the first manifesto in history. The simplification that the identification of the genre with the text of Marx and Engels entails, narrows significantly the possibilities of the format, as it is linked with its aggressive tone, its disruptive intention and, even, its communist ideology. As Puchner himself explains, the manifesto has been widely used before and after the “Communist Manifesto”; thus, this simplification, although very common, is not at all accurate. Its influence might be due, besides, not so much to its political or revolutionary character, but to its structural and communicative clarity. These qualities will seduce the avant-garde artists, who begin to use the manifesto extensively as the founding text of the movements they propose.

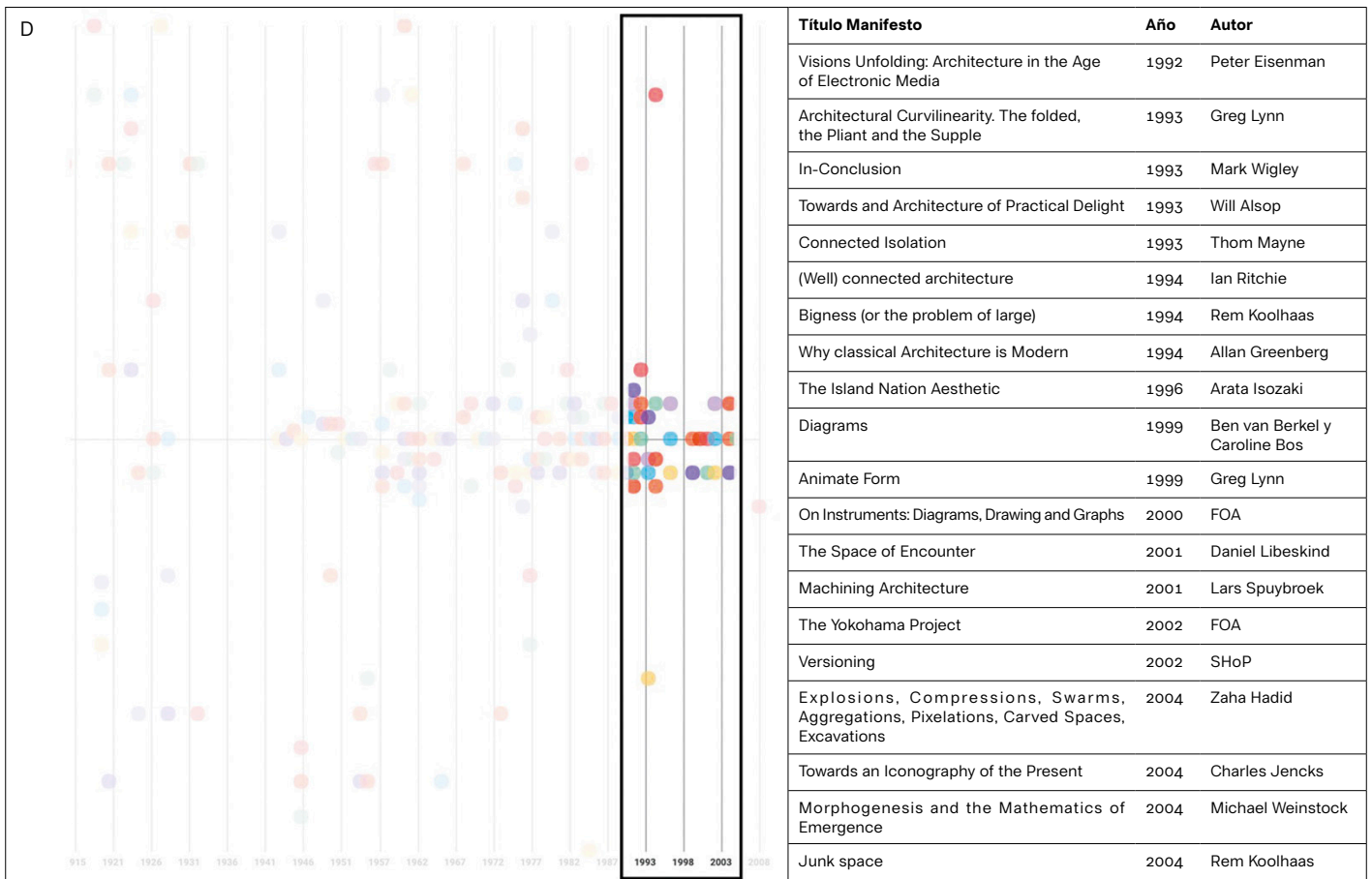
“The manifesto was from the beginning, and has remained, a deliberate manipulation of the public view. Setting out the terms of the faith toward which the listening public is to be swayed, it is a document of an ideology, crafted to convict and convert. The stance taken may be institutional or individual and independent”.⁵

³ Para más información ver: Martin Puchner, *Poetry of The Revolution: Marx, Manifestos and The Avant Gardes*, (Princeton, NJ: Univ. Press, 2006).

⁴ Originalmente publicado como: Karl Marx y Friedrich Engels, *Manifest Der Kommunistischen Partei* (Londres, 1848). En español, la traducción literal sería Manifiesto del Partido Comunista.

³ For more information: Martin Puchner, *Poetry of The Revolution: Marx, Manifestos and The Avant Gardes*, (Princeton, NJ: Univ. Press, 2006).

⁴ Published originally in German: Karl Marx and Friedrich Engels, *Manifest Der Kommunistischen Partei* (London, 1848).



› Fig 1. D. Listado de los manifiestos anteriores que se escriben durante el período de estudio (entre 1993 y 2004).
Fig 1. D. Zoom in the previous figure of the manifiestos written between 1993 and 2004

La postura adoptada puede ser institucional o individual e independiente”⁵.

La utilización del formato en el ámbito artístico introduce cambios importantes. Más que comunicar ideas, el manifiesto vanguardista busca seducir o, como afirma Mary Ann Caws en la cita anterior manipular y, debido al carácter creativo de sus autores, alcanza una extraordinaria riqueza formal. En la (Fig. 02) se puede observar la cantidad de movimientos vanguardistas que recurren al manifiesto como texto fundacional y comunicativo.⁶ Aunque dicha variedad ha contribuido, sin duda, a complicar la definición del género, también ha multiplicado sus posibilidades comunicativas, haciéndolo más atractivo también para otras disciplinas. La proliferación de manifiestos de temática arquitectónica que se ha dado a lo largo de los siglos XX y XXI podría, pues, indicar que el formato ha sabido adaptar su tono, su intención y su ideología a las diversas realidades socio-políticas con las que ha convivido.

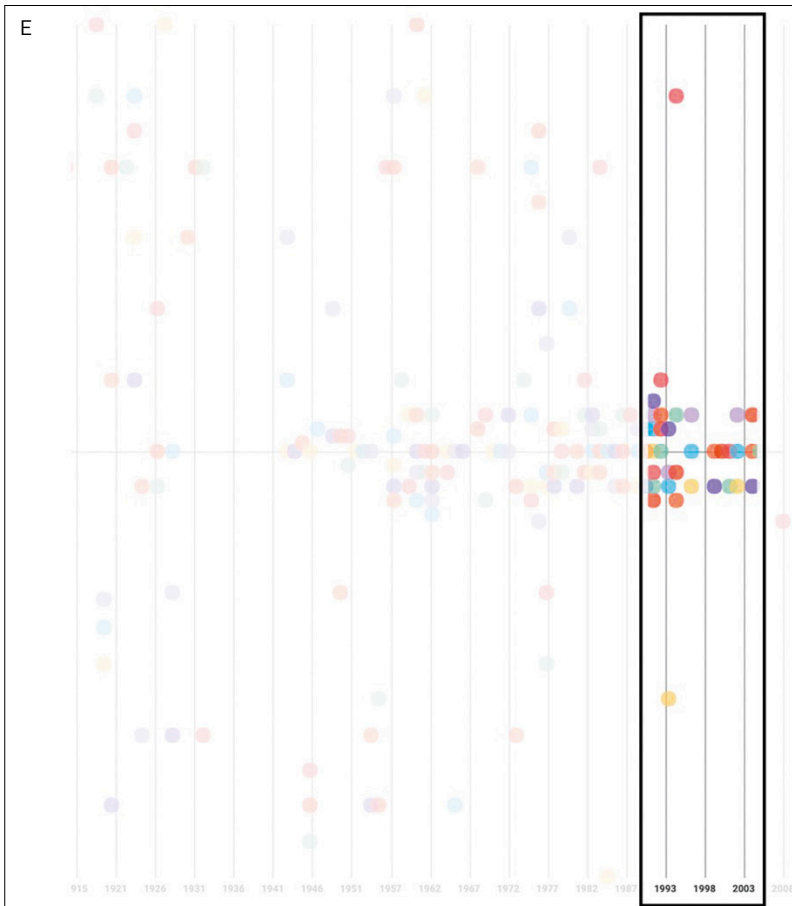
⁵ Caws, *Manifiesto*, XIX.
“The manifesto was from the beginning, and has remained, a deliberate manipulation of the public view. Setting out the terms of the faith toward which the listening public is to be swayed, it is a document of an ideology, crafted to convict and convert. The stance taken may be institutional or individual and independent”.

⁶ Los movimientos y manifiestos relativos a los mismos que han sido incluidos en el diagrama son solamente los incluidos en el libro, Caws, *Manifiesto*.

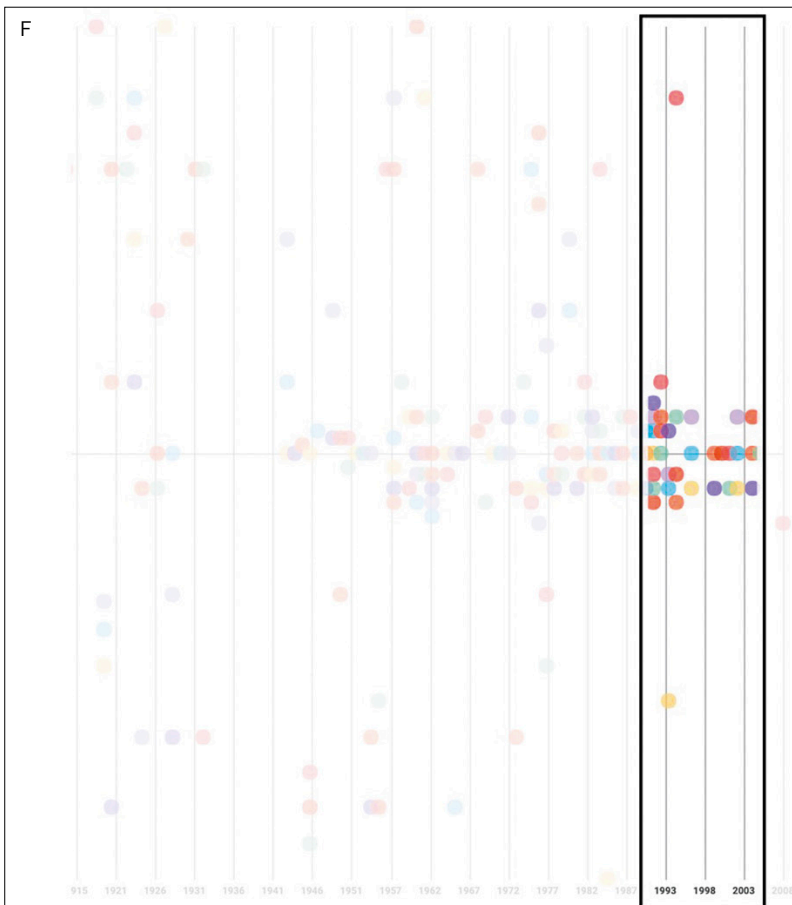
The use of the format in the artistic field introduces important changes. More than communicating ideas, the avant-garde manifesto seeks to seduce or, as MaryAnn Caws states in the previous quote, to manipulate and, due to the creative nature of its authors, it reaches an extraordinary formal richness. In (Fig. 02) it can be seen the amount of avant-garde movements that resort to the manifesto as a foundational and communicative text.⁶ Although this variety has undoubtedly contributed to complicating the definition of the genre, it has also multiplied its communicative possibilities, making it more attractive for other disciplines as well. The proliferation of manifestos on architectural themes that has taken place throughout the 20th and 21st centuries could therefore indicate that the format has been able to adapt its tone, its intention and its ideology to the various socio-political realities that it has coexisted with.

⁵ Caws, *Manifiesto*, XIX.
“The manifesto was from the beginning, and has remained, a deliberate manipulation of the public view. Setting out the terms of the faith toward which the listening public is to be swayed, it is a document of an ideology, crafted to convict and convert. The stance taken may be institutional or individual and independent”.

⁶ The movements and manifiestos related to them included in the diagram are only the ones included in the book, Caws, *Manifiesto*.



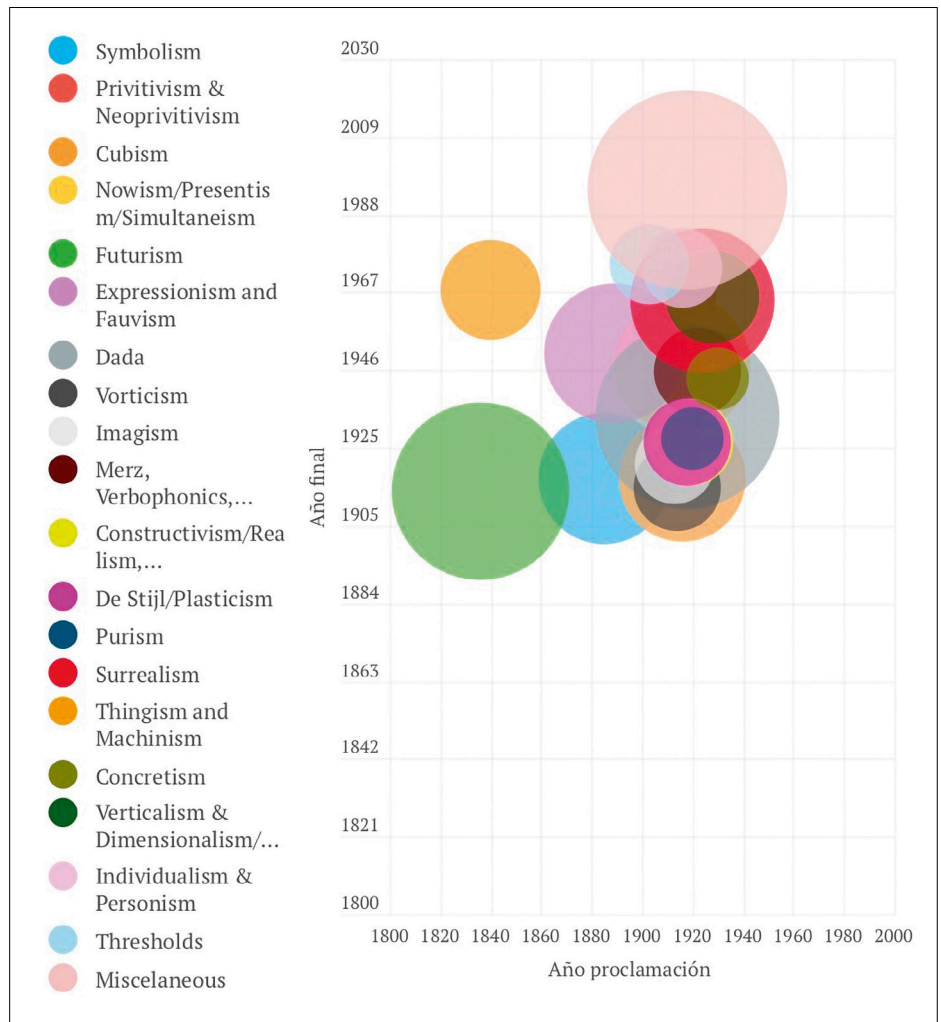
Título Manifiesto	Año	Autor
Visions Unfolding: Architecture in the Age of Electronic Media	1992	Peter Eisenman
Architectural Curvilinearity. The folded, the Pliant and the Supple	1993	Greg Lynn
In-Conclusion	1993	Mark Wigley
Towards and Architecture of Practical Delight	1993	Will Alsop
Connected Isolation	1993	Thom Mayne
(Well) connected architecture	1994	Ian Ritchie
Bigness (or the problem of large)	1994	Rem Koolhaas
Why classical Architecture is Modern	1994	Allan Greenberg
The Island Nation Aesthetic	1996	Arata Isozaki
Diagrams	1999	Ben van Berkel y Caroline Bos
Animate Form	1999	Greg Lynn
On Instruments: Diagrams, Drawing and Graphs	2000	FOA
The Space of Encounter	2001	Daniel Libeskind
Machining Architecture	2001	Lars Spuybroek
The Yokohama Project	2002	FOA
Versioning	2002	SHoP
Explosions, Compressions, Swarms, Aggregations, Pixelations, Carved Spaces, Excavations	2004	Zaha Hadid
Towards an Iconography of the Present	2004	Charles Jencks
Morphogenesis and the Mathematics of Emergence	2004	Michael Weinstock
Junk space	2004	Rem Koolhaas



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The Yokohama Project	2002	FOA
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Explosions, Compressions, Swarms, Aggregations, Pixelations, Carved Spaces, Excavations	2004	Zaha Hadid
Towards an Iconography of the Present	2004	Charles Jencks
Morphogenesis and the Mathematics of Emergence	2004	Michael Weinstock
Junk space	2004	Rem Koolhaas

◀ Fig 1. E. Eliminación de manifiestos excesivamente personales, que no pueden relacionarse con las dialécticas establecidas en el estudio. Fig 1. E. Elimination of manifests about very personal matters, as it would be too complex their analysis here.

