“To each his own. I follow mine, which consists of destroying the weapons of discourse, far more effective than iron and fire, the external form and the internal organization of large cities. New Towers of Babel, erected in the present times by unpredictability and greed, you will fall to the blows of my pick!”

Arturo Soria y Mata, ‘La cuestión social y la Ciudad Lineal’ in El Progreso. Madrid, March 5, 1883.

The politician, inventor, and geometrician Arturo Soria y Mata (1844-1920) is strongly linked to the project that he promoted and disseminated internationally for more than forty years: The Linear City (Ciudad Lineal), a pioneering proposal in what its author called ‘architecture of cities’ [Fig. 01]. Prior to the consolidation of modern urbanism, the principles of this new discipline were outlined in various publications without being conclusively systematized. The core of his thought was presented in a series of urban-themed texts published between 1881 and 1883 in the newspaper El Progreso, in which he sought to reveal the laws behind the growth of modern cities while influencing local politics. This unfinished theory, laid down in the form of short newspaper articles, combined theoretical aspirations with the first attempts to come up with a Linear City. In 1892, a decade after the publication of his first texts, Soria announced a matured revision of his proposal, and two years later he began to pave the way for its construction through the company he founded, the Compañía Madrileña de Urbanización (hereinafter CMU). The beginning of his work as an urban developer meant the abandonment of his theoretical ambitions, the intuitions behind which were subordinated to the dissemination and promotion of his company. This research seeks to weaken the correlations of influences on Arturo Soria’s thought with the aim of clarifying his most relevant contributions, exposing his principles and contextualizing all in the germinal debate of modern urbanism as well as in contemporary ecological concerns. When the key points of his urban vision are exposed, it becomes clear that, for Soria, the Linear City is the definitive answer, but what are the terms of his question? How does the author explain the phenomena of the origin and expansion of cities? What analysis does

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The organic language of Arturo Soria. The antecedent of ecological urban planning

The antecedent of ecological urban planning

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he carry out around urban issues and what tools does he use?

Since the late 1960s, when authors like Fernando Terán, George R. Collins or Carlos Flores stressed the importance of the Linear City, numerous researchers have shed light on the biography of Arturo Soria y Mata, unravelling multiple aspects of his thought and work. In this research, however, we will not focus on his biography, but rather on an analysis of his abundant writings. In studying Soria's written work, the research has distinguished different stages in the development of his thought which correspond to successive languages adopted and the overlap between them.

First, a primitive organic language (1881-1883) is identified, on which this article is focused and which we believe to be the most relevant, constituting, as it does, the mental framework in which his intuition of the Linear City germinated. From the dating we glean it is one of the most original and transcendental proto-urbanistic languages, and he has been described as one of the sources of modern urban thought, the influence of which can be traced to the present. Second, we must mention a later, obscure neo-Pythagorean language which appeared in "El Origen Poliedrico de las Especies" (1894), the publication where the author tried to explain the origin of natural forms by means of the combination of polyhedrons, and whose connection to his urban theory remains controversial [Fig. 02]. This theosophy-inspired language manifested Soria's controversial theosophy-origin of natural forms by means of the later, obscure neo-Pythagorean language the present. Second, we must mention a...
The identification of infrastructure as urban structure is followed by the definition of a ‘cell’, the ultimate syntactic element on which Soria’s urban language rests: the house. Soria’s predilection for single-family housing has hygienic, political and speculative motivations, but also syntactic ones: the Aristotelian social cell, the family, must have another equivalent architectural unit, the house. The definition of this minimal unit and its association, forming packages called blocks, was where the true architectural and political content of Soria’s project lies: a social image where we can live together, capable of terrorizing us through its monotony and at the same time dazzling us with the clear promise of a life in harmony with nature, where ‘the palace of the powerful, adorned with magnificent gardens, and the poor man’s hut, with a modest barnyard simply embellished with useful plants and scented flowers, live close together’ (Fig. 06).

