FIG 1 Locomotiva 3. Dogma (Pier Vittorio Aureli, Martino Tattara)
© Dogma

FOOTPRINTS

Alejandra Celedón

Profesora, Escuela de Arquitectura, Pontificia Universidad
Católica de Chile, Santiago, Chile

As a drawing on the ground, the plan not only anticipates the disposition of a future building. It is also a conceptual abstraction, a political device and even a possible redoubt of autonomy for architecture. Understanding the plan as a footprint that imprints a mark on the territory, the text invites us to rethink the potential of this tool beyond its mere instrumentality in the design process.

KEYWORDS · plan, ground, typology, building, city

In 1959, a selection of 45 building plans were collected in “Building Footprints,” an issue of a student publication (Sacriste, 1959). The collection of drawings ranged from the Parthenon on the Athenian Acropolis (447 BC) to Notre Dame du Haut in Ronchamp (1954), from the Great Hypostyle Hall of Karnak (1312 BC) to the United Nations Headquarters in New York (1952), all shown at the same scale, using the same technique.

The publication’s title suggests the word *ichnography*, which Vitruvius used along with *orthography* and *scenography* to explain the “forms of expression of arrangement” of a building, that is, the devices used to visualize its *dispositio*. In these terms, ichnography referred to the top view of a building but also indicated the arrangement of ideas and an effort of the mind (Vitruvius, 1860).¹ The word comes from the Greek *ichnos* –a footprint or track made by the sole of the foot– and

¹ “Arrangement is the disposition, in their just and proper places, of all parts of the building, and the pleasing effect of the same, keeping in view its appropriate character. It is divisible into three heads, which, considered together, constitute design: these, by the Greeks, are named ‘idea’: they are called ichnography, orthography and scenography. The first is the representation on a plane of the ground plan of the work, drawn by rule and compasses. The second is the elevation of the front, slightly shadowed, and showing the forms of the intended building. The last exhibits the front and a receding side properly shadowed, the lines being drawn to their proper vanishing points. These three are the result of thought and invention. Thought is an effort of the mind.” (Vitruvius, 1860).

Palacio de las Cien Columnas,
 Persépolis (Persia) Siglos VI-V A.C.
 /Hall of the Hundred Columns,
 Persepolis (Persia) 6th-5th century B.C.
 Fuente / Source: Eduardo Sacriste,
*Building Footprints: A Selection of
 Forty-Five Building Plans, All Drawn
 at the Same Scale.* Redibujado de ARQ a
 partir de original / Redrawn by ARQ
 based on the original

thus signifies the plan or track formed as a ground for the base of a supported corpus.² From *ichnos* (footprint) and *graphe* (writing and drawing), ichnography refers to the imprint, whether drawn or written, of a work: a plan.³ Evoking the idea of vestige or trace, *ichnos* suggests that the plan represents the building's being, that is, the idea from which it originated. In its most economical expression, a plan delineates the fundamental distinction between interior and exterior, private and public, inclusion and exclusion, thereby revealing patterns of occupancy and forms of life.

"Building Footprints" was a preliminary edition of a book published in Buenos Aires in 1962 under the same title, *Huellas de Edificios*, authored by Eduardo Sacriste, a professor and an advocate for the architecture of Le Corbusier (who visited Argentina in 1929 when Sacriste was student) and Frank Lloyd Wright (whom Sacriste met in the United States). Sacriste

2 The first to note the connection between *ichnos* and the plan was Quatremère de Quincy in his entry for "plan" in the *Encyclopédie méthodique* (De Quincy, 1788). Charles Blanc later recalled the same connection in his *Grammaire*, comparing the plan of a building with the footprint man leaves on the earth. For Blanc, the plan determines the expression (*ekphrasis*) and the imprint (trace, footprint, *ichnos*) of a building on a site (Blanc, 1870). More recently, Anthony Vidler has recovered the link between *ichnos* and the plan to argue for a connection with the idea of type. For him, the plan becomes the place for the production and reproduction of variants of a single example, the type, by means of a rule-based process (Vidler, 1987).

3 The plan as graphic means involves an act of description with a two-fold imprint. From the Greek *graphein*, it embraces both drawing and writing. In this way, the plan could be understood as a graphic formula articulating a discursive variable.