▶ Fig 2. Clasificación cronológica y temática de los manifiestos incluidos en *Manifiesto. A century of isms*. Se considera año de proclamación el del primer manifiesto, el que da inicio a cada movimiento vanguardista; el año final, la fecha del último manifiesto registrado en ese libro respecto cada una de las vanguardias listadas junto al cuadro. Por último, el tamaño de los círculos corresponde con el número de textos asociados en cada movimiento. Fig 2. Chronologic and thematic classification of the manifests included in the book *Manifiesto. A century of isms*. Considered as announcement year the first manifest's one and the final year the one that registered the last written manifest for this particular movement, from the ones listed. Lastly, the size of each circle would correspond to the number of texts that could be associated to each movement.



Las transformaciones del manifiesto al inicio del s. XXI

◀ Fig 1. F. Nueve manifiestos. En esta fase sólo se eliminan aquellos que pertenecen a autores que ya han sido seleccionados y cuyo contenido está incluido en el manifiesto elegido. Fig 1. F. Nine manifests. In the last phase only the ones written by the same architect could be eliminated, until having the most relevant one per architect in this period of time.

Un ejemplo entre irónico e irreverente de dicha transformación, es el inicio del libro con el que Charles Jencks define el fenómeno del *edificio icónico*⁷, que reproduce la apertura del “Manifiesto Comunista”.

“Un espectro se está apareciendo en la aldea global —el espectro del edificio icónico. En los últimos diez años ha surgido un nuevo tipo de arquitectura. Impulsado por los agentes sociales, la búsqueda de la fama fácil y el crecimiento económico, el hito expresivo ha desafiado la tradición anterior del monumento arquitectónico”.⁸

Más allá de analizar la dimensión política, económica o, incluso, la intención que podría encerrar esta estrategia de Jencks, cuestiones sin duda ajenas al ámbito de este artículo, el *homenaje* al texto de 1848 en uno de 2005, prueba la relevancia del manifiesto *tradicional* a principios del s. XXI. El hecho de que se utilice

The transformations of the manifesto at the beginning of the s. XXI

An ironic and irreverent example of this transformation is the beginning of the book where Charles Jencks defines the phenomenon of the *iconic building*,⁷ which reproduces the opening of the “Communist Manifesto”.

“A spectre is haunting the global village—the spectre of the iconic building. In the last ten years a new type of architecture has emerged. Driven by social forces, the demand for instant fame and economic growth, the expressive landmark has challenged the previous tradition of the architectural monument”.⁸

Beyond analyzing the political, economic dimension or, even, the intention that Jencks’ strategy could be, questions without a doubt beyond the scope of this article, the *homage* to the 1848’s text in one written in 2005 proves the relevance of the traditional manifesto at the beginning of the 21st cen-

· 7 Charles Jencks, *The Iconic Building: the Power of Enigma* (Londres: Frances Lincoln Publishers Ltd, 2005).

· 8 Jencks, *The Iconic Building*, Introducción.

· 7 Charles Jencks, *The Iconic Building: the Power of Enigma* (Londres: Frances Lincoln Publishers Ltd, 2005).

· 8 Jencks, *The Iconic Building*, introduction.

para introducir al *edificio icónico*, presentado en el propio libro como íntimamente ligado al paradigma capitalista es, además, una prueba fehaciente de la habilidad del formato para adaptarse a diferentes momentos socio-políticos, desligándolo de la ideología política con la que se le relacionaba originalmente. Por ejemplo, sólo en el año 1960, durante las denominadas *utopías tecnológicas*, se van a escribir once textos que, a modo de manifiestos, pretenden dar respuesta a la cuestión del diseño arquitectónico del futuro. El idealismo que caracteriza a esta época tiene su máxima expresión en el mayo del 68 donde, a consecuencia de la identificación de la arquitectura moderna con el poder, se confrontan definitivamente los principios de la modernidad.

“De manera similar, la inestabilidad cultural que la arquitectura europea sufrió a raíz de las protestas de la primera de 1968 fue sin duda una oportunidad perdida para la recuperación de los valores sociales en los que se fundó buena parte de la práctica arquitectónica moderna”⁹.

Esta inestabilidad a la que se refiere Franco en la cita anterior, junto con la pérdida de los mencionados valores sociales de la arquitectura moderna, se refleja en la confusión que caracteriza al manifiesto desde este momento y que continuará a principios del s. XXI. Un ejemplo muy ilustrativo de este cambio es el concepto de *manifiesto amable*, acuñado por Robert Venturi en su libro “Complejidad y Contradicción en arquitectura”¹⁰. El adjetivo *amable* es fundamental para comprender el cambio del formato, no sólo porque reniega del carácter agresivo atribuido hasta ese momento al manifiesto, también porque, paradójicamente, lo que Venturi propone con su libro, es una ruptura total con respecto a los principios funcionalista y racionalista de la arquitectura moderna. Es decir, su manifiesto, *amablemente* ataca los cimientos de una modernidad, que considera superada, y sienta la base teórica para el desarrollo de una nueva arquitectura libre y ecléctica. A partir del texto de Venturi, la definición de manifiesto se amplía, se vuelve más compleja y, como muestra Charles Jencks en su libro “Theories and Manifestoes of Contemporary Architecture,”¹¹ se aplica a textos que antes difícilmente podrían considerarse como tales.

El interés en el manifiesto continúa a principio del s. XXI, acompañado de una cierta urgencia por encontrar formas de expresión más contemporáneas, que reflejen una sociedad radicalmente distinta a la del siglo anterior. En este sentido se organizarán en la primera década de este siglo tres eventos que resultan especial-

mente. The fact that it is used to introduce the iconic building, presented in the book itself as intimately linked to the capitalist paradigm is, furthermore, a reliable proof of the format’s ability to adapt to different socio-political moments, detaching it from political ideology with the one that was originally related to it. For example, only in 1960, during the so-called *technological utopias*, eleven texts were going to be written and claimed to be manifiestos, so that they may answer to the question of the architectural design of the future. The idealism that characterizes this era has its peak in May 68 where, as a result of the identification of modern architecture with power, the principles of modernity are definitely confronted.

“Similarly, the cultural instability that European architecture suffered as a result of the protests of the first of 1968 was undoubtedly a lost opportunity for the recovery of the social values on which much of the modern architectural practice was founded”⁹.

This instability Franco claims in the previous quote, along with the loss of the aforementioned social values of modern architecture, is reflected in the confusion that characterizes the manifesto from this moment and that will continue at the beginning of the 21st century. A very illustrative example of this change is the concept of *gentle manifesto*, coined by Robert Venturi in his book “Complexity and Contradiction in Architecture”¹⁰. The adjective *gentle* is essential to understand the change in format, not only because it denies the aggressive character attributed to the manifesto until then, but also because, paradoxically, what Venturi proposes with his book is a total rupture with the functionalist and rationalist principles in modern architecture. In other words, his manifesto *gently* attacks the foundations of a modernity, which he considers to be out-dated, and lays the theoretical grounds for the development of a new free and eclectic architecture. Starting from Venturi’s text, the definition of manifesto is broadened, it becomes more complex and, as Charles Jencks shows in his book “Theories and Manifestoes of Contemporary Architecture,”¹¹ it is applied to texts that previously could hardly be considered as such.

The interest in the manifesto continues into the early 21st century, along with a certain rush to find more contemporary forms of expression, in order to depict a radically different society from that of the previous century. In this sense, three events that are especially significant will be organized in the first decade of

· 9
David Franco Santa Cruz, “Lecciones aprendidas en mayo del 68. La fugaz repolitización de la arquitectura moderna europea”. *Boletín Académico*, n.º 8 (2018): 57.

· 10
Robert Venturi, *Complexity and Contradiction in Architecture* (New York: The Museum of Modern Art, 1966).

· 11
Jencks y Kropf, *Theories and Manifestoes*.

· 9
David Franco Santa Cruz, “Lecciones aprendidas en mayo del 68. La fugaz repolitización de la arquitectura moderna europea”. *Boletín Académico*, n.º 8 (2018): 57.

· 10
Robert Venturi, *Complexity and Contradiction in Architecture* (New York: The Museum of Modern Art, 1966).

· 11
Jencks and Kropf, *Theories and Manifestoes*.

mente significativos, no sólo porque directamente recuperan el formato, sino porque todos, al mismo tiempo que lo reivindican, ponen en duda su relevancia. Dicha contradicción va a condicionar el tono de los manifiestos de este siglo, que se dividen radicalmente entre aquellos más agresivos, que buscan una reacción unilateral y directa del lector, y lo más *amables*, que proponen un diálogo.

El primer evento que muestra esta tendencia es el 50 aniversario de la revista "Icon" que celebra, precisamente, publicando 50 manifiestos. La decisión va más allá de la producción masiva de manifiestos por parte de los invitados, también permite reflexionar sobre el futuro del arte y la propia relevancia del género. La editorial, de Justin McGuirk, es una muestra de la diversidad de opiniones y propuestas que también se encuentran en la revista, ya que, a pesar de declarar en su inicio que "La era del manifiesto ha terminado", subraya la necesidad de recuperar el género, como único medio para acabar con la apatía y el relativismo que, en su opinión, caracterizan los primeros años del s. XXI.¹²

Exactamente la misma intención se aprecia, de manera general, en el segundo evento al que nos gustaría referirnos, el "Manifiesto Marathon", que se celebra en el fin de semana del 18 y 19 de octubre de 2008 en el pabellón de verano de la Serpentine Gallery de Londres. Comisariado por Hans Ulrich Olbrist, invita a sesenta y un personalidades del mundo del arte y el diseño a reflexionar sobre la posibilidad de incorporar el manifiesto al debate cultural del s. XXI. Entre estos invitados se encuentran influyentes arquitectos como Rem Koolhaas, Peter Cook, Pier Vittorio Aureli, Yona Friedman o Charles Jencks, por citar algunos. El espíritu dialogante del evento se resume en las palabras de uno de los invitados, Tino Sehgal:

"Creí que el siglo veintiuno sería, con suerte, más como un diálogo, más como una conversación, y quizás que esto mismo es como una especie de manifestación o lo que sea. Soy muy cuidadoso incluso empleando esa palabra. Sólo creo que el siglo veinte estaba tan seguro de sí mismo, y *espero que el siglo veintiuno esté menos seguro*. Y parte de ello consiste en escuchar lo que otra gente dice y entrar en un diálogo, no levantarse y declarar uno inmediatamente sus propias intenciones".¹³

Frente a estos dos eventos, que simbolizan la tendencia dialogante del manifiesto del s.

this century, not only because they directly recover the format, but also because all of them, while claiming it, questions its relevance. This contradiction will impact the tone of the manifestos throughout this century, which are radically divided between the most aggressive, which seek a unilateral and direct reaction from the reader, and the most gently, which propose a dialogue.

The first event to show this trend is the 50th anniversary of "Icon" magazine, which celebrates it precisely by publishing 50 manifestos. The decision goes beyond the massive production of manifestos by the guests; as it also allows us to reflect on the future of art and the relevance of the genre itself. The editorial, by Justin McGuirk, is a sample of the diversity of opinions and proposals that are also found in the magazine, since, despite declaring at the beginning that "The era of the manifesto is over", it underlines the need to recover the genre, as the only way to finish with the apathy and relativism that, in his opinion, is characteristic to the early years of the 21st century.¹²

Similarly, the same aim is pursued, almost exactly, in the second event that we would like to comment on, the "Manifiesto Marathon", which is held on the weekend of October 18 and 19, 2008 in the summer pavilion of the Serpentine Gallery in London. Curated by Hans Ulrich Olbrist, sixty-one personalities from the world of art and design are invited to reflect on the possibility of incorporating the manifesto into the cultural debate of the 21st century. Among the guests, there are influential architects such as Rem Koolhaas, Peter Cook, Pier Vittorio Aureli, Yona Friedman or Charles Jencks, to name a few. The dialogue spirit of the event is summarized in the words of one of the guests, Tino Sehgal:

"I thought that the twenty-first century would hopefully be more like a dialogue, more like a conversation, and maybe this is like some kind of demonstration or whatever. I'm very careful even using that word. I just think the twentieth century was so self-confident, and I hope the twenty-first century was less in that sense. And we will achieve that if we listen to what other people are saying and start a dialogue, not standing up and immediately stating our own intentions".¹³

Opposed to these two events, which symbolize the dialogue tendency of the 21st cen-

· 12
McGuirk, "Manifestos".

· 13
Tino Sehgal hace esta declaración junto a Ulrich Olbrist en una reflexión presentada durante el evento: Olbrist, *Manifiesto Marathon*.
"I thought the twenty-first century would be, hopefully, more like a dialogue, more like conversation, and maybe than itself is a kind of manifestation or whatever. I am very careful in even using that word. I just think the twentieth century was so sure of itself, and I hope that the twenty-first century will be less sure. And part of that is to listen to what other people say and to enter into a dialogue, to not stand up and immediately declare one's intent.

· 12
McGuirk, "Manifestos".

· 13
Tino Sehgal makes this claim together with Ulrich Olbrist during the event: Olbrist, *Manifiesto Marathon*.
"I thought the twenty-first century would be, hopefully, more like a dialogue, more like conversation, and maybe than itself is a kind of manifestation or whatever. I am very careful in even using that word. I just think the twentieth century was so sure of itself, and I hope that the twenty-first century will be less sure. And part of that is to listen to what other people say and to enter into a dialogue, to not stand up and immediately declare one's intent.

xxi, el tercero es la proclamación tradicional de un manifiesto. El acto tiene lugar durante la segunda edición del "Dark Side Club"¹⁴, cuando, a modo de introducción o *warm up*, el comisario, Patrik Schumacher, presenta su polémico manifiesto "Parametricism as New Style"¹⁵. La intención fundacional de dicho manifiesto queda clara en el hecho de que, a partir de dicha proclamación, el socio de Zaha Hadid dedicará su trabajo teórico a desarrollar, en numerosos escritos, las posibilidades que se derivan de la aplicación del cálculo paramétrico y de la *autopoiesis* al diseño arquitectónico. En un giro realmente inesperado, dado el carácter tecnológico del tema, Schumacher califica al parametricismo como *estilo*, reivindicando, de este modo, la necesidad de retomar el debate estilístico en arquitectura.¹⁶

Todos estos eventos prueban que, a principios del s. XXI, más allá de la cuestión de la relevancia del manifiesto debido a su carácter comunicativo, aunque íntimamente relacionado con éste, está su claridad estructural. Dicha característica se consigue gracias a varios factores, que varían de un texto a otro y que, como podemos deducir de lo explicado anteriormente, van a depender enormemente del tema tratado y del sector social al que se dirigen. Sin embargo, existe un factor común que los hace fácilmente adaptables al mundo digital. Independientemente del caso concreto, todo manifiesto tiene, por principio, un carácter propositivo que le lleva a definir claramente la nueva realidad a la que aspira, lo que constituye un concepto nuevo y abstracto. Para definirlo con precisión es necesario enumerar cada una de sus características o elementos (parámetros) estableciendo, al mismo tiempo, una clara secuencia de relaciones o conexiones (algoritmos) que deben darse entre ellos para la consecución de dicho deseable paradigma. Dicha estrategia, como veremos a continuación, se corresponde con la mecánica del proceso algorítmico.

· 14 Robert White organiza un espacio de debate y crítica durante la Bienal de Venecia, en el Palazzo Loredan, al que denomina *Dark Side Club*. En este club imaginario, que había comenzado a existir en la anterior edición de la Bienal, se sucederán diversos debates que tratarán alguno de los temas planteados durante la *mostra*. Cada uno de ellos tendrá un comisario, un moderador, un tema y unos invitados distintos. El 11 de Septiembre de 2008 el comisario es Patrick Schumacher, los invitados son ocho estudios de arquitectura (MAD, f-u-r, UFO, Plasma Studio, Minimaforms, Aranda/Lasch, AltN Research+Design y MOH) y el moderador es Jeff Kipnis.

· 15 Patrik Schumacher, "Parametricism As Style. Parametricist Manifesto", presentado y debatido en *The Dark Side Club de Londres, 11 Bienal de Arquitectura de Venecia, 2008*. <http://arquitecturamashistoria.blogspot.com.es/2010/11/manifiesto-parametricista-patrik.html>.