The invention of an organic image

“Perhaps, following Fourier, we should call an inventor [not a writer or a philosopher] he who brings to light new formulas, occupying, by means of fragments, immensely and in detail, the space of the signifier.”


By recomposing the fragments of Soria’s discourse, dispersed in articles, manifestos and various conferences, we are able to visualize the deterministic and reductionist notions of his urban theory, a theory incapable of satisfying the growing complexity of urban phenomena in our era of temporary metropolises, but analysis of which gives us back one of the most powerful instruments developed by urban writing: the possibility of a total urban image. Soria’s writings offer an attractive answer with a holistic capacity to bring together advances in knowledge and technique in areas as diverse as locomotion, telecommunications or sanitation, and integrate them in a dynamic whole, which is necessary if individual projects called upon to transform the city are to be able to support and satisfy the needs of life from the house to the city and from the city to the territory. For Soria, in our cities ‘There has been a lack of organization and linkage of valuable elements. It is in the syntactic composition of simple elements, in the synchronized articulation of urban systems that, wisely arranged, they can give amazing results, in the same way that the seed, well fertilized soil and the separated water are inactive riches, and together they are transformed into the infinite wonders of the plant kingdom’.

This text presents a continuous reiteration of basic concepts that come in different time contexts to help push through the developmentalist aims of Arturo Soria. This is fostered by the intertwining, in a continuous reading of Soria’s written thought, of concise fragments of information, such as manifestos or lectures, followed by other more elaborate texts focused less on presenting the Linear City project than on studying of phenomena tangential to it. These temporary folds of the text-network are, however, an inestimable help in showing the cracks and interstices of its conceptual sieve, through which many aspects of the urban phenomena pass without being trapped by his critical analysis, giving shape, in some way, to the counter-form of the text’s implicit structure.

Urban Anatomy

For Soria, the urban form ‘must be subordinated to the needs of urban life’ and attests to each city’s stage of evolution, in its generalized trend towards regularity. He repeatedly used the term ‘form’ as something equivalent to ‘structure’, referring almost exclusively to the layout of the road system of streets and squares that constitutes the infrastructural support and negative of the built mass. Soria suggests that in the structure-skeleton of the city there are different categories of bearing-linear elements or bones: the streets, avenues and boulevards that should accommodate the layout of the railways and whose relationship and hierarchy vary according to their width. In this way, Soria clarified that the growth of the city is based on the layout of infrastructures and their coordination with the transportation system as a whole. Consequently, it is only possible to describe the shape of the traditional city as anti-organic, a formless mass (or invertebrate) where ‘the variable angles, the sinuses, the irregular contours of the non-crystallized mineral dominate; it is the image of chaos’.

On the contrary, the cities that were planned according to regular grids or checkerboards where ‘two series of parallel streets intersecting at right angles’, e.g. the New York City layout, would represent the most advanced stage of urban evolution, which Soria praised as ‘the most advanced and closest to perfection’. He also suggested a stage beyond the hypodamic plan or checkerboard layout: ‘The square form of the American ones, thanks to the wonderful intuition of the Spanish conquerors, is a result of the transition from the military to the industrial organization that now predominates. The latter will lean more and more towards the linear form, in which the fact that buses and railways are the same thing takes on extraordinary importance’ (Fig. 05).
In Collection and Recollection: On Film Itineraries and Museum Walks, Bruno delves into the concepts of memory and imagination from the space of the museum, film and architecture. She underlines the interest in mnemonic processes in cinema, as in the films Memento or Blade Runner, where memory is portrayed as the sum of “fragments of an archival process porously embedded in our path, part of our own shifting geography”. From the angle of this idea, the boundaries between cinema and museum are blurred, with an increasing use of moving images that turn museum rooms into projection rooms. This connection is observed in the experimentation on cinematographic language that artists such as Chris Marker, Douglas Gordon or Bill Viola have carried out. Regarding the urban passage and the transit through the museum, Bruno relates picturesque aesthetics, his legacy of “making feel through the eye”, with cinematographic optics, where “a double movement connects the external to the internal topography”. There is prominent mention of Montage and Architecture (1930) by Sergei Eisenstein and Le Corbusiers ‘promenade architecturale’, where cinematographic montage and architectural itinerary converge and the observer becomes a consumer of views. The museum, the gallery or the room, therefore, are conceived as “places of texture”, “fabrications of visual fabrics” or “emotional archives of the imagination”.