0 5 10 m

Partenón, Atenas (Grecia) Siglo V A.C. /
Parthenon, Athens (Greece) 5th century B.C.
 Fuente / Source: Eduardo Sacriste, *Building
 Footprints: A Selection of Forty-Five Building
 Plans, All Drawn at the Same Scale*. Redibujo
 de ARQ a partir de original / Redrawn by ARQ
 based on the original

Johnson Building, Racine (E.E.UU.) Siglo XX /
(USA) 20th century
 Fuente / Source: Eduardo Sacriste, *Building
 Footprints: A Selection of Forty-Five Building
 Plans, All Drawn at the Same Scale*. Redibujo
 de ARQ a partir de original / Redrawn by ARQ
 based on the original

traveled widely: from Argentina to North Africa, the United States, India, Japan, and back, serving as a worldly reference on architecture not only in his home country but also at various universities abroad. *Huellas de Edificios* is a portfolio of notable buildings that connects his impressions during the course of his journeys. In his introduction, Sacriste defines footprints as traces from which we can infer a larger entity:

When we walk by the muddy shore of a lake and see the footprints of animals, we can see that there stood a horse, a cow, an elephant, a snake, a crab, a bird. If we do not recognize the footprint we can guess quite easily the kind of animal that has left its mark. In other words, we can classify the footprint into some group. We can guess the volume, the weight and other characteristics of the animal. We can judge because we have a visual education in footprints (Sacriste, 1959:2).

A few lines later Sacriste establishes the connection between a footprint, the act of description, and the drawing of a plan by recalling Le Corbusier's assertion, central in *Towards an Architecture*, that "the plan is the generator," and that "the plan has within itself the essence of sensations... It is a summary... The law of the building is written on the floor" (Sacriste, 1959:2).

Redrawn, or rather rewritten, a collection of drawings uncovers a typological nature and offers a diagrammatic

A

B

A. Palacio de Darius, Persépolis
(Persia) Siglos VI-V A.C. / *Palace of Darius, Persepolis (Persia)*
6th-5th century B.C.

B. Palacio, Sarvistán (Persia) Siglo IV / *Palace, Sarvistan (Persia)*
4th century

Fuente / Source: Eduardo Sacriste,
Building Footprints: A Selection of Forty-Five Building Plans, All Drawn at the Same Scale. Redibujó de ARQ a partir de original / *Redrawn by ARQ based on the original*

0 5 10 m

potential for imprinting a larger site with ideas. Normalized at the same scale and using the same drawing constrictions, Sacriste's plans are thus 'arrested' in a single plane. The 45 buildings are shed from their unique pasts to become ahistorical, non-geographical structures, which in turn produce an atemporal version of the present on paper –one in which, paradoxically, history forms the core of architectural knowledge.⁴ Borrowing Manfredo Tafuri's terms, we could call this an "actualization of history": an act of bringing examples from the past into the present and the planning (and prescription) of a specific ideological orientation. But rather than annihilating time –by bringing examples from the past into the present– the book compresses it, visualizes it, and introduces all periods and places as actualized knowledge.⁵ Extracted and edited, building plans are idealized and typified through an act of abstraction that is neither mechanical nor neutral. By rendering projects generic, equivalent, and in the present tense, they indeed become footprints, fundamental traces on a piece of land. In this most abstract version of drawing –that is, a redrawing– buildings are reduced to a repertoire of intentional diagrams. Indeed, when the Pantheon in Rome and Santa Sophia in Istanbul are both drawn in plan, they are disclosed as identical diagrams.

"Building Footprints" is at once a late praise and a timely epitaph for the plan. Inasmuch as it was a tribute to the plan, the publication reenacted the early operations of Julien-David Le Roy and Jean-Nicolas-Louis Durand, who were the first to collect series of buildings in single plates. In *Le ruines des plus beaux monuments de la Grèce* (1758), Le Roy used a comparative drawing framework to register the development of the Christian church over time. Drawing at a unified scale for the purpose of comparison, Le Roy created a history of Christian churches and their evolving dispositions "from the reign of Constantine the great, till our times" (Leroy, 2004). His depictions of one building type and its transformation through time demonstrate its invariant and changing

⁴ Within narrative studies, an 'arrest' is defined as "a temporal paralysis within narrative itself" (Purves, 2010:144).