· 16 La recopilación de dichos estudios se publica en dos libros: · Patrik Schumacher, *The Autopoiesis of Architecture, vol. I, A New Framework for Architecture* (Hoboken, N.J.: Wiley, 2009).

· Patrik Schumacher, *The Autopoiesis of Architecture, vol. II, A New Agenda for Architecture* (Hoboken N.J.: John Wiley & Sons, 2012).

tury, the third is the traditional proclamation of a manifesto. The event takes place during the second edition of the "Dark Side Club"¹⁴, when, as an introduction or warm up, the curator, Patrik Schumacher, presents his controversial manifesto "Parametricism as New Style".¹⁵ The founding intention of the said manifesto is clear from the beginning and since then, Zaha Hadid's partner will dedicate his theoretical work to develop, in numerous writings, the possibilities that derive from the application of parametric calculus and the *autopoiesis* to architectural design. In a really unexpected turn, given the technological nature of the subject, Schumacher tags parametricism as a style, thus claiming the need to retake the stylistic debate in architecture.¹⁶

All these events prove that, at the beginning of the 21st. century, beyond the question of the relevance of the manifesto due to its communicative nature, although closely related to it, its structural clarity outstands. This characteristic is achieved thanks to several factors, which vary from one text to another and which, as we can deduce from what has been explained above, will greatly depend on each of the themes and the social layer to which they are addressed. However, there is a common factor that makes them easily adaptable to the digital world. Regardless of the specific case, every manifesto has, by principle, a purposeful character that leads it to clearly define the new reality to which it aspires, which constitutes a new and abstract concept. In order to define it with accuracy, it is necessary to list each of its characteristics or elements (parameters), establishing, at the same time, a clear sequence of relationships or connections (algorithms) that must exist between them in order to achieve this desirable paradigm. This strategy, as we will see below, corresponds to the mechanics of the algorithmic process.

· 14 Robert White organize a space open to the debate and criticism during Venice Biennale, at the Palazzo Loredan, named as the *Dark Side Club*. In this imaginary club, that started in the previous editio of the Biennale, several debates will take place, dealing in a different way with the topics brought up during the *mostra*. Each of those will have a curator, a moderator, a topic and some different guests. On September 11th 2008, the curator is Patrick Schumacher, the guests are eight architectural offices (MAD, f-u-r, UFO, Plasma Studio, Minimaforms, Aranda/Lasch, AltN Research+Design and MOH) and the moderator is Jeff Kipnis.

· 15 Patrik Schumacher, "Parametricism As Style. Parametricist Manifesto", Presentation in *The Dark Side Club de Londres, 11 Bienal de Arquitectura de Venecia, 2008*. <http://arquitecturamashistoria.blogspot.com.es/2010/11/manifiesto-parametricista-patrik.html>.

· 16 The compilation of said studies is published in two books: · Patrik Schumacher, *The Autopoiesis of Architecture, vol. I, A New Framework for Architecture* (Hoboken, N.J.: Wiley, 2009).

· Patrik Schumacher, *The Autopoiesis of Architecture, vol. II, A New Agenda for Architecture* (Hoboken N.J.: John Wiley & Sons, 2012).

Una breve introducción al funcionamiento de los algoritmos

“A estas alturas ya sabemos que los humanos somos realmente buenos a la hora de interpretar sutilezas, analizar contextos, aplicar la experiencia y diferenciar patrones. En cambio, se nos da francamente mal prestar atención, ser precisos, coherentes y plenamente conscientes de nuestro entorno. En resumen: nuestro conjunto de habilidades es justo el opuesto al de los algoritmos”.¹⁷

Una vez acotada la extensión y comprendidas las posibilidades operativas del manifiesto arquitectónico contemporáneo, es necesario hacer una breve reflexión acerca de cómo funcionan los algoritmos, con el fin de comprobar cómo la información que contienen éstos podría adaptarse a un proyecto arquitectónico basado en el cálculo. Ya que el objetivo de este artículo requiere de un punto de encuentro entre el intelecto humano, representado por el manifiesto arquitectónico, y los procesos computarizados, esta es una cuestión crítica para validar su planteamiento.

En el libro “Hola mundo. Cómo seguir siendo humanos en la era de los algoritmos”,¹⁸ Hannah Fry explica que existen dos tipos de algoritmos. Los primeros son los basados en reglas y actúan según unas instrucciones detalladas diseñadas previamente por humanos. Los segundos, denominados *Inteligencia Artificial*, son más complejos. También parten de una serie de reglas establecidas *a priori*, pero son capaces de aprender y reaccionar apropiadamente a lo largo del proceso. En ambos casos, los algoritmos funcionan de forma lineal, es decir, en una sucesión de decisiones basadas en el binomio causa-consecuencia, a partir de procesos previamente definidos.

Un ejemplo de aplicación de esta operativa a un proceso de creación artística son los “Experimentos en Inteligencia Musical” de David Cope. Éstos consisten en la creación de una serie de patrones que reproducen las relaciones estructurales que autores como Bach, Beethoven o Vivaldi, aplican a sus composiciones musicales. A partir de dichos patrones y de la introducción de una serie de parámetros que definen los componentes de dichas partituras, los algoritmos fueron capaces de crear *ex novo* composiciones ficticias imitando a dichos autores.¹⁹ Como explica Fry en su libro, las composiciones de los algoritmos son prácticamente imposibles de distinguir de las creadas por los compositores humanos, aunque, esencialmente, no pueden considerarse originales.

· 17
Hannah Fry, *Hola mundo. Cómo seguir siendo humanos en la era de los algoritmos* (Barcelona: Blackie Books, 2019), 170.

· 18
Fry, *Hola mundo*, 170.

· 19
Los resultados de dichas experimentaciones se pueden escuchar en el canal de David Cope en *youtube*.

A brief introduction to how algorithms work

“By now, we know that humans are really good at understanding subtleties, at analysing context, applying experience and distinguishing patterns. We’re really bad at paying attention, at precision, at consistency and at being fully aware of our surroundings. We have, in short, precisely the opposite set of skills to algorithms.”¹⁷

Once the scope of the manifesto has been narrowed down and its operative possibilities completely understood, it might be necessary to make a brief reflection about how the algorithms work, with the aim of checking if the information contained in the manifestoes could be transferred to a calculus-based design architectural process. Since the objective of this article requires a meeting point between the human intellect, represented by the architectural manifesto, and the computerized processes, this is a critical question to validate its premises.

In the book “Hello World Being Human in the Age of Algorithms”,¹⁸ Hanna Fry distinguish between two kinds of algorithms. The first one are those based on rules and that act according to some detailed instructions previously designed by human beings. The second ones, known as Artificial Intelligence (AI), are more complex. Their starting point is also a set of rules established *a priori*, but, unlike the first kind, they are capable of learn and appropriately react along the process. In both cases, the algorithms work linearly, that is, in a succession of decisions based on the cause-consequence binomial, from previously defined processes.

An example of the application of this operative to an artistic creation process are the “Experiments in Musical Intelligence, (EMI)” by David Cope. They consist in the design of a series of patterns that reproduce the structural connections that authors as Bach, Beethoven or Vivaldi, apply to their musical compositions. From these patterns and the introduction of a series of parameters that define the components of said scores, the algorithms were able to create *ex novo* fictitious compositions imitating these authors.¹⁹ As Fry explains in her book, the compositions of the algorithms as practically impossible to differentiate from the ones created by the human composers, although, essentially, they cannot be considered as original.

· 17
Hannah Fry, *Hola mundo. Cómo seguir siendo humanos en la era de los algoritmos*. (Barcelona: Blackie Books, 2019): 170. [Spanish versión]

· 18
Fry, *Hola mundo*, 170.

· 19
The results of the experimentations can be heard on David Cope YouTube channel.

“La creatividad consiste únicamente en hallar una asociación entre dos cosas que normalmente no parecen estar relacionadas”.²⁰

Según lo demostrado por los experimentos de Cope, un algoritmo es capaz de crear algo que no existía anteriormente. Sin embargo, no define nuevas relaciones, sino que todas las posibles conexiones entre parámetros han sido definidas anteriormente, en este caso, por los compositores clásicos. Este es el mismo proceso que se sigue en la arquitectura paramétrica, creada, por ejemplo, a partir de la combinación de un programa de lenguaje visual, como “Grasshopper” y uno de C.A.D., como “Rhinceros”. El resultado puede resultar formalmente novedoso, pero sus componentes responden a los patrones que han sido definidos anteriormente. Es posible que, en este tipo de procesos, no sea tan inmediato para el arquitecto decidir directamente la forma final del objeto como en los tradicionales, generados a partir de un boceto o idea inicial. De todos modos, si atendemos al desarrollo del propio proceso, al igual que ocurría en los “Experimentos en Inteligencia Musical”, no es estrictamente correcto afirmar que es el ordenador el que define la forma del objeto arquitectónico. Tanto en el experimento de Cope como en los procesos paramétricos arquitectónicos resulta evidente que es necesario modificar las relaciones entre parámetros para que su resultado sea original, y es en este punto donde se propone introducir las estrategias provenientes de los manifiestos.

La dificultad de elegir la *forma óptima* en la arquitectura producida digitalmente

Así, uno de los principales problemas que afectan a la producción digital de arquitectura, es el que se refiere a la definición de la *forma óptima*. El propio concepto surge, precisamente, del modo en que se desarrolla el proceso. Se puede deducir de lo desarrollado en el apartado anterior que el ordenador es incapaz de dar una única solución a la cuestión de la forma arquitectónica, sino que es el arquitecto quien debe decidir cuál es la opción óptima. Los principales promotores de la aplicación de la tecnología digital al proyecto arquitectónico rechazan esta operativa, por considerar que es susceptible de introducir subjetividades en un proceso que consideran científico y, por lo tanto, objetivo.

En 1999, Greg Lynn propone una solución en su manifiesto “Animate Form”²¹ al definir la *intuición humana sistemática*, concepto que viene a sustituir al de *intuición*, definido a principio de siglo por el filósofo Henri Bergson.²² Bergson defiende que la *intuición*, cimentada

· 20
Cita del científico y músico americano David Cope en el libro: Fry, *Hola mundo*, 236.

· 21
Greg Lynn, *Animate Form* (Nueva York: Princeton Architectural Press, 1999).

“Creativity is just finding an association between two things which ordinarily would not seem related”.²⁰

As demonstrated by Cope’s experiments, an algorithm is capable of creating something that did not previously exist. However, algorithms do not define new relationships, because all utilised connections between parameters have been previously defined, in this case, by classical composers. This is the same process that parametric architecture follows, as the one created, for example, from the combination of a visual language program, such as “Grasshopper” and a C.A.D. program, such as “Rhinceros”. The result may seem original in regard to its shape, but its components respond to the patterns that have been previously defined. It is possible that, in this type of process, it is not as immediate for the architect to decide directly the final shape of the object as in the traditional ones, generated from a personal sketch or an initial idea. Anyway, if we look at the development of the process itself, as happened in the “Experiments in Musical Intelligence (EMI)”, it is not strictly correct to say that it is the computer that defines the shape of the architectural object. Both in Cope’s experiment and in architectural parametric processes, it is evident that it is necessary to modify the relationships between parameters so that their result is actually original, and it is at this point that it is proposed to introduce the strategies from the manifiestos.

The difficulty of choosing the optimal form in digitally produced architecture

Thus, one of the main problems that affect the digital production of architecture, is the one that refers to the definition of the *optimal form*, a concept that arises, precisely, from the way the process unfolds. It can be deduced from what was explained in the previous section that the computer is unable to provide a single solution to the question of architectural form, but it is the architect who must decide which is the optimal option among the variety of proposals that result from the process. The main supporters of the application of digital technology to architectural design reject this operation, considering that it is susceptible to introducing subjectivities in a process that they consider scientific and, therefore, objective.

In 1999, Greg Lynn proposed a solution in his manifesto “Animate Form”²¹ by defining *systematic human intuition*, a concept that replaced the intuition philosopher Henri Bergson defined at the beginning of the century.²²

· 20
David Cope quoted in the book: Fry, *Hola mundo*, 236.

· 21
Greg Lynn, *Animate Form* (New York: Princeton Architectural Press, 1999).

en el conocimiento del profesional, es capaz de resolver satisfactoriamente cuestiones a las que el pensamiento científico, que se desarrollado de manera lineal, no llega. Colquhoun traduce este concepto filosófico de Bergson a la arquitectura en su artículo "Typology and Design Method," identificando la *intuición* con la acumulación de conocimiento que en arquitectura resumen las tipologías arquitectónicas.²³ Esto sería la base del concepto de Lynn que, debido a la naturaleza matemática de la arquitectura paramétrica, reduce las características tipológicas a cuestiones de escala, geometría y demás aspectos físicos y fácilmente cuantificables de las mismas.

De este modo, los conocimientos acumulados en las tipologías arquitectónicas, fruto de numerosas experimentaciones a lo largo de los años, son reducidos, en el concepto de *intuición humana sistemática*, a una serie de procesos, sistemas y patrones que el arquitecto estaría obligado a seguir para asegurar que la selección de la *forma óptima* del objeto arquitectónico resultante es coherente con el resto del proceso de diseño basado en el cálculo.

Esta deriva ha provocado que los actuales procesos paramétricos sean puramente mecánicos, operando a un nivel lógico-matemático, e incapaces de absorber ningún tipo de información de índole cultural. Todo aquello que no provenga de información medible se percibe como un peligro de introducir información subjetiva en un proceso científico y, por lo tanto, tiende a eliminarse. De este modo, durante los procesos algorítmicos previamente explicados, el arquitecto limita su intervención a la definición inicial de los parámetros y conexiones que afectan al proyecto, y a la selección de la *forma óptima* entre las posibles soluciones de un desarrollo que, en su mayor parte, le resulta opaco. Dicha opacidad puede conllevar un exceso de confianza en el ordenador, cuyos posibles errores no serían, consecuentemente, detectados.

Para resolver esto, existen ahora numerosos planes de estudios que incorporan a la carrera de arquitectura conocimientos avanzados en programación informática. Indudablemente, este tipo de conocimientos contribuye a un mayor control del arquitecto sobre la totalidad del proyecto digital. Es evidente que, al estar más informado sobre los procesos computarizados, el arquitecto puede tomar decisiones que afecten al resultado, es decir a la *forma óptima*, a lo largo de todo el proyecto y no sólo al final. Consecuentemente, la decisión crítica podría apoyarse en temas que van más allá de una cuestión estética, siguiendo una operativa equivalente al proyecto tradicional.

²² Henri Bergson, "La Intuición Filosófica", en *El pensamiento y lo móvil: ensayos y conferencias*, 90-106 (Santiago de Chile: Ediciones Ercilla, 1936).

²³ Alan Colquhoun, "Typology and Design Method", *Perspecta* n.º 12 (1969): 71.

Bergson claims that *intuition*, based on the knowledge of the philosopher, is capable of satisfactorily solving questions that scientific thought, that is developed in a linear manner, does not reach. Colquhoun proposed a translation of this philosophical concept to architecture in his article "Typology and Design Method," identifying *intuition* with the accumulation of knowledge that in architecture is summarized by the *architectural typologies*²³. This would be the starting point of Lynn's *systematic human intuition* that, due to the mathematical nature of parametric architecture, reduces the complex typological characteristics to questions such as their scale, their geometry and any other of their physical and easily quantifiable aspects.

In this way, the knowledge accumulated in the architectural typologies, result of numerous experiments over the centuries, is reduced, in the concept of *systematic human intuition*, to a series of processes, systems and patterns that the architect would be obliged to follow to ensure that the selection of the *optimal shape* for the resulting architectural object is consistent with the rest of the calculus based design process.

This drift has caused the current parametric processes to be purely mechanical, operating at a logical-mathematical level, therefore incapable of absorbing any type of cultural information. Everything that does not come from measurable sources is perceived as a danger of introducing subjective inputs in a scientific process and, therefore, tends to be eliminated. In this way, during the previously explained algorithmic processes, the architect limits his intervention to the initial definition of the parameters and the connections that will initiate the procedure, as well as to the final selection of the *optimal form* among the possible solutions of a development that, for the most part, is opaque to him. This opacity can lead to an excess of confidence in the computer, whose possible errors would, consequently, remain undetected.

To solve this, there are now numerous study plans that incorporate advanced knowledge in computer programming into the architecture degree. Undoubtedly, this type of knowledge contributes to a greater control of the architect over the entire digital process. It is clear that, by being more informed about computerized processes, the architect can make decisions that affect the result, such as the selection of the *optimal form*, throughout the entire project and not just at the end. Consequently, the critical decision could be based on issues that go beyond an aesthetic question, following a sequence equivalent to the traditional architectural design one.

²² Henri Bergson, "La Intuición Filosófica", in *El pensamiento y lo móvil: ensayos y conferencias*, 90-106 (Santiago de Chile: Ediciones Ercilla, 1936).

²³ Alan Colquhoun, "Typology and Design Method", *Perspecta* n.º 12 (1969): 71.