“Modernist Ruins, Filmic Archaeologies” runs through “A Free and Anonymous Monument”, the installation that Jane and Louise Wilson presented at the BALTIC Centre for Contemporary Art (Newcastle) in 2003. The installation reconstructs through a succession of suspended screens, like a Lev Kuleshov montage, the Apollo Pavilion design by the artist Victor Pasmore. It stimulates the sensory character of the exhibition space itself, as well as acting as suspended memories of the work. Attention is drawn to the relationship that Bruno points out between modernity and landscape culture, where the pavilion, transition between city and nature, is conceived as a privileged spectator of the perceptual, cultural and social transformations of the modern era. The installation, thus, represents the “multiple, fractured, disjointed, fluid and unstable nature” of space and the modern subject – or the ‘flaneur’, as poetically defined by Charles Baudelaire.

In “The Architecture of Science in Art. An Anatomy Lesson”, Bruno establishes a relationship between science and art through forms of observing the human body and the evolution of exhibition spaces intended for this. The origin is located in Naples, in a show of the anatomical lesson as an antecedent of cinema. Its research base and the fragmentation of the human body relate the anatomical with the cinematographic gaze, the latter from a corporeal form of visuality. In this relationship between the cinematographic and anatomical eye, the text owes to The Work of Art in the Age of Mechanical Reproduction, where Walter Benjamin pointed out that “the boldness of the cameraman is comparable to that of the surgeon”. Bruno analyses José de Ribera’s 1631 painting Magdalena Ventura with Her Husband, stressing not only high culture’s interest in an image of popular (low) culture, but also the interest in anatomical abnormalities, especially those of the female body. This “epistemological movement toward the body-object” from culture has contributed to the regarding of the body as a “privileged subject of knowledge, pleasure and power”. In contrast, Bruno points out medicine’s debt to cinema in terms of observation and perception modes.

In “Mind Works: Rebecca Horn’s Interior Art”, the work of the German artist serves as a guide for Bruno to delve deeper into the idea of appropriation as an extension of our intimacy, where the human body is shown as an instrument of possession. In “Berlin Exercises”, “Dreaming Underwater” or “White Body Fan”, corporeal prostheses determine the body’s ability to explore space, while in “River of the Moon” or “Station Amoureuse”, the hotel room is understood as a superposition of stories where space emerges as a geography of subjectivities. Regarding the relationship between body and technology, Horn explores the coordination of movements and the automation of the body to delve into how technology merges with the body to accentuate a shared intimacy.

“Fashions of Living. Intimacy in Art and Film” begins with the “Femme-Maison” series of Louise Bourgeois, which fuses the silhouette of a woman with a house. The drawing makes explicit the connection between home and female subject, eliciting an emotional gaze linked to the idea of travel, at the same time that this idea triggers a transitory relationship with the home as a wandering cartography. In this journey through the house, the first stop is in Dorothy Arzner’s film “Craig’s Wife”, where the house becomes the protagonist in a domesticity that problematizes the relationship between space and sexuality. In The New Dwelling: Woman as Creator by Bruno Taut, domesticity is fused with movement, the planes are interpreted as maps for living, and the female subject as a performative object. The relationship between architecture and living continues with works like the Urban maps of Guillermo Kuitca, “Crying Wall” by Ann Hamilton, “House” by Rachel Whiteread or “Untitled” by Doris Salcedo, resulting in a complete geography of intimacy.