⁵ For Tafuri, to actualize history is to "turn it into a supple instrument for action" (Tafuri, 1980:149).

A

B

C

A. Saint-Chapelle, París (Francia)

Siglo XIII / París (Francia)

13th century

B. S. Maria in Cosmedin, Roma (Italia)

Siglo VIII / Roma (Italia) 8th century

C. S. Ivo, Roma (Italia) Siglo XVII /

Roma (Italia) 17th century

Fuente / Source: Eduardo Sacriste,
*Building Footprints: A Selection of
 Forty-Five Building Plans, All Drawn
 at the Same Scale. Redibujado de ARQ a
 partir de original / Redrawn by ARQ
 based on the original*

qualities. Durand, in turn, went further. Extending the logic of Le Roy's engravings, he compared not whole buildings but building elements extracted from their original context. "Porches," "Stairs," "Doors," and "Vestibules" are the titles of his comparative plates in which not only time and place are eliminated but also the buildings to which they belong. In Durand's *Précis*, building parts are extracted and abstracted, removed from their original surroundings, and thus acquire an autonomous and absolute existence in the space of the page (Durand, 2000 [1809]). In Sacriste's book –as in Le Roy's and Durand's plates– the drawing of a plan does not only represent but also analyzes, scales, measures, orders, and selects the relevant from the irrelevant. Redrawing buildings (and their parts) at the same scale and under the same form of visualization enables comparison and thus judgment, making this act the precondition of typologies.

The codification of the architectural project at the École des Beaux-Arts into a series of drawings made in plan –the *parti*, the *poché*, the *entourage*, and the *mosaïque*– was instrumental to enabling the communication of information in a condensed mode and transforming the plan itself into a site of specialized knowledge.⁶ In the Beaux-Arts tradition, these drawings were not meant to be finished but only sketched through a technique called 'indications,' leaving the overall plan to be inferred from a part. The Beaux-Arts teaching method was based on the notion of 'composition' and the relevance of historical references; thus, history was the source from which architects could extract elements to be composed in service of a particular program.⁷ For Durand, identifying the fundamental elements of architecture and the general principles for assembling them meant studying,

6 The *parti* was the geometrical essence of the building's conception and configuration. The *poché* was a plan indicating wall heights and the distribution of loads. The *mosaïque* was a key plan of floor patterns and ceilings used to show the distinction between circulation and solid areas. The *entourage* depicted the relation of the building to the site. Reading these drawings required specific and technical knowledge of conventions (for example, the width of a wall represented its height).

7 In order to obtain a certificate from the Beaux-Arts institute, a student had to undertake the *archaeo* (archaeology project), which was considered "one of the surest methods of creating an architectural vocabulary."

Comparación entre /
 Comparison between:
 Santa Sofía, Estambul (Turquía)
 Siglo VI y el Panteón, Roma (Italia)
 Siglo II / *Santa Sophia, Istanbul*
 (Turkey) 6th century and the
Pantheon, Rome (Italy) 2th century
 Fuente / Source: Eduardo Sacriste,
Building Footprints: A Selection of
Forty-Five Building Plans, All Drawn
at the Same Scale. Redibujo de
 ARQ a partir de original / Redrawn
 by ARQ based on the original

comparing, and classifying past architectures. The example allowed different architectures to be brought together by means of a graphical approach.

While the plan may have been the architectural device par excellence in the times of Durand and even of Le Corbusier, interest in the tool waned after World War II. When in 1967 a second edition of *Huellas de Edificios* was reedited in Argentina, Reyner Banham, Cedric Price, *New Society* editor Paul Barker, and urban geographer Peter Hall coined the term ‘non-plan’ at the Yorkshire Pub in Holborn, London (Barker, 1999). In March 1969, their article “Non-Plan: An Experiment in Freedom” appeared in *New Society*. Described by its authors as a “thought experiment,” the article challenges the central tenets of the plan by questioning both the heroic continental idea of planning enacted by figures such as Baron Haussmann and Napoleon III in 19th-century Paris and the postwar English model, no less autocratic, that seemed to engender nothing but monotonous, predictable sameness. “Non-Plan” advocates a new kind of “uneven development,” prompted by the wholesale abandonment of existing forms of planning legislation, which would empower individual citizens to affect the way their communities adapt, move, shrink, and grow in accordance with new forms of transport and changing social and economic conditions. In

essence, the experiment was to imagine a world in which there were no plans.