Sin embargo, esta opción dejaría todavía pendiente la cuestión de la propia definición de la relación entre los parámetros de cada proyecto, si bien facilita que sea el arquitecto-programador el que la defina. Como se ha visto anteriormente, para que el proceso arquitectónico digital pueda considerarse creativo, es necesario diseñar nuevas relaciones entre parámetros, algoritmos, de manera crítica. De este modo es posible que cada arquitecto consiga proponer una arquitectura que realmente se corresponda con sus ideas e inquietudes. Según lo explicado anteriormente, las características estructurales de los manifiestos arquitectónicos podrían hacer de estos unos transmisores culturales susceptibles de ser sintetizados y, por lo tanto, incluíbles en proceso arquitectónico paramétrico. A partir de estas propuestas podríamos elaborar sencillos diagramas de conexiones, que introdujesen algoritmos de índole conceptual en los programas de diseño arquitectónico asistidos por ordenador.

Conclusión. El manifiesto como herramienta arquitectónica en el entorno digital.

Con el objetivo de mostrar la operatividad del manifiesto en el entorno digital se procederá a seleccionar una muestra. La proliferación de manifiestos a la que antes se ha aludido y que se muestra en la (Fig. 1.A.), dificulta su manejabilidad, por lo que se propone la eliminación de manifiestos que no estén relacionados con la producción de arquitectura construida. En la (Fig. 1) se muestra esta secuencia de selección de manifiestos, que evoluciona desde lo temático a lo temporal. Entendiendo que los temas relativos a la planificación urbanística exceden el ámbito de este estudio, se prescinde de los textos que se centran en ellos (Fig. 1.B). Como se persigue proponer un método de proyecto efectivo, se eliminan a continuación todos aquellos manifiestos que no hayan sido escritos por *arquitectos-constructores*.²⁴ Por otro lado es necesario establecer un ciclo temporal compatible con el análisis de la influencia de las herramientas digitales en el proyecto arquitectónico, limitado por dos eventos que marcan su corta historia.

El límite inicial, situado en 1992, coincide con el comienzo del proyecto del Museo Guggenheim de Frank O. Gehry en Bilbao, primer edificio conformado gracias un programa informático. El período de estudio e cierra con el congreso “Morphogenesis and the Mathematics of Emergence”, celebrado en 2004 en la Architectural Association

However, this option would still leave the question of the very definition of the relationship between the parameters of each project pending, although it makes it easier for the architect-programmer to define it. As seen above, in order for the digital architectural process to be considered creative, it is necessary to design new relationships between parameters, —algorithms—, in a critical way. In this way it is possible for each architect to be able to propose an architecture that truly corresponds to their ideas and concerns. As aforementioned, the structural characteristics of architectural manifestos could transform them in cultural transmitters susceptible to being synthesized and, therefore, included in a parametric architectural process. From these proposals we could elaborate some simple connection diagrams that introduce *conceptual* algorithms in computer-aided architectural design software.

Conclusion. The manifesto as an architectural tool in the digital environment.

In order to show how the manifesto would work in the digital environment, a sample will be selected. The proliferation of manifestos referred to above and shown in (Fig. 1.A.), makes them difficult to manage, so it is proposed to eliminate all manifestoes that are not related to the production of the built environment. (Fig. 1) shows this sequence of selection of manifestoes, which evolves from the theme-based to the time-based. Understanding that the issues related to urban planning are beyond the scope of this study, the texts that focus on them are disregarded (Fig. 1 B). As the aim of the article is to propose an effective design methodology, all those manifestos that have not been written by *architect-builders* are also eliminated.²⁴ Furthermore, it is necessary to establish a temporal cycle compatible with the analysis of the influence of digital tools in the architectural project, that will limited by two events that marked its short history.

The initial boundary, located in 1992 marks the beginning of Frank O. Gehry's Guggenheim Museum project in Bilbao, the first building to be defined thanks to a computer software. The study time frame ends with the congress “Morphogenesis and the Mathematics of Emergence”, held in 2004 at the Architectural Association in London,²⁵ that will introduce formal architectural design

²⁴ Peter McCleary, "Some Characteristics of A New Concept of Technology", *Journal of Architectural Education* 42, n.º 1 (1988): 4, doi:10.2307/1424994. (...) the architect-builder acquire knowledge of the environment through the mediation of equipment, processes, and theories "el arquitecto-constructor adquiere conocimiento del entorno mediante la mediación del equipamiento, procesos y teorías".

²⁴ Peter McCleary, "Some Characteristics of A New Concept of Technology", *Journal of Architectural Education* 42, n.º 1 (1988): 4, doi:10.2307/1424994. (...) the architect-builder acquire knowledge of the environment through the mediation of equipment, processes, and theories "el arquitecto-constructor adquiere conocimiento del entorno mediante la mediación del equipamiento, procesos y teorías".

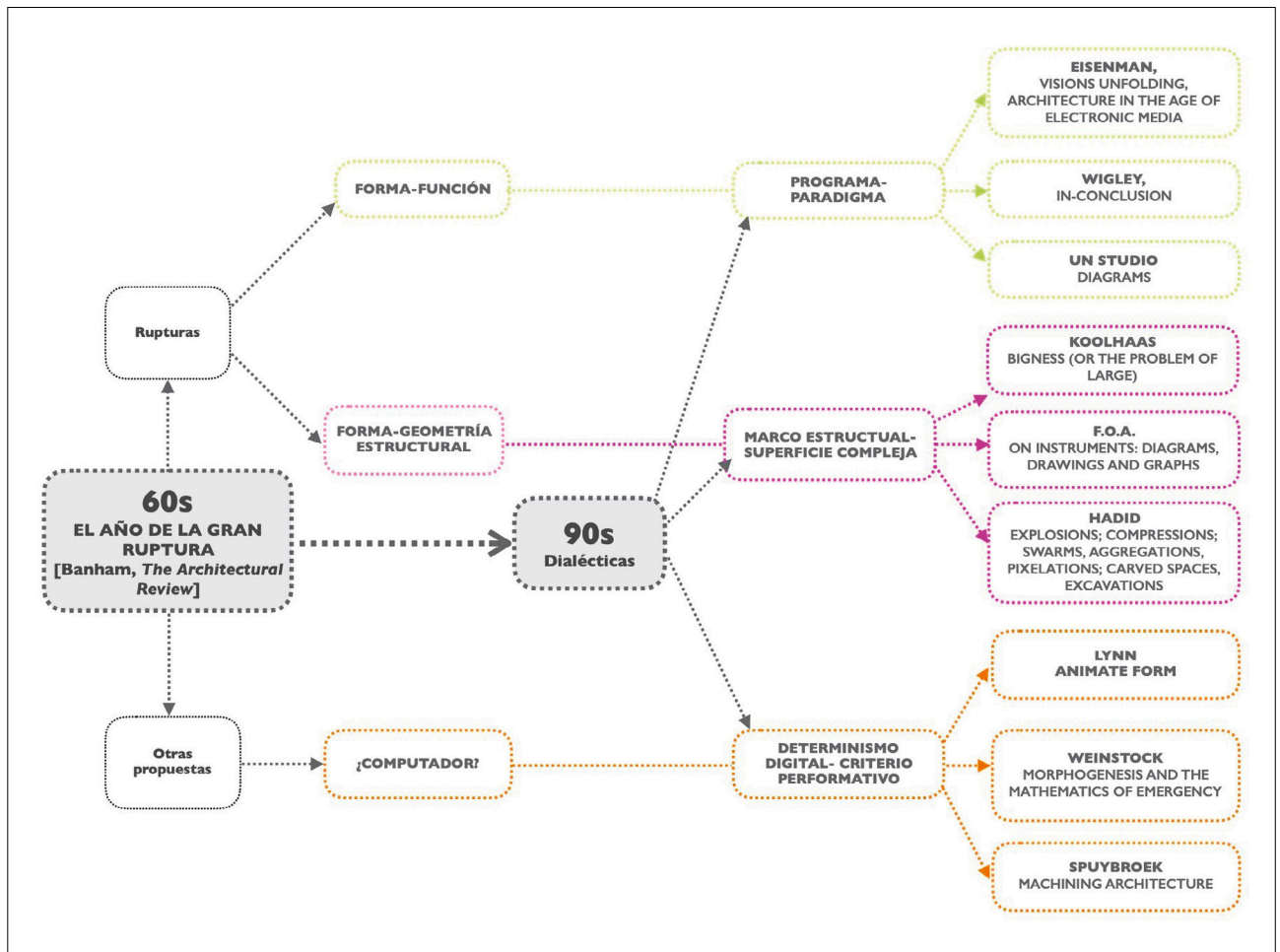


Fig. 3. Diagrama que muestra las conexiones entre las dialécticas de la primera era digital y las rupturas que afectan a la arquitectura en la segunda mitad del siglo XX. A la izquierda, los manifiestos seleccionados, con sus autores.

Fig. 3. Diagram showing the connections between dialectics of the first digital era and the breakdown affecting the architecture of the second half of the 20th century. To the left, the selected manifests and their authors.

de Londres,²⁵ gracias al que se introducen los procesos de autogeneración formal en Europa. Una vez realizada esta delimitación temporal, la secuencia D-E-F (Fig. 1), muestra los pasos que se siguen hasta la selección final de 9 manifiestos, evitando posturas demasiado personales (que debieran ser estudiadas de manera individual) y seleccionando el manifiesto más representativo de cada autor, en el caso de existir varios textos del mismo arquitecto.

Se propone un análisis dialéctico transversal, que afectan de manera general al diseño arquitectónico en su evolución desde la modernidad a la contemporaneidad, clasificando inicialmente los manifiestos seleccionados en torno a la dialéctica a la que responden de manera más directa (Fig. 03). Dichas dialéctica son: la ruptura de la cuestión de la forma arquitectónica con respecto a la función del edificio, la ruptura de la forma del objeto arquitectónico respecto a su marco estructural y la introducción de los medios digitales en el proyecto arquitectónico. La conexión entre cada dialéctica y los manifiestos se establece a partir de los conceptos que éstos

self-generation processes in Europe. Once this temporal delimitation has been carried out, the sequence D-E-F [Fig. 1], shows the steps that are followed until the final selection of 9 manifiestos, which is avoiding overly personal positions (which should be studied individually) and is selecting the most representative manifesto of each author, in the case of having several texts by the same architect.

A cross dialectical analysis is proposed, which generally affected architectural design in its evolution from Modernity to Contemporaneity, for initially classifying the selected manifiestos around the dialectic to which they most directly respond (Fig. 03). These dialectics are: the rupture of the question of architectural form regarding the function of the building, the rupture of the form of the architectural object in relation to its structural framework and the introduction of digital media in the architectural design process. The connection between each dialectic and each manifesto is established from the concepts they develop, depending on which one they respond to

²⁵ Los resultados de dicho congreso se publicarán en un número especial de la revista AD, actuando uno de sus organizadores como editor especial e introductor del tema. Michael Weinstock, "Morphogenesis and the Mathematics of Emergency", *Architectural Design* 74, n.º 3 (2004): 10-17.

²⁵ The conclusions of the congress mentioned were published in an special number of AD journal, being special guest editor one of its organizers, who will introduce the topic in: Michael Weinstock, "Morphogenesis and the Mathematics of Emergency", *Architectural Design* 74, no. 3 (2004): 10-17.

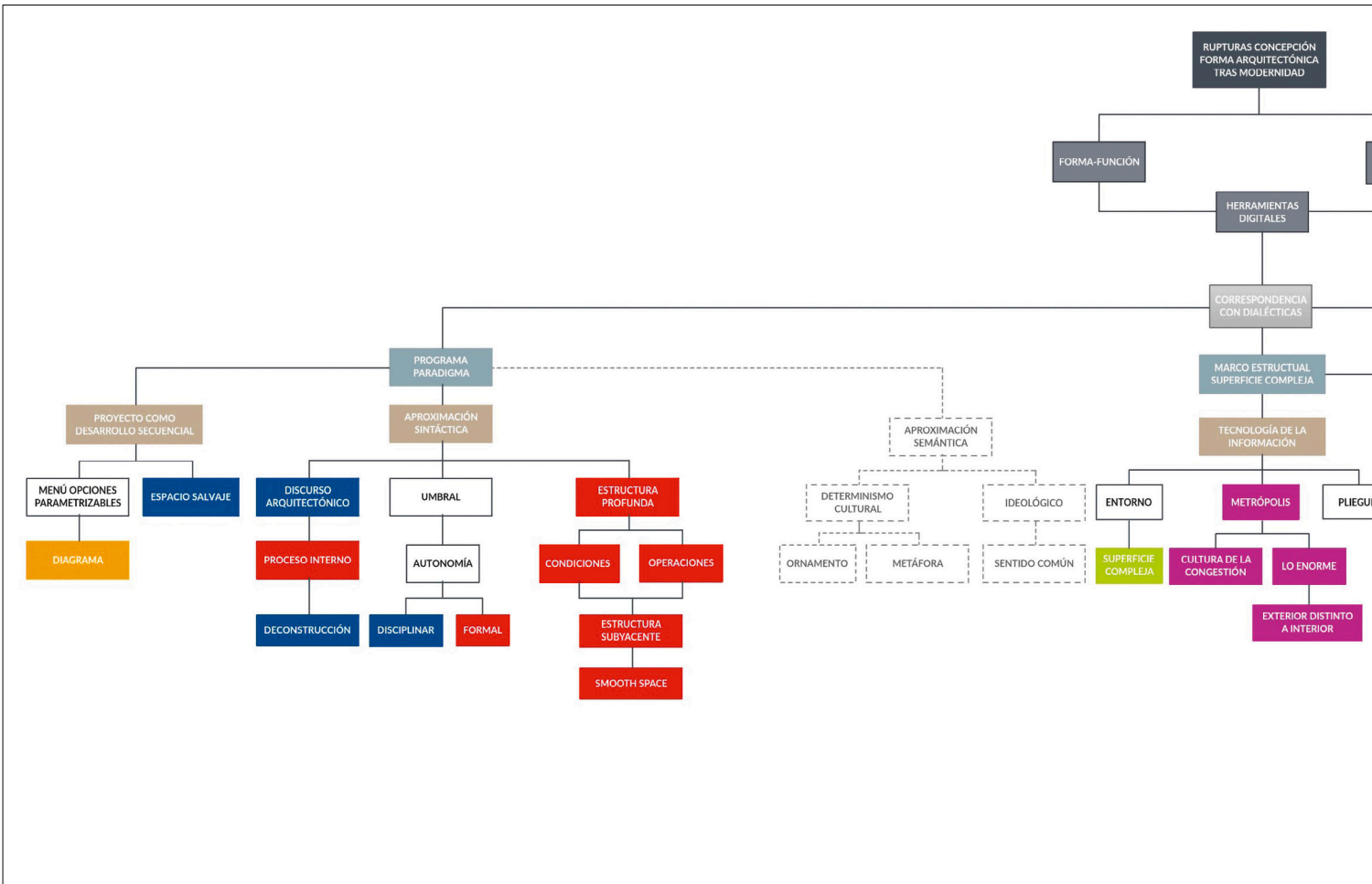


Fig. 4. El diagrama representa una estructura donde los conceptos que se definen en los manifiestos se tratan como parámetros que se relacionan según lo expuesto en los manifiestos por sus autores. Dicha estructura es asimilable a un algoritmo, con la única diferencia que los parámetros que relaciona no son de índole técnica, sino teórica. Los colores de los cuadros que representan cada concepto corresponden con el manifiesto donde aparecen. Como puede verse, en algunos casos, se establecen relaciones también entre conceptos desarrollados en distintos manifiestos.



Visions Unfolding: Architecture in the Age of Electronic Media (Eisenman, 1992)



Diagrams (Ben van Berkel y Caroline Bos, 1999)



Matching Architecture (Spuybroek, 2001)



In-Conclusion (Wingley, 1993)



Animate Form (Greg Lynn, 1999)



Explosions, Compressions; Swarms, Aggregations, Pixelations; Carved Spaces, Excavations (Hadid, 2004)



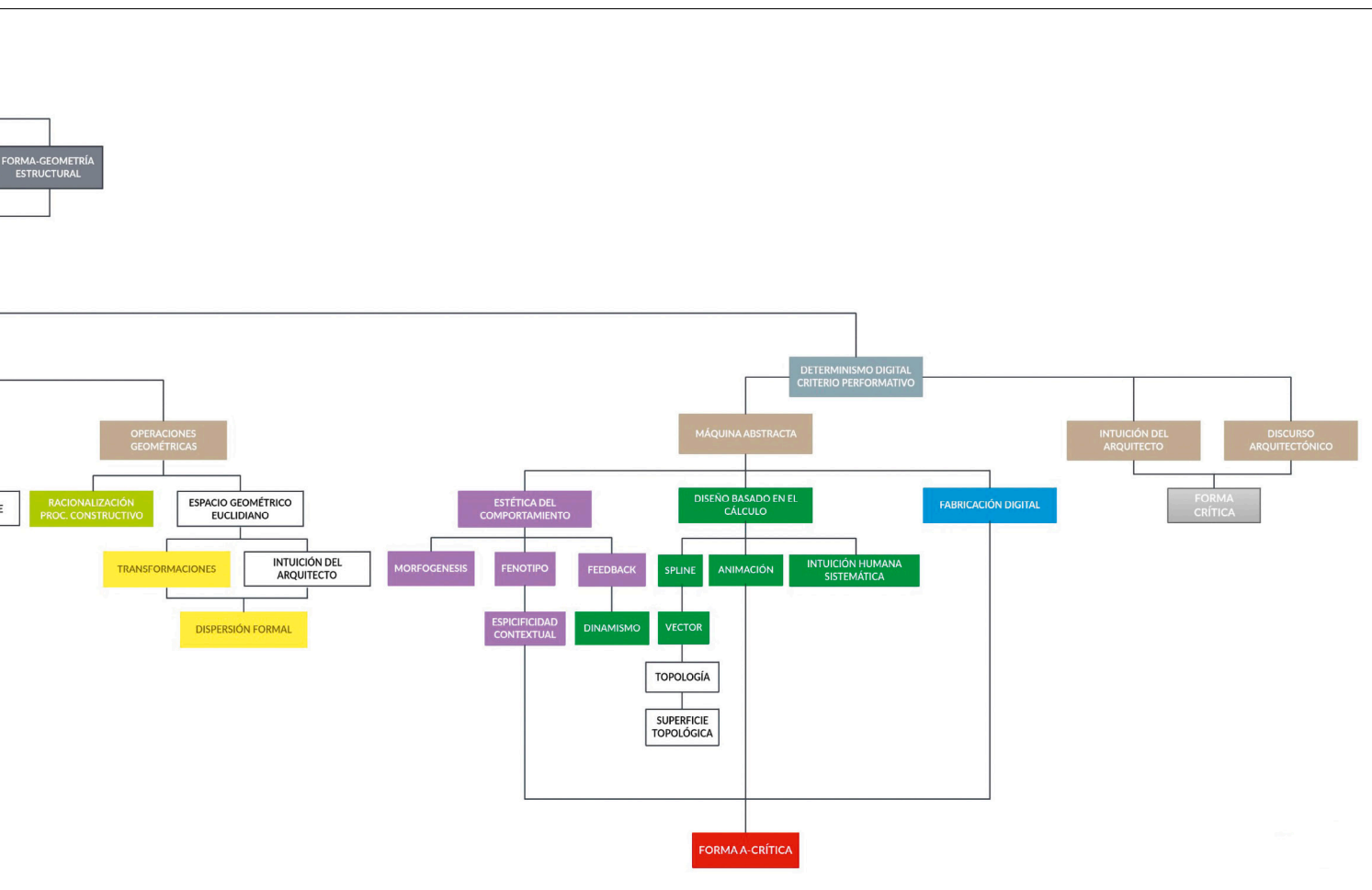
Bigness (or the problem of large) (Koolhaas, 1994)



On Instruments: Diagrams, Drawing and Graphs (F.O.A. 2000)



Morphogenesis and the Mathematics of Emergence (Weinstock, 2004)



^ Fig. 4. The diagram represents a structure where the concepts defined in the manifests are understood as parameters that are connected according to what is presented in the texts by their authors. This structure is assimilable to an algorithm, with the only difference that the parameters are not of a technical but cultural nature. The colors of each figure are connecting the concept inside with the manifest it belongs to. As it can be deduced from the diagram, connection between concepts developed in different manifests are also possible.

desarrollan, según a cuál responden de manera más directa. En el diagrama de la (Fig. 04), los elementos rectangulares representan dichos conceptos (parámetros), mientras que las flechas indican las relaciones, es decir, la posible estructura algorítmica. Por otro lado, la organización del diagrama representa la jerarquía de los conceptos y los colores su correspondencia con el manifiesto que lo define, tal como se explica en la leyenda adjunta. La relación entre ambos, que trasciende lo lógico, geométrico y matemático, tiene la capacidad de definir arquitecturas críticas, diferentes en cada autor, ya que el único criterio que se ha seguido para la elaboración del diagrama es el que los autores establecen en su manifiesto. De acuerdo al funcionamiento de los algoritmos, expuesto anteriormente, y paralelamente a lo que ocurría respecto a la composición musical, dichos parámetros pueden definirse en términos matemáticos, según su relevancia para un proyecto determinado, por ejemplo. Este procedimiento sería equivalente a algunos de los que actualmente se aplican en los procesos paramétricos, para introducir en ellos parámetros técnicos como la acción de la luz solar o el viento sobre el edificio, entre otros.

more directly. In the diagram of (Fig. 04), the rectangular elements represent these concepts (parameters), while the arrows indicate the relationships, that is, a possible algorithmic structure. Additionally, the very organization of the diagram represents the hierarchy of the concepts, while their colors their link with the manifest that defines it, as explained in the attached legend. The relationship between parameters and manifests, which transcends the logical, geometric and mathematical, has the ability to define *critical architectures*, that are different in each author, since the only criterion that has been followed for the elaboration of the diagram is just the one established by the author in the manifesto. According to the functioning of the algorithms, previously exposed, and in parallel with what happened with regard to musical composition, these parameters can be defined in mathematical terms, according to their relevance for a specific project, for example. This procedure would be equivalent to some of those currently applied in parametric processes, when introducing in them technical parameters such as the action of sunlight or wind on the building, among others.

Un cambio de mentalidad, que facilite una comprensión menos física y más metafísica de los procesos algorítmicos, permitiría al arquitecto tomar decisiones críticas desde el inicio del proyecto, lo que conlleva una mayor personalización del proceso digital. Paralelamente a lo que ocurre en los manifiestos utilizados, estas intenciones de proyecto, introducidas en el mismo mediante parámetros, podrían relacionarse de distintas maneras. Las conexiones, que pueden también incorporar parámetros técnicos, también serían definidas por el arquitecto de acuerdo a su visión crítica, ya que éste está involucrado en el proceso desde su definición conceptual inicial. La *forma óptima* resultaría directamente del proyecto, sin necesidad de introducir, para su resolución, metodologías ajenas al mismo. Según lo explicado, dichos parámetros y conexiones son definidas y fácilmente identificables en el manifiesto arquitectónico. Además, la posibilidad de actuar sobre los enlaces permite introducir variantes, lo que contribuye a la innovación *de facto* en la disciplina, adaptando el sistema a distintas aproximaciones teóricas y, de este modo, trascendiendo el actual enfoque físico-formal.

A change in the mind set, that facilitates a less physical and more metaphysical understanding of algorithmic processes, would allow the architect to make critical decisions from the beginning of the design process, which entails its customization on a digital environment. Parallel to what happens in the used manifests, these design intentions, introduced in the process through parameters, could be related in different ways. The connections, which can also relate technical parameters, would also be defined by the architects according to their critical vision, since they are involved in the process from its initial conceptual definition. The *optimal form* would result directly from the design process, without the need to introduce, for its resolution, external methodologies. As unfolded along the article, these parameters and connections are defined and easily identifiable in the architectural manifest. Furthermore, the possibility of transforming also the links facilitates the creation of variables inside each process, which contributes *de facto* to the innovation in the discipline, by adapting the system to different theoretical approaches and, thus, transcending the current physical-formal approach.

Procedencia de las imágenes

Figs. 1-4. Elaboración propia

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Source of illustrations

Figs. 1-4. All images are by the authors

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Saline Joniche

Parque Natural y Antrópico
Calabria. Italia

Natural and anthropic Park
Calabria. Italy

Grupo Aranea
Francisco Leiva Ivorra,
Marta García Chico

Colaboradores · Collaborators
Martín López Robles, Elena Velasco Román,
Lucía Pierro, Anna Pont Solbes, Aleksandra Duczmal,
Andrés Llopis Pérez, Roberto Carrasco Cañizares,
Beatriz Segura Ros, Paul Cetnarski, José Javier Botí Sarrió,
Ana Ybarra Arias, Beata Targosz
Colaborador local · Local Collaborator
Autonome Forme

“Los tiempos de la explotación sin control se acaban. Saline Joniche lleva demasiado tiempo obsesionada por la productividad, sin valorar lo que estaba arriesgando. Ha llegado el momento de anteponer un sano equilibrio medioambiental ante cualquier propuesta que determine una acción impositiva al lugar.

Es el momento de apostar por un rico ecosistema renovado, tremendamente atractivo y posicionarlo como referente mundial de la convivencia medioambiental, al que, sin duda, se irán acercando los inquilinos que merece. Serán estos los que finalmente dotarán de productividad al lugar.

La propuesta restaura el paisaje acuático de marisma, superponiéndole la obsoleta capa industrial adaptada para convertirla en un nuevo soporte de vida.

Se pretende reestructurar el equilibrio natural, revertir el abuso producido por el hombre. En este largo proceso no deben borrarse las huellas producidas en este deteriorado entorno, estas permanecerán en la memoria, recordando a generaciones futuras los riesgos de esta inconsciente actitud.

Se crea un ecosistema en continua evolución, donde el hombre debe convivir y al que el hombre se debe adaptar.”

“The age of uncontrolled exploitation is over. Saline Joniche was for too long obsessed with short termed productivity, without evaluating the risks of this mindset. The time has arrived for a healthy environmental balance against imposed actions.

It´s time to bet for a rich renewed ecosystem, a compelling ecosystem capable of positioning itself as a worldwide reference of ecological coexistence. An ecosystem that will appeal users worth of it, users capable of giving true productivity to this place.

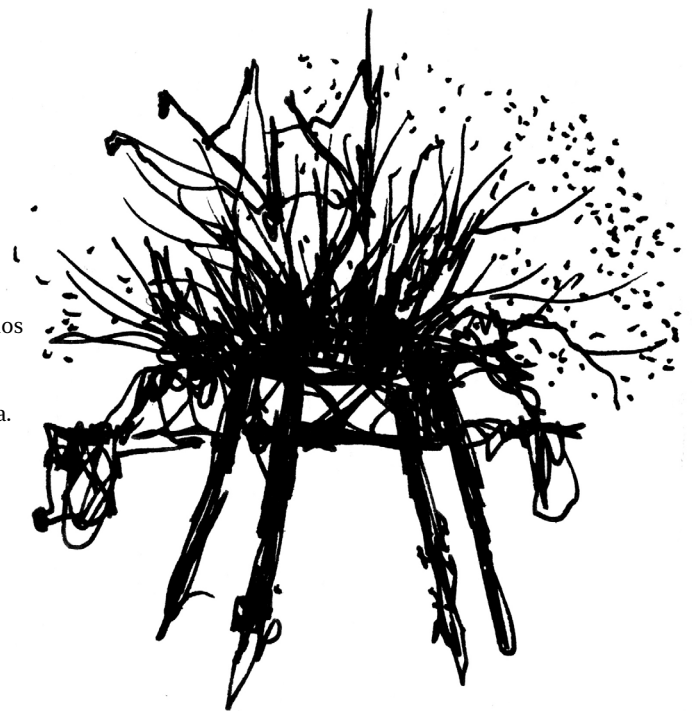
The proposal restores the freshwater prairie landscape, superimposing it to the obsolete industrial layer as a life support.

The goal is the restoration of natural balance; to turn back the human abuse. During this long period of time, manmade footprints must be kept as they are, kept in memories, as a reminder for the future generations of the dangers of this kind of foolish attitudes.

A shape shifting ecosystem is born, where the man must live in harmony, adapting himself to the landscape.”

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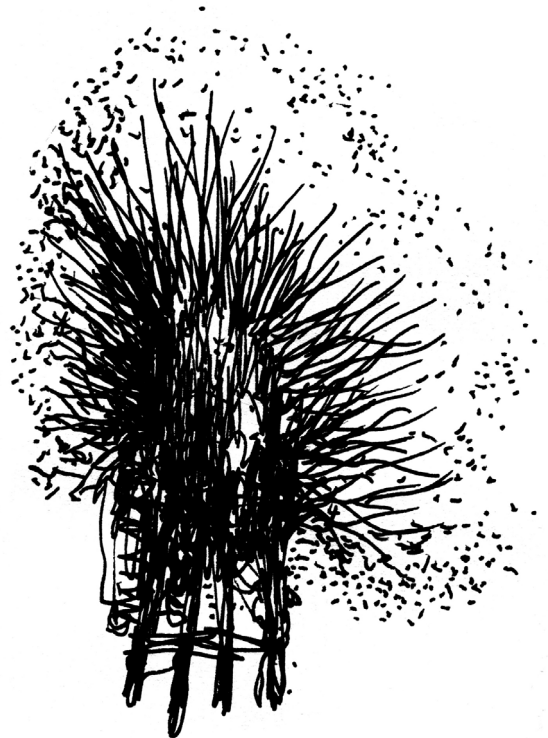
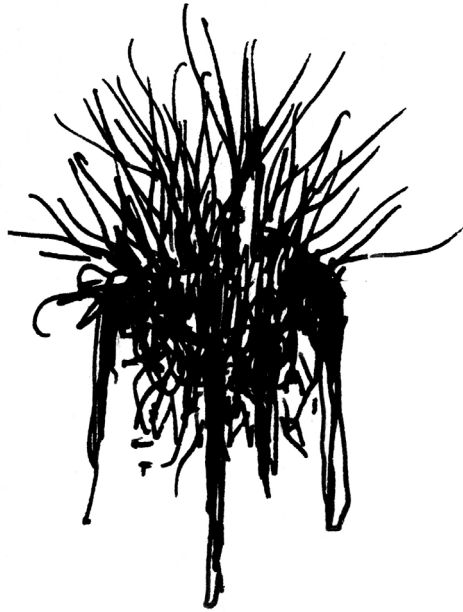
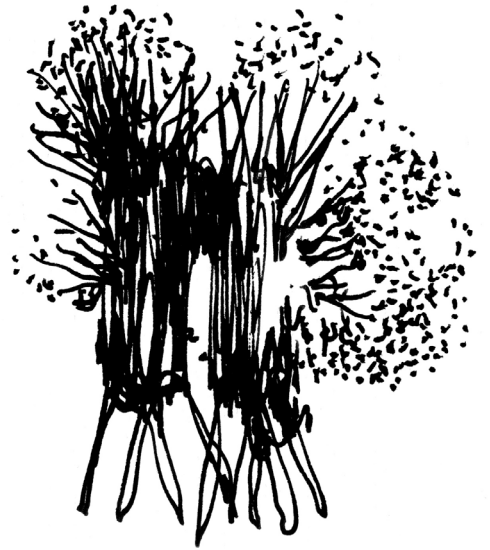
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Saline Joniche es un área costera de unos ocho kilómetros, situada en el extremo sur de Italia en el estrecho de Messina frente al volcán Etna.

De gran interés paisajístico y medioambiental, ha sufrido en los últimos tiempos un importante proceso de degradación producido por una actividad industrial ahora abandonada.

La voluntad del promotor del proyecto: el Gobierno de Reggio Calabria, es convertir a Saline Joniche en un referente mundial de la recuperación de áreas industriales en un contexto sostenible.

Buscamos recuperar las conexiones con el lugar que los sucesivos desarrollos industriales fracasados han ido borrando, aprovechando las trazas que estos han dejado.

Proponemos un territorio inundado, que es la desembocadura de múltiples cauces naturales. Un ecosistema muy rico en fauna y flora con especial importancia de las aves migratorias. Este proceso se realizará de forma natural, el paisaje resultante evolucionará con el tiempo y permitirá la incorporación paulatina de nuevas especies vegetales y animales.

Al igual que la vegetación y los animales, el ser humano debe ser capaz de encontrar su equilibrio en este nuevo entorno.

Saline Joniche is an 8 km long coastal area, at the southern border of Italy in the Messina's strait in front of Etna's volcano.

It is a rich landscape and environmental area, who suffered continuous degradations through industrial activities, left abandoned nowadays.

The will of the project's developer: The Reggio's Calabria Government is to transform Saline Joniche in a worldwide reference for Industrial areas recoveries in a sustainable context.

We seek to recover the lost connections erased by the continuous failed industrial developments, taking advantage of the footprints left behind.

We propose a flooded landscape, mouth of multiple natural watercourses. An ecosystem filled with flora and fauna, which focuses on migrating birds. This process will fulfill itself in a natural manner, and the resulting landscape will evolve adding new species of vegetation and wildlife.

As natural life, humans must be capable of reaching a balanced state with the new medium. Amidst this landscape, a giant chimney, symbol of the industrial voracity, brings a message of hope. The chimney opens his new arms to Joniche and with a system of solar energy capacitors, the birds will nest on daytime and a lighthouse will guide in the Messina's Strait nights.



La Officine di Grandi riparazioni, donde se reparaban los trenes de todo el Sur de Italia, se convierte ahora en el motor de la recuperación: centro de tratamiento de tierras contaminadas, un enorme vivero de reforestación, una planta de generación de energía limpia, laboratorios,... Centro de Estudio y Museo que pretende explicar los procesos de recuperación de zonas degradadas.