“Non-Plan” provided an early framework for crowd-sourced living that attempted to contest what had been, for the previous two centuries, the plan’s irrefutable authority. But it was part of a broader sensibility that was materialized in the 1950s by Alison and Peter Smithson in the “as found” (A & P Smithson, 1990 [1950]) and articulated by Robert Venturi and Denise Scott Brown in *Learning From Las Vegas* (Venturi, Scott-Brown, Izenour, 1972). Although neither the Smithsons nor Venturi and Scott Brown were explicitly opposed to the plan as system of representation, they argued for a strategy toward the city that would be distinct from planning (and indeed they also explored systems of representation beyond the plan, including collages, section perspectives, photographs, and diagrams). They rejected aesthetic formality and fixed solutions in favor of topology, relations, and processes. By celebrating everyday life, they challenged the heroic, monumental, and utopian aims of social and urban reform and top-down planning.

Today, however, it seems the plan has been rediscovered as an incomplete project. As cities have been driven by economic interests and supported by architectural arguments for flexibility and continuity, architecture has been transformed

into the perfect technology for accommodating the dynamics of the contemporary world. Non-plan, bottom-up, liberal rhetoric leaves architecture in a powerless position regarding the urban. Smooth, round, continuous forms –and ever more spectacular shapes– have become the norm in an endless repertoire of buildings. In these, the plan is not an a priori ‘generator’ but rather the result of decisions made elsewhere (in the elevation, the section, the model, the rendering, or the software’s algorithm). An absence of plans is ultimately an absence of limits, an undefined and ambiguous field that becomes the perfect site for economic speculation and individual profit. In such a domain the plan offers the possibility of resistance, countering the ways cities have grown and developed.

Fifty years after “Building Footprints,” a digital collage places a plan at the center of the visual field. It is only one plan, yet it represents any and all plans. In this collage two languages coalesce: one photographic (grey city and green landscape), the other projective (drawn lines mediating greyness and greenness). The viewer looks out over the shoulder of a man contemplating the vastness before him. Clipped from René Magritte’s *La reproduction interdite* (1937), the man is placed on higher ground; possibly standing on a hillside or, given the windowsill separating him from the manicured lawn below, more likely the upper floor of a building. Farther away, a span of 13 identical high-rises punctuates a dense forest, dominating the skyline and serving as the gateway to a city that extends without limits. Above the towers, appearing almost as an alien spaceship, the iconographic silhouette of this city’s plan is set against the ocher sky. Only here the logic and finitude of the city’s boundaries are conveyed. Yet this is no mere image of a building proposal, but rather of a project –a composition of references and projections– a window, or mirror, into an unsolved paradox. It presents a problem with a past (the outmoded plan) and a prognosis. Inside the limits drawn by the lines of the plan there is a text inscribed, a manifesto for the architectural project with the same degree of mathematical insistence than the repetition of a single generic element reproduced along the landscape, a true drawn and written *ichnography*: a double territorial inscription (FIG. 1).

This image, titled *Locomotiva 3*, is part of a series of speculative projects by the firm Dogma and was produced in 2010 for an international competition for the area of Spina 4 in Turin, Italy. It was published (without the inscribed plan in the sky) alongside an essay titled “Obstructions: A Grammar for the City,” jointly written with the firm Office. Dogma and Office forecast that “the time will come when form will only follow itself” (Dogma and Office, 2012). This call for autonomy takes shape as a radical plea when the word ‘form’ is replaced with ‘plan’: the time will come when the plan will only follow itself. But is that formulation even possible? Can the plan become an autonomous apparatus when it only gained

authority in relation to a heteronomous practice engaged with social, urban, political, and even moral domains?