Buscamos la convivencia del pasado a través de la gestión de la ruina. Una serie de paisajes inundados repletos de obsoletas estructuras industriales sirven de soporte para la vida animal y vegetal.

Este es sin duda el marco idóneo para la implantación de un nuevo espacio de representatividad para grandes sedes corporativas cercanas a la naturaleza y la sostenibilidad.

El proyecto amplía además la reflexión sobre la ruina conectándose con dos importantes hitos cercanos: Pentedattilo, un pueblo abandonado a finales del siglo XVIII a causa de un terremoto, y el Laura C, un barco hundido a pocos metros de la costa durante la segunda guerra mundial. Ejemplos, en este caso fortuitos, de cómo las acciones humanas pueden llegar a crear ricos ecosistemas.

The “Officina di grandi riparazioni”, another abandoned location, where all the southern Italy’s trains where once repaired, will transform itself into a polluted soil recycling plant, an enormous nursery plant for reforestation, a renewal energies plant, in some labs... A museum who testifies the process of recovering damaged areas and records the memories of razed areas around the globe.

A Studies and a Museum center of which testifies the process of recovering damaged areas.

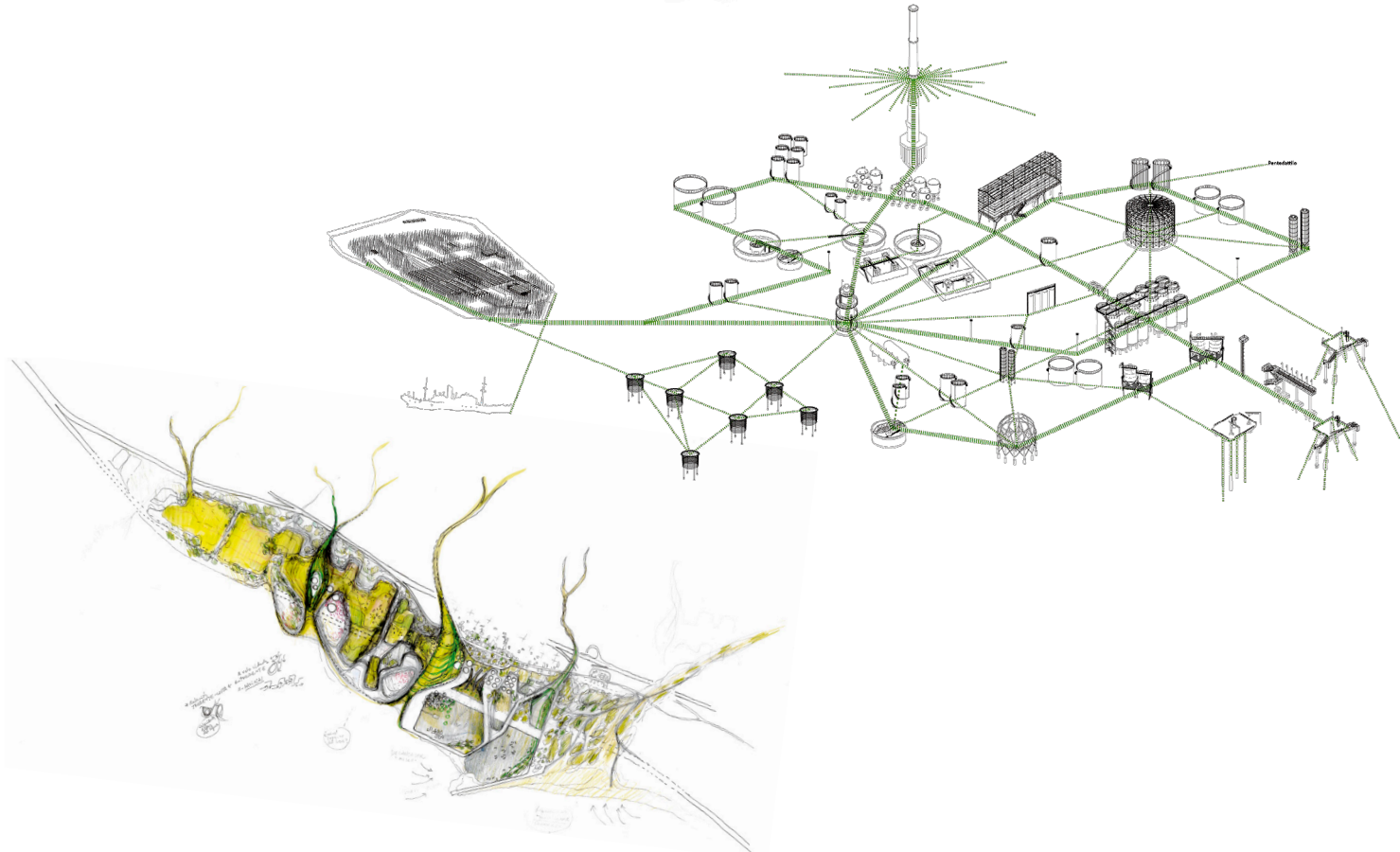
We look forward to reunite ourselves with our past managing the ruins. A series of flooded landscapes filled with old fashioned industrial’s structures will be used as a new home for the wildlife and greenery. This is the perfect framework for corporate headquarters of brands concerned with nature and sustainability.

The Project broadens the thoughts around the concept of ruin, connecting two important landmarks: Pentedattilo, an abandoned village from late 1800, victim of an earthquake and the “Laura C”, a shipwreck near the coast, sank during the Second World War. Two unexpected examples of how human actions can develop rich ecosystem.



◀ Masterplan
Masterplan

▶ Nuevas especies
de Soline Joniche
New species of
Soline Joniche





Envolviendo la marisma

Wrapping the marsh

Itinerario paisajístico en
torno al Estuario Norte del
río Odiel. Huelva

Landscape itinerary
around the North Estuary of
the Odiel river. Huelva

Fco. Javier López Rivera
Ramón Pico Valimaña

Se trata de una gran infraestructura verde, de carácter supramunicipal y accesible a todos los públicos, de unos 30 km. de longitud, que conecta las poblaciones de tres municipios (Huelva, Aljaraque y Gibraleón, que suman entre ellos unos 180.000 hab.) y los acerca a la gran riqueza medioambiental, paisajística, botánica, zoológica, cultural, arqueológica, patrimonial y turística que engloba el vasto espacio natural protegido de Marismas del Odiel que les rodea (7.185 Has.) La actuación conlleva una doble vertiente:

- La recalificación de los bordes urbano-rurales degradados, mediante la regeneración ambiental de los mismos y la mejora de su imagen paisajística. La actuación conlleva la plantación de casi 25.000 nuevas especies arbóreas y arbustivas, a razón de casi una por cada metro lineal de itinerario.
- La accesibilidad no motorizada entre las 3 áreas pobladas mencionadas, que pretenden conectarse mediante una vía multimodal que recorra el borde de las marismas en contacto con el Paraje Natural del estuario Norte del Odiel —de alto valor ecológico—, declarado Reserva de la Biosfera.

It is a large green infrastructure, of a supra-municipal nature and accessible to all people, of about 30 km. long, which connects the towns of three municipalities (Huelva, Aljaraque and Gibraleón, which have about 180.000 people between them) and brings them closer to the great environmental, landscape, botanical, zoological, cultural, archaeological, heritage and tourist wealth it encompasses the vast protected natural area of the Odiel Marshes that surrounds them (7,185 Has.) The project involves a double aspect:

- The requalification of the degraded urban-rural borders, through their environmental regeneration and the improvement of their landscape image. The project involves the planting of almost 25.000 new tree and shrub species, at the rate of almost one for each linear meter of itinerary.
- The non-motorized accessibility between the 3 aforementioned populated areas, which intend to connect by means of a multimodal route that runs along the edge of the marshes in contact with the Natural Park of the North Odiel Estuary —of high ecological value—, declared a Biosphere Reserve.

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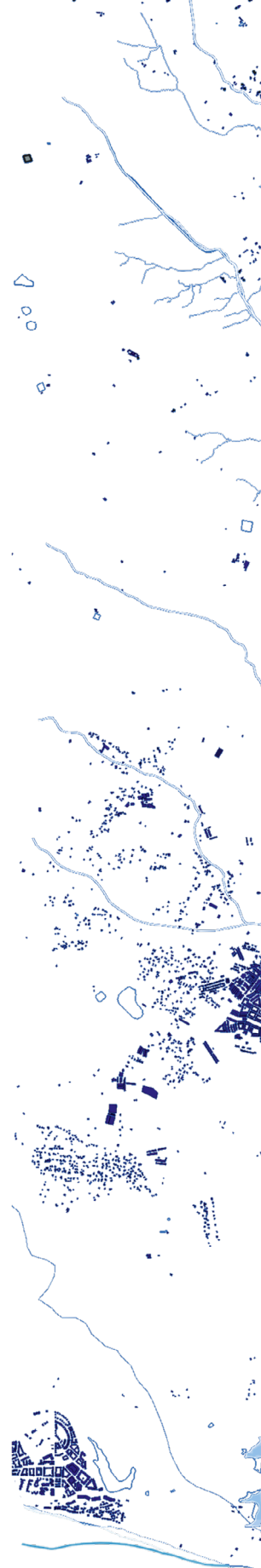
López Rivera, Fco. Javier, y Ramón Pico Valimaña. “Envolviendo la marisma: Itinerario paisajístico en torno al estuario norte del río Odiel, Huelva”. BAC Boletín Académico. Revista de investigación y arquitectura contemporánea, no. 11 (2021): 78-83. <https://doi.org/10.17979/bac.2021.11.0.7212>.

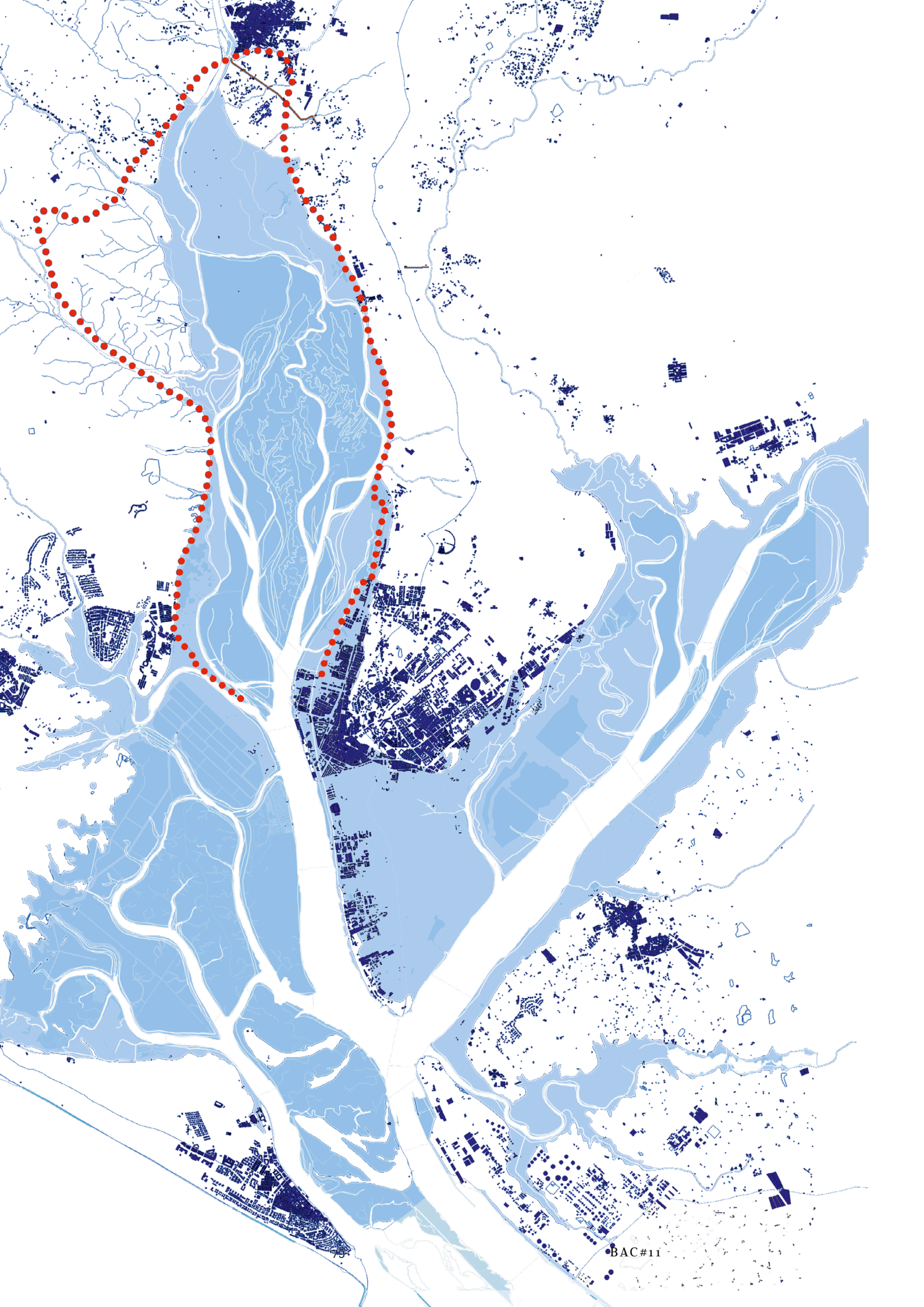
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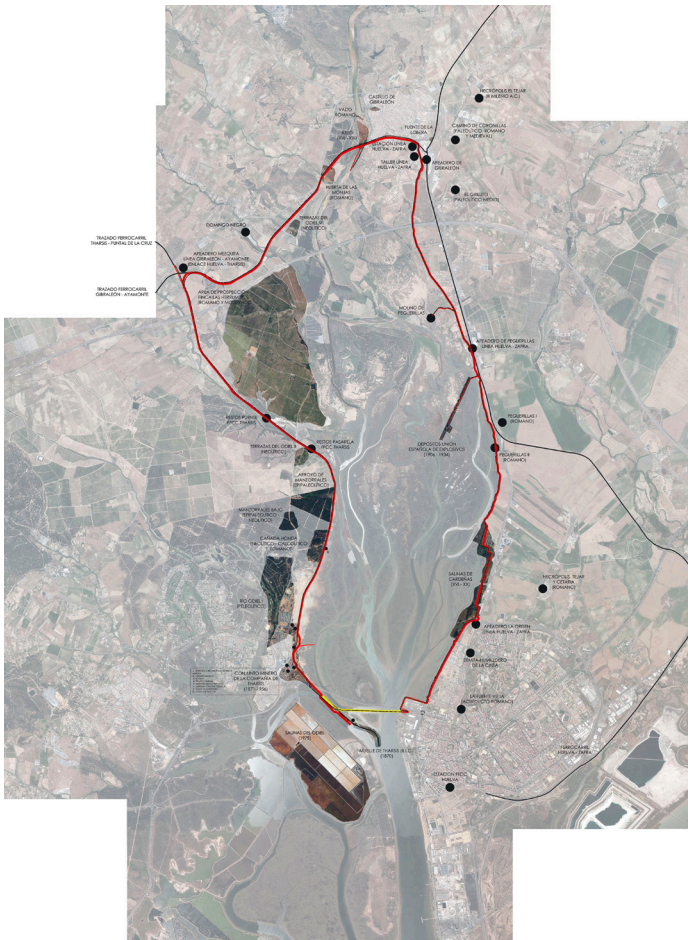
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^ Valores patrimoniales
Patrimonial values



^ Valores ambientales
Environmental values

La filosofía del proyecto nace de la consideración de que los ciudadanos del siglo XXI ya no habitan en ciudades, pueblos o lugares confinados —aunque residan en ellos—, sin apenas relación con los vecinos de otros municipios cercanos. El concepto de Territorio, como espacio donde se desarrolla la vida —trabajo, residencia, ocio, relación social— reclama cada vez más el establecimiento de lazos entre las distintas partes que componen nuestra realidad física, más allá de la posible creación de entes, puramente administrativos, como son las áreas metropolitanas.

Por tanto, la posibilidad de crear recorridos, espacios y actividades que unan los territorios y las partes que los componen, supone una oportunidad de oro para adecuarnos a los tiempos cambiantes en que nos toca vivir y para, en definitiva, ser capaces de enlazar paisaje natural y vida, algo que los ciudadanos llevan tiempo reclamando y que define el objetivo general de esta propuesta. Éste se desglosa en cinco objetivos particulares:

1. Establecer redes de comunicación y tránsito operativas en el territorio.
2. Proteger el borde de la Marisma Norte del Odiel en sus contactos con los núcleos habitados de Huelva, Aljaraque y Gibraleón, conectada como parte indivisible con el Sur del Estuario, como pulmón natural.
3. Convertir este lugar en un espacio de aprendizaje, empoderamiento y recreo para la población del lugar, allí donde esto es posible y compatible con la protección del mismo.
4. Reactivar las opciones de producción del territorio de la marisma, en términos sostenibles y de calidad.