“Public and private utility, the happiness and the protection of individuals and of society: such is the aim of architecture,” wrote Durand in his *Précis* (Durand, 2000 [1809]:84). Since gaining its authority, the plan has been linked to utopian desires of social and urban reform and thus determined by external restrictions. The increased emphasis on the efficient organization of space paralleled architecture’s commitment to serve social needs and the belief in the power of planning to mold cities and societies. If the 19th-century notion of composition incarnated both the plan’s search for disciplinary empowerment and a hunt for the internal rules of autonomous development, a paradox lies within the very idea of the plan: it can only gain hegemony by serving the ideological objectives of society. We can trace such a paradoxical existence to the formulation of the plan’s codes and conventions in the École des Beaux-Arts to discover that beyond the collage’s generic attributes and repetition what is at stake was never the plan but the persistence of man himself (Cook, 2013:23).

The enigmatic man standing against the city in “Locomotiva 3” is presumably Edward James, the British poet and patron of Magritte who first appeared (not once but twice) in *La reproduction interdite*, standing in front of a mirror but unable to see his own reflection correctly. In Magritte’s painting, the looking glass accurately flips the book –a French edition of Edgar Allan Poe’s *The Narrative of Arthur Gordon Pym of Nantucket*– but the subject cannot glimpse the visage he seeks: his own.⁸ Instead, the reflection shows a form that turns back on itself. Architecture looks at itself in a mirror, but with the risk of only seeing its back.

Previously, when the discipline has focused on its techniques and tools as it tries to demarcate its disciplinary boundaries, it has lost sight of its social and political engagement. In a 2005 issue of *Log*, Robert Somol and Sarah Whiting’s editorial, “Okay, Here’s the Plan,” calls for some form of its return, with either the architectural or urban as the best shot for a projective discipline and for an architecture capable of more than merely communicating –*parlante*– but of producing certain effects –*résonnante*– (Somol & Whiting, 2005). A revision of the plan today should seek not a mere return to the past, but a chance to face our ghosts while searching for new arguments and authority regarding the city. But the plan is not autonomous, and rather than operating as a means without an end it can thrive as a means toward an end: the city.

What, then, is left of the plan? It is critique, an act of judgment, and a definition of inclusion/exclusion, inside/outside. It offers the possibility of redrawing the outline that defines different alternatives of the relation between

⁸ *The Narrative of Arthur Gordon Pym of Nantucket* (1837) is the only complete novel by Edgar Allan Poe. It tells the tale of a sailor’s bizarre adventures to the South Pole.

the individual and the collective. It is the drawing and redrawing of lines and boundaries, proposing new contours between what is private and what public, alternative delineations of the common existence of individual realms. Within the plan lies the power to define what is contained and omitted in the space of the city and to rethink different modes of enclosing, opening, and ruling the land. Like traces of chalk over a board, the plan can set the realm of the possible and the impossible in the game of our collective existence. One of the most essential architectural tools, the plan divides the possible from the impossible. Taken as more than a boundary that marks a territory, the plan is also an epistemological site with a diagrammatic and typological potential to shape the urban. Seen today as reductionist, insufficient, authoritarian, and imposing, the status of the plan is at stake, but so is the chance of inaugurating new possibilities of living in common. The risk of this renewed interest in the plan is succumbing to sheer abstraction and finding ourselves looking at our backs in a mirror. The hazard then is disconnecting the plan from reality, and thus its instrumentality –its capacity to stamp a print.

The plan can act as a coded, economic, and typological account of a building, wherein lies both its risk and potential. Its diagrammatic capacity anticipates a strong relationship between plans and typological production: the possibility to evolve from footprint diagrams into entire buildings and more, allowing the plan to perform beyond representation, to produce territorial strategies that transcend buildings themselves.

Herein lies the productivity of typology, a latent potential of the plan in contemporary urban conditions or what Tafuri called “typological criticism” (Tafuri, 1980:141) in which architectural activity shifts from the analysis of the architectural object to the criticism of the modes of production and insists on formally invariant phenomena to construct a new critical reading of modern architecture. Here, Tafuri says, history, criticism, and planning can meet with mutual advantage (Tafuri, 1980:162).

From a book compiled in 1959 to an image published in 2010, from a painting made in 1937 to a book written in 1837, these distinct cultural productions invite us to see the plan not only as an outline, but also as a tool with which to think and produce the urban. The book in Magritte’s painting is the only object properly reflected in the mirror, and in this act of exclusion something else is revealed: the book is the only reproducible object.