The philosophy of the project arises from the consideration that the citizens of the 21st century no longer live in confined cities, towns or places—even if they reside in them—, with hardly any relationship with the residents of other nearby municipalities. The concept of Territory, as a space where life takes place—work, residence, leisure, social relationship— increasingly calls for the establishment of ties between the different parts that make up our physical reality, beyond the possible creation of entities, purely administrative, such as metropolitan areas.

Therefore, the possibility of creating routes, spaces and activities that unite the territories and the parts that compose them, represents a golden opportunity to adapt to the changing times in which we have to live and, ultimately, to be able to link landscape natural and life, something that citizens have been demanding for a long time and that defines the general objective of this proposal. This is broken down into five particular goals:

1. Establish operational communication and transit networks in the territory.
2. Protect the edge of the North Odiel Marsh in its contacts with the inhabited nucleus of Huelva, Aljaraque and Gibraleón, connected as an indivisible part with the South Estuary, as a natural lung.
3. Convert this place into a space for learning, empowerment and leisure for the local population, where this is possible and compatible with its protection.
4. Reactivate the production options of the marsh territory, in sustainable and quality terms.

5. Promover este territorio como símbolo de identidad del lugar, estimulando además su oferta turística.

Se trata sin duda de un proceso a largo plazo, necesariamente dinámico, con capacidad de ir adaptándose al tiempo y a las circunstancias. Todo proyecto de paisaje es un camino de largo recorrido, un proceso paciente, al que intentamos responder desde la mencionada perspectiva de un plan de actuaciones versátil y adaptable. Desde esta perspectiva dinámica del proyecto, la colección de propuestas planteadas se divide claramente en tres categorías: Lazo (recorrido base), Injertos (nodos posibles) y Semillas (iniciativas de futuro).

El recorrido se divide en 14 tramos, en los que podemos encontrar las siguientes actuaciones puntuales:

- Pérgolas-estancias zona minera de Corrales
- Área de Descanso y embarcadero del Fraile
- Puente-estancia sobre el Arroyo del Prado
- Conexión con Molino de mareas de Peguerillas
- Conexión con antiguo Polvorín y embarcadero del Caño del Burro
- Lagunas y mirador de aves en antiguas Salinas de Cardeñas
- Paseo, miradores y estancias en Paseo marítimo de Huelva

La elección del trazado y la situación precisa de cada una de las propuestas en el territorio, el cómo estas se han dimensionado y han sido elegidas sus actividades, responde a un proceso consciente y necesario de reconocimiento y apropiación del lugar, de enfangarse los pies en la marisma:

- Rastrear. Hemos recorrido meticulosamente el territorio, rastreado su historia y analizado sus parámetros, para sacar a la luz sus valores y conflictos, señalar sus oportunidades y amenazas, encontrar sus señas de identidad. Datos todos ellos necesarios para trazar un recorrido.

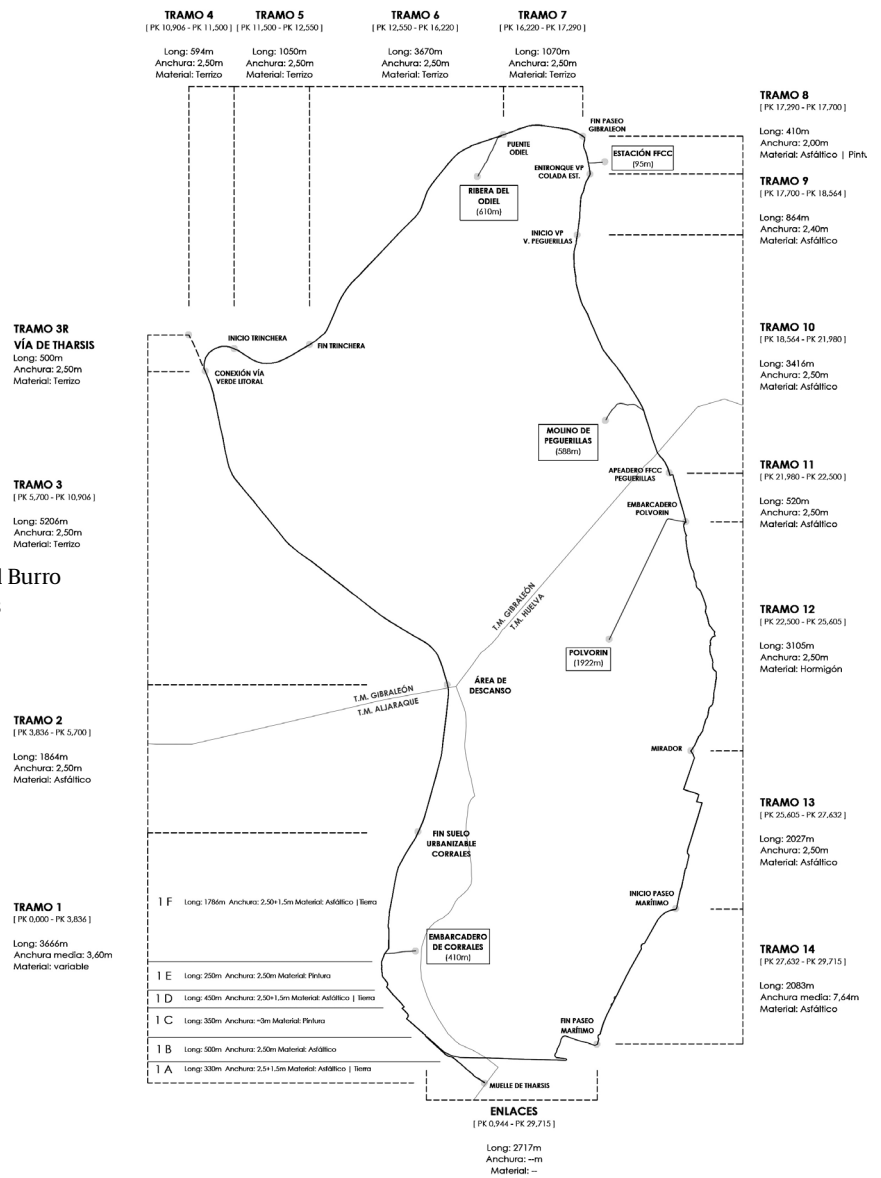
5. Promote this territory as a symbol of the place's identity, also stimulating its tourist offer.

It is, undoubtedly, a long-term process, necessarily dynamic, with the ability to adapt to time and circumstances. Every landscape project is a long-haul path, a patient process, to which we try to answer from the aforementioned perspective of a versatile and adaptable action plan. From this dynamic perspective of the project, the collection of made proposals is clearly divided into three categories: Loop (base path), Grafts (possible nodes) and Seeds (future initiatives). The itinerary is divided into 14 lots, in which we can find the following specific actions:

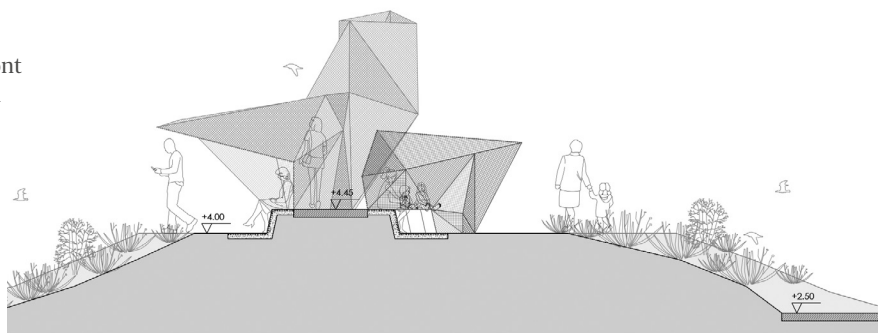
- Pergola-stay at Corrales mining area
- Rest Area and Fraile's pier
- Bridge-stay over the Prado's river
- Connection with Peguerillas tidal mill and the Caño del Burro's pier
- Lagoons and bird lookout in old Cardeñas saltworks
- Promenade, viewpoints and stays on the Huelva seafront

The choice of route and the precise situation of each of the proposals in the territory, how these have been dimensioned and their activities have been chosen, responds to a conscious and necessary process of recognition and appropriation of the place, of getting the feet wet in the marsh:

- Track. We have meticulously walked the territory, tracking its history and analyzing its parameters, to expose its values and conflicts,



Tramos y actuaciones del proyecto
Project sections and actions



- Conectar. En base a la prospección se ha determinado una opción de trazado del lazo y se ha dimensionado y matizado éste para ser capaz para diferenciar rangos de circulación eficaces: comunicación, deporte y ocio.

- Envolver. El recorrido perimetral propuesto en el lazo sirve para encapsular la marisma norte, trazar claramente sus límites con las zonas urbanas y en definitiva proteger la Isla de Sostenibilidad que esta supone en el territorio andaluz.

- Cualificar. El lazo se engrosa para acoger espacios de vida y actividad en aquellos puntos donde el propio lugar lo reclama, bien por la presencia de áreas urbanas, bien por la detección de valores ecológicos o patrimoniales, o por la necesidad de regenerar ambientalmente el paisaje.

- Aventurarse. Desde el lazo perimetral, la propuesta penetra en el centro de la marisma allí donde es posible y necesario, buscando estimular la relación de habitantes y visitantes con el paisaje interior del Parque.

En resumen, partiendo de un proyecto de infraestructuras y comunicaciones, pretendemos dar “liebre por gato” y, con pequeñas intervenciones —propuestas de acupuntura territorial— dar un valor añadido a la intervención para convertirla en un futuro parque equipado. Se trata en definitiva de aprovechar una operación lineal de 30 km. para reflexionar sobre el desarrollo a largo plazo de todo el territorio que envuelve.



mark its opportunities and threats and find its hallmarks. Data all of them necessary to trace a route.

- Connect. Based on the prospecting, an option to draw the loop has been determined and it has been sized and qualified to be able to differentiate effective circulation ranges: communication, sports and leisure.

- Wrap. The proposed perimeter route in the loop serves to encapsulate the northern marsh, clearly trace its limits with urban areas and definitely protect the Island of Sustainability that this entails in Andalusian territory.

- Qualify. The loop thickens to hold living and activity spaces in those points where the place itself demands it, either due to the presence of urban areas, either due to the detection of ecological or heritage values, or due to the need to environmentally regenerate the landscape.

- Adventure. From the perimeter loop, the proposal penetrates into the center of the marsh where it is possible and necessary, searching to stimulate the relationship of inhabitants and visitors with the interior landscape of the Park.

In summary, starting from an infrastructure and communications project, we intend to give “hare for cat” and, with small interventions —proposals for territorial acupuntura— give an added value to the intervention to turn it into a future equipped park. It is definitely about taking advantage of a linear operation of 30 km. to think on the long-term development of the entire territory it involves.



Arquitectura en tiempo presente. Lo moderno incluye lo contemporáneo

Fabrizio Toppetti

Francisco Gómez Díaz
Javier Navarro de Pablos

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¿Cómo ordenaría el mundo un extraterrestre que llegase a una Tierra deshabitada? ¿en base a qué tipo de familias clasificaría las casas, iglesias, los estadios, museos, calles y fábricas? ¿Reconocería en el Guggenheim de Bilbao las proporciones de las iglesias de Borromini y en las obras de Rem Koolhaas coincidencias lexicales con Le Corbusier?

Así inaugura Fabrizio Toppetti su particular visión de la arquitectura, considerada una obra inacabada en constante transformación, imposible de segmentar en trozos de tiempo o contextos estilísticos. *Arquitectura en tiempo presente: lo moderno incluye lo contemporáneo* ofrece una mirada, como su título indica, en presente continuo, intentando alejarse de las premisas y los prejuicios arquitectónicos como si él mismo fuera ese alienígena que aterriza en un planeta de grandes edificios vacíos. Estas pinceladas apocalípticas —inspiradas en *El mundo sin nosotros* de Alan Weisman— contrastan con una narrativa concisa —“en arquitectura existen los hechos”— en la que proyectos, autores y lugares van apareciendo como un *continuum*. El paisaje cultural que resulta de la transformación de la materia en forma de arquitectura es una colección de objetos y espacios que responden a necesidades funcionales y simbólicas.

Con un comienzo en el que se duda de la dicotomía entre lo moderno y lo contemporáneo, Toppetti defiende la imposibilidad de limitar el presente como periodo autónomo. Lo contemporáneo no goza de extensión y, por lo tanto, cualquier ejercicio de clasificación historiográfica es estéril. Esta referencia velada a las ideas de Marc Augé, recogidas en *Hacia una antropología de los tiempos contemporáneos*, sirve para que el autor entienda su propia obra un conjunto de “consideraciones inoportunas,

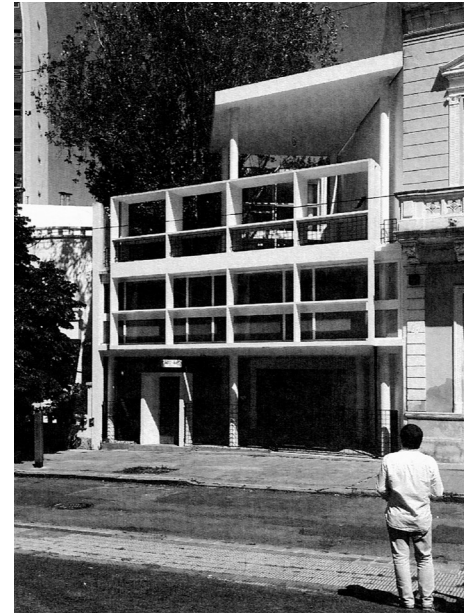
How would an extraterrestrial arriving on an uninhabited Earth order the world? On the basis of what kind of families would he classify houses, churches, stadiums, museums, streets and factories? Would he recognise in the Guggenheim in Bilbao the proportions of Borromini’s churches and in the works of Rem Koolhaas lexical coincidences with Le Corbusier?

This is how Fabrizio Toppetti begins his particular vision of architecture, considered an unfinished work in constant transformation, impossible to segment into chunks of time or stylistic contexts. *Arquitectura en tiempo presente: lo moderno incluye lo contemporáneo* offers a view, as its title indicates, in the present continuous, attempting to distance himself from architectural premises and prejudices as if he himself were that alien landing on a planet of large empty buildings. These apocalyptic brushstrokes —inspired by Alan Weisman’s *The World Without Us*— contrast with a concise narrative —“in architecture there are facts”— in which projects, authors and places appear as a continuum. The cultural landscape that results from the transformation of matter in the form of architecture is a collection of objects and spaces that respond to functional and symbolic needs.

At the beginning of the essay, Toppetti questions the dichotomy between the modern and the contemporary, defending the impossibility of limiting the present as an autonomous period. The contemporary does not enjoy extension and, therefore, any exercise in historiographical classification is sterile. This veiled reference to the ideas of Marc Augé, collected in *An Anthropology for Contemporaneous Worlds*, serves to make the author understand

› Fig. 01. Richard Neutra con su esposa Dione, mediados de los años setenta.
Fig. 01. Richard Neutra with his wife Dione, mid-sixties.

›› Fig. 02. Le Corbusier, Casa Curutchet, La Plata, 1949/53; fotografía de Fabrizio Toppetti.
Fig. 02. Le Corbusier, Curutchet House, La Plata, 1949/53; photograph by Fabrizio Toppetti.



parciales y tendenciosas”. Liberado de una objetividad inalcanzable, Toppetti recorre el Dominion Center de Mies van der Rohe, el Banco de Londres y América del Sur de Clorindo Testa, las infraestructuras urbanas de Otto Wagner, las intervenciones sutiles de Dimitris Pikionis, o los ejercicios de modernidad contenida de Jozê Plecnik, apoyándose en textos de Giedion, Neutra o Zevi. Al trasluz, la cascada de referencias dibuja un panorama vital y sugestivo, una clara alternativa a la visión dogmática y segmentada de la crítica arquitectónica.

A través de la Casa Curutchet se trazan las analogías entre el bisturí de un médico y la necesidad de encontrar un instrumento icónico para los arquitectos, visibilizando el papel social de la arquitectura de la misma forma que el escalpelo es sinónimo de cura y progreso. El relato se cierra trazando escenarios abiertos como el concepto de espacio virtual, el equilibrio mediambiental o la revolución biopolítica, con el convencimiento de que la arquitectura alberga la solución a la ciudad a través de la “cultura del proyecto”. A pesar del ejercicio propositivo, el autor reconoce el carácter impredecible del tiempo y sus hechos a través de una cita de Mies recogida en el número 1 de *Bürohaus*, dejando en suspenso cualquier intento de sistematizar lo contemporáneo: “La arquitectura es la voluntad de una época concebida espacialmente, viviente, en transformación, nueva. Ni al ayer, ni al mañana: solo es posible darle forma al hoy”.

his own work as a set of “inopportune, partial and tendentious considerations”. Freed from an unattainable objectivity, Toppetti traces Mies van der Rohe’s Dominion Center, Clorindo Testa’s Bank of London and South America, Otto Wagner’s urban infrastructures, Dimitris Pikionis’s subtle interventions, or Jozê Plecnik’s exercises in restrained modernity, relying on texts by Giedion, Neutra or Zevi. In the light, the cascade of references draws a vital and suggestive panorama, a clear alternative to the dogmatic and segmented vision of architectural criticism.