Our disciplinary certainty might rely on the plan as drawing but also on the uncertainty and the very unreflective nature of the buildings and cities that the plan might generate. Likewise, the plan’s footprint –a building– might also be reproducible within the territory of the city. As footprint, the plan raises the question of the architectural project beyond the material building to the realm of discourse. In Dogma’s re-enactment of Magritte’s man, the

figure looks at a plan, he hunts for what has gone missing, or perhaps for an influence and command he never had, thus questioning both the idea and function of representation itself. By recovering the drawing and writing of plans as devices through which to look at, represent and therefore construct reality, we might return to the question of the ability to mark a territory with ideas, to draw new modes of negotiating what is common and shared. **ARQ**

ALEJANDRA CELEDÓN
<alceledon@uc.cl>

Architect, Universidad de Chile, 2003. Master in Advanced Architectural Studies, The Bartlett School of Architecture, UCL, London, 2007. PhD, The Architectural Association School of Architecture, London, 2014. She has been Visiting Fellow at Universidad de Costa Rica (2014), and part of the Study Centre at the CCA in Montreal (2011). Her latest publications include "Half-Plan" in *San Rocco* 11 (2015) and the book chapter "Critical Times, scales and Functions of Art and Architecture" in *Art, City and the Public Sphere in Chile* (Santiago, 2015). Currently, she is a researcher and educator at the School of Architecture at the Pontificia Universidad Católica de Chile.

BIBLIOGRAFÍA / BIBLIOGRAPHY

- BARKER, Paul. «Non-Plan Revisited: or the Real Way Cities Grow». *Journal of Design History* 12, no. 2 (1999): 95-110.
- BLANC, Charles. *Grammaire des arts du dessin: architecture, sculpture, peinture*. Paris: Henri Laurend, 1870.
- COOK, Peter. «Viewpoints: Dry Bores Dominate Discussion – Even in These Pages,» *Architectural Review* 140 (November 2013).
- DE QUINCY, Quatremère. *Encyclopédie méthodique, ou par ordre de matières: par une société de gens de lettres, de savans et d'artistes, Architecture*, vol. 2. Paris: Chez Panckoucke, 1788.
- DOGMA and OFFICE, «Obstructions: A Grammar for the City,» *AA Files* 54 (2012): 3-7.
- DURAND, Jean-Nicolas-Louis. *Précis of the Lectures on Architecture*. Los Angeles: Getty Research Institute, 2000.
- HARBESON, John. *The Study of Architectural Design: With Special Reference to the Program of the Beaux-Arts Institute of Design*. New York: Pencil Points Press, 1927.
- LE ROY, David. *The ruins of the most beautiful monuments of Greece*. Los Angeles: Getty Research Institute, 2004.
- PURVES, Alex. *Space and Time in Ancient Greek Narrative*. New York: Cambridge University Press, 2010.
- SACRISTE, Eduardo. «Building Footprints: A Selection of Forty-Five Building Plans, All Drawn at the Same Scale». *The Student Publication of the School of Design* (North Carolina State University), vol. 9 (1959).
- SACRISTE, Eduardo. *Huellas de edificios: una colección de plantas de edificios dibujadas en la misma escala*. Buenos Aires: Editorial Universitaria de Buenos Aires, 1962.
- SMITHSON, Alison; SMITHSON, Peter. «The 'As Found' and the 'Found'». In: Robbins, David (Ed.). *The Independent Group: Postwar Britain and the Aesthetics of Plenty*. Cambridge: MIT Press, 1990.
- SOMOL, Robert; WHITING, Sarah. «Okay, Here's the Plan». *Log* 5 (Spring/Summer 2005).
- TAFURI, Manfredo. *Theories and History of Architecture*. New York: Harper & Row, 1980.
- VIDLER, Anthony. *The Writing of the Walls: Architectural Theory in the Late Enlightenment*. New York: Princeton Architectural Press, 1987.
- VITRUVIUS, Marco. *The Architecture of Marcus Vitruvius Pollio in Ten Books*. Trans. Joseph Gwilt. London: John Weale, 1860. Traducido al español en: VITRUVIO, Marco. *La arquitectura de Marco Vitruvio en diez libros*, traducción de José Luis Oliver. Madrid: Alianza, 1997.