Through the Curutchet House, analogies are drawn between a doctor’s scalpel and the need to find an iconic instrument for architects, making visible the social role of architecture in the same way that the scalpel is synonymous with healing and progress. The story closes by tracing open scenarios such as the concept of virtual space, environmental balance or the biopolitical revolution, with the conviction that architecture holds the solution to the city through the “culture of the project”. In spite of the propositional exercise, the author recognises the unpredictable nature of time and its facts through a quote from Mies in issue 1 of *Bürohaus*, leaving in abeyance any attempt to systematise the contemporary: “Architecture is the will of a spatially conceived, living, changing, new epoch. Neither yesterday nor tomorrow: it is only possible to give form to today”.

∨ Portada
Cover



Cómo citar · Citation

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Louisiana Architecture and Landscape

Michael Sheridan

Carmen García Sánchez

Copenhague: Strandberg Publishing, 2017
378 págs., 17 x 23,6 cm
ISBN 978-87-92877-86-4

El Museo de Arte Moderno Louisiana, ampliación de una antigua residencia del siglo XIX que se integra en un espléndido parque a orillas del Øresund, representa una obra maestra de la arquitectura de posguerra danesa de los arquitectos Jørgen Bo y Vilhelm Wohlert. Tras su inauguración en 1958 le sucederán numerosas ampliaciones, conservando la idea original de proyecto: la cohesión de arquitectura, arte y paisaje, una obra de arte integral cuyas lecciones en la era del “Antropoceno” conviene recuperar.

El arquitecto estadounidense Michael Sheridan, reconocido internacionalmente por sus publicaciones sobre arquitectura y diseño moderno danés, realiza un recorrido cronológico a través de la obra del museo. “Louisiana-Architecture and Landscape”, publicado en danés y en inglés, se estructura en siete capítulos precedidos de una introducción del autor: “Genius Loci”, “Origins: 1657-1956”, “A Home for Art: 1956-58”, “Organic Growth: 1959-71”, “A New Museum 1972-82”, “Earthwork 1983-2006” y “Evolution”. Su pequeño formato y modesta edición, en tapa blanda, oculta la riqueza de su contenido, el extenso desarrollo de su narrativa y valioso material gráfico. El proyecto, ejemplo del ascetismo arquitectónico, no podría mostrarse de otro modo.

La publicación, producto de la alianza entre el conocido autor y el propio museo, no es meramente divulgativa, sino que tiene carácter científico por la introspección en su arquitectura. Es un reto que dificulta su redacción, pero que se consigue con maestría. Sheridan nos adentra en la larga historia del parque y del edificio del museo, que ha crecido orgánicamente, siguiendo la evolución del arte contemporáneo y la visión de su fundador, Knud W. Jensen. Aporta nuevos datos sobre su origen, la finca original, sus cambios de propietarios, las transformaciones del edificio y el examen de su paisajismo. Revela información inédita, destacando los dibujos

The Louisiana Museum of Modern Art, an extension of an ancient 19th-century residence set in a splendid park by the Øresund’s shore, represents a post-war Danish architectural master piece designed by architects Jørgen Bo and Vilhelm Wohlert. A set of extensions was carried out after its opening in 1958, preserving the original idea of the project: the cohesion of architecture, art and landscape, a comprehensive work of art whose lessons should be recovered and preserved in the “Anthropocene” era.

American architect Michael Sheridan, internationally renowned for his publications on modern Danish architecture and design, displays a chronological journey through the museum’s architectural work. “Louisiana-Architecture and Landscape”, published in Danish and English, is structured in seven chapters preceded by the author’s Introduction: “Genius Loci”, “Origins: 1657-1956”, “A Home for Art: 1956-58”, “Organic Growth: 1959-71”, “A New Museum 1972-82”, “Earthwork 1983-2006” and “Evolution”. Its small format and humble softcover edition, hides the richness of its content, the extensive development of its narrative and valuable graphical material. The project, an exemplary ascetic architectural case, couldn’t be presented in any other way.

The publication, a product of the alliance between the well-known author and the museum itself, is not merely informative. It also has a scientific component due to Sheridan’s introspection in Louisiana’s architectural features. It is a challenge that makes it difficult to be written, but Sheridan achieves this with mastery. Sheridan leads us into the long history of the park and the museum building—which has grown organically—following the evolution of contemporary art and the vision of its founder, Knud W. Jensen. He provides new information on its origin, the original estate, its different owners, the building transformations and the examination of its landscaping. Therefore, he discloses

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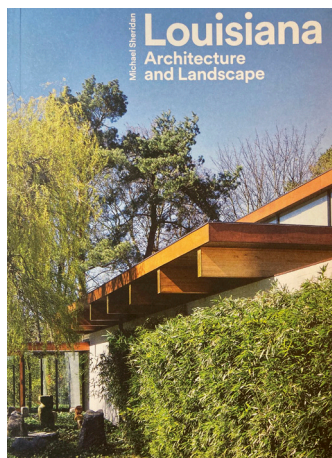


- › Fig. 02. Fotografía de la percepción de la naturaleza desde el interior de la sala Giacometti de Museo Louisiana tomada por el autor del texto verano de 2020.
Fig. 02. Photography that shows the perception of nature from inside the Giacometti room, Louisiana Museum. Photography by the author, summer 2020.



- 1 Carmen García Sánchez, *1950 en Torno Al Museo Louisiana 1970*, PhD Tesis Doctoral, Universidad Politécnica de Madrid, D. P. A., E.T.S.A.M. 2015 y Jaime J. Ferrer Forés, *Arquitectura Moderna en Dinamarca*, PhD Tesis Doctoral, Universidad Politécnica de Cataluña, D.P.A., E.T.S.A.B. 2006. Carmen García Sánchez, *1950 en Torno Al Museo Louisiana 1970*, PhD Doctoral Dissertation Universidad Politécnica de Madrid, D. P. A., E.T.S.A.M. 2015 and Jaime J. Ferrer Forés, *Arquitectura Moderna en Dinamarca*, PhD Doctoral Dissertation, Universidad Politécnica de Cataluña, D.P.A., E.T.S.A.B. 2006.

- ✓ Fig. 01. Portada. Fotografía del Museo Louisiana inmerso en la naturaleza tomada por Jens Frederiksen (2017).
Fig. 01. Cover. Photography of the Louisiana Museum immersed in nature, by Jens Frederiksen (2017).



originales del archivo del Museo Louisiana y la Biblioteca de Arte Nacional Danesa, completados mediante una espléndida colección de fotografías.

Sheridan despliega una profunda investigación donde señala nuevas referencias arquitectónicas centrándose principalmente en la tradición danesa, completando así la información y documentación ofrecida en publicaciones anteriores. Con ello, contribuye al entendimiento de esta obra compleja que amalgama una gran cantidad de culturas y referencias; una obra que sin renunciar a la tradición representa su evolución hacia la modernidad, renovándose a través de contribuciones extranjeras. No exento de polémica, niega su relación con la arquitectura tradicional japonesa, la cual ha sido identificada por autores como la prestigiosa historiadora danesa Lisbet Balslev. Por otro lado, salda una deuda pendiente con Bo, un arquitecto poco conocido fuera del ámbito académico danés a diferencia de Wohlert. Sheridan expone las diferentes experiencias y recorridos previos a Louisiana de ambos, más allá de apuntar sus referentes, esclarece sus intenciones y modo de abordar el ejercicio proyectual.

Como crítica a un volumen magnífico, estudio exhaustivo y actualizado de Louisiana que se aproxima a lo científico, sería justo mencionar algunas contribuciones previas omitidas; como dos tesis doctorales internacionales defendidas en España¹, que enriquecerían la publicación y ampliarían la visión internacional que Louisiana representa para la comunidad científica y educativa.

unpublished data. Among this data provided, it is worth highlighting the original drawings kept in the archive of the Louisiana Museum and the Danish National Art Library, complemented by a splendid collection of photographs.

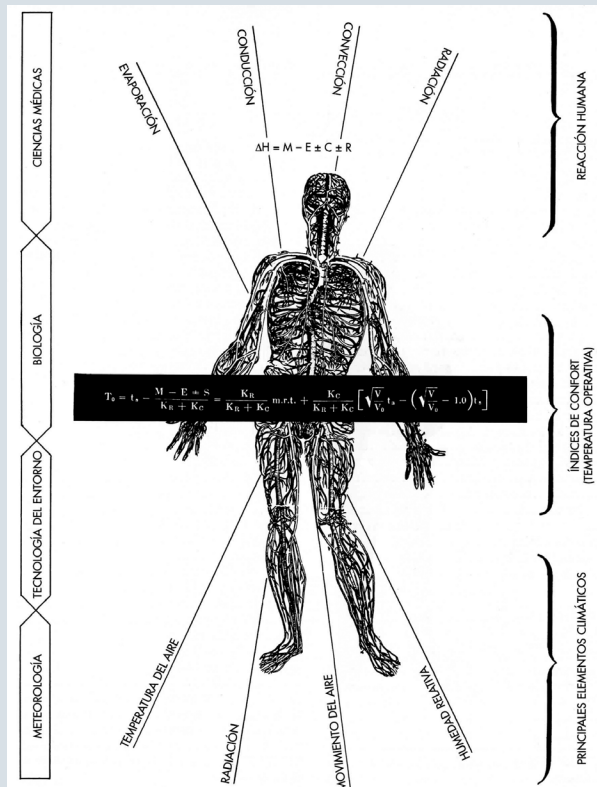
Sheridan unfolds an extensive research where he points out new architectural references and mainly focuses on Danish tradition. So that, he completes the information and documentation offered by other previous publications. He contributes to the understanding of this complex architectural work that links a wide set of cultures and references, an architectural work that represents an evolution towards modernity without renouncing tradition, and renews itself through the interpretation of foreign pieces of architecture. Out of polemic, he denies Louisiana Museum's relationship with traditional Japanese architecture, which has been identified by some authors like prestigious Danish historian Lisbet Balslev. In addition, he settles a debt of recognition to Bo, an architect little known outside of Danish academic circles unlike Wohlert. Sheridan presents both their pre-Louisiana experience and background. He not only points out their architectural references, but he clarifies their intentions and own approach to architectural design practice.

As a critique to a magnificent volume, comprehensive and updated study of Louisiana, that involves a scientific approach, it would have been fair to have mentioned some other previous contributions that have been omitted, for instance two Doctoral dissertations defended in Spain¹. This would enrich the book and boost the international vision that Louisiana represents for the scientific and educational community.

Cómo citar · Citation

García Sanchez, Carmen. Reseña de *Louisiana. Architecture and Landscape*, de Michael Sheridan. *BAC Boletín Académico. Revista de investigación y arquitectura contemporánea*, no. 11 (2021): 86-87. <https://doi.org/10.17979/bac.2021.11.0.7326>.

Call for papers



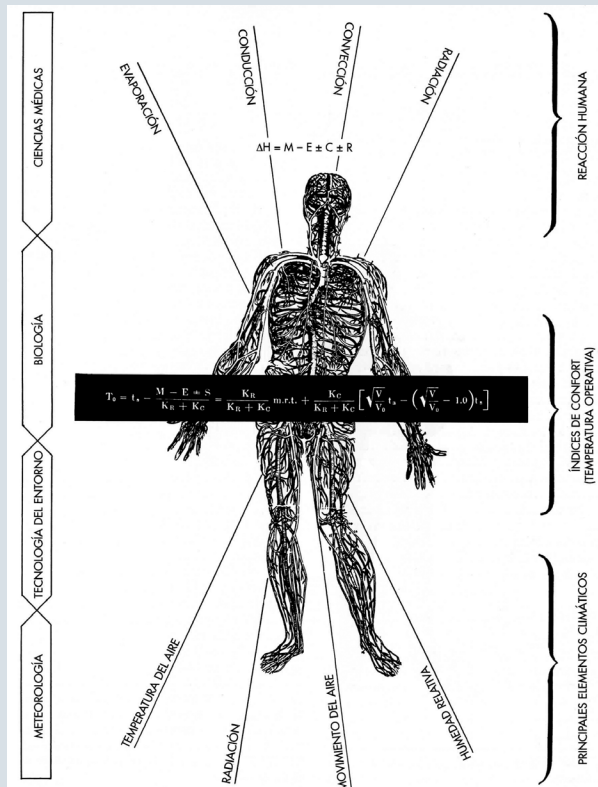
Informal

En 1963 se publica *Arquitectura y Clima* de Victor Olgay donde se menciona por primera vez la necesidad de realizar una interpretación bioclimática del regionalismo arquitectónico¹. Un año después Bernard Rudofsky utiliza en *Arquitectura sin arquitectos*: una breve introducción a los no-entendidos en arquitectura, el término de informal para referirse a una arquitectura anónima, de origen vernáculo o local, de gran eficiencia energética. Siendo conscientes de la importancia de los efectos del clima sobre el ser humano y su arquitectura, o viceversa, de la evidencia que la arquitectura debe ser una respuesta coherente a los condicionantes medioambientales, queremos abrir el debate sobre una problemática que más de medio siglo después no solo sigue siendo igual de inevitable sino que, acrecentada con el cambio climático, se ha visto traducida a procesos económicos globales donde la sustentable y la sostenibilidad se entrecruzan con la eficiencia energética y la termodinámica. Hacemos un llamamiento a la reflexión de todo lo que hay de informal en una relación donde el regionalismo cobra de nuevo sentido.

BAC Boletín Académico es la revista científica de la Escuela Técnica Superior de Arquitectura de la UDC. Se edita en formato Open Journal Systems, con periodicidad anual y sigue el procedimiento de revisión por pares de doble ciego. Cada artículo se publica en su lengua original, junto al inglés y castellano, gallego o portugués. Cada número se dedica a publicar artículos de investigación inéditos que giren entorno a la arquitectura en todas sus acepciones y escalas. Creemos en recuperar la revista de arquitectura como un elemento de reflexión contemporánea. Para ello se hace necesario ampliar el marco de interacción con las otras artes y las ciencias como medio para alcanzar un estado de la cuestión, de lo posible, todo ello surgirá de esta interacción o collage formado por varias secciones: Conversaciones editoriales: entrevistas, debates y textos fundamentales de traducción inédita. Ensayos: artículos o investigaciones académicas originales, revisadas por pares. Proyectos: de arquitectura contemporánea, o no, cuyas cualidades resulten pertinentes proclamar. Reseñas: notas breves de texto o imagen, bibliográficas, expositivas, etc. <https://revistas.udc.es/index.php/BAC>

1 El título original viene acompañado del subtítulo: *Bioclimatic approach to architectural regionalism*. La tardía edición española, publicada ten 1998 y reeditada en 2019, se acompaña en castellano de otro epígrafe donde la palabra regionalismo desaparece: *Manual de diseño Bioclimático para arquitectos y urbanistas*. Olgay, Victor, *Arquitectura y Clima*, Editorial Gustavo Gili, SL., Barcelona, 1998, 1ª Reimpresión 2019.

Call for papers



Informal

In 1963 Victor Olgyay's book "Architecture and Climate" was published, where the need for a bioclimatic interpretation of architectural regionalism is mentioned for the first time¹. A year later, Bernard Rudofsky, in "Architecture Without Architects: a Short Introduction to Non-Pedigreed Architecture", used the term informal to refer to an anonymous architecture, with a vernacular or local origin and high energy efficiency. Being aware of the importance of the effects of climate on human beings and our architecture, or vice versa, of the evidence that architecture must be a coherent response to environmental constraints, our aim is to spark a debate on a problem that more than half a century later is not only still as unavoidable as ever, but which, aggravated by climate change, has been translated into global economic processes where the sustainable and sustainability are intertwined with energy efficiency and thermodynamics. We call for reflection on all that is informal in a relationship where regionalism takes on a new meaning.

BAC *Boletín Académico* is the scientific journal of the University School of Architecture of the University of A Coruña. It is published in Open Journal Systems format, on an annual basis and follows the double-blind peer review procedure. Each article is published in its original language, together with English and Spanish, Galician or Portuguese. Each issue is dedicated to publishing unedited research articles that revolve around architecture in all its expressions and scales. We believe in recovering the architecture magazine as an element of contemporary reflection. To do so, it is necessary to broaden the framework of interaction with the other arts and sciences as a way to achieve an understanding of the current state of play, of what is possible: all of this will emerge from this interaction or collage consisting of several sections: Editorial conversations: interviews, debates and translations of unpublished key texts. Essays: original, peer-reviewed academic articles or research. Projects: of contemporary architecture, or not, with qualities that deserve special recognition. Reviews: short text or image notes, bibliographic or explanatory pieces, etc... <https://revistas.udc.es/index.php/BAC>

1. The original title comes with the subtitle: Bioclimatic approach to architectural regionalism.

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Criticism